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ATTACHMENT 1

ACRONYMS: HAZARDOUS MATERIALS

A	**AA**	Administering Agency
	AAR	After Action Report
	ABAG	Association of Bay Area Governments
	AC	Military designation for blood agent HYDROGEN CYANIDE.
	ACI	Approved Course of Instruction
	ADA	Americans with Disabilities Act
	ADP	Department of Alcohol and Drug Programs
	AG	Attorney General
	AHM	Acutely Hazardous Material
	AIHA	American Industrial Hygiene Associations
	ALA	American Lifelines Alliance
	ALRB	California Agriculture Labor Relations Board
	AMBAG	Association of Monterey Bay Area Governments
	AMC	Army Material Command (DOD)
	AMS	Aerial Measuring System (DOE)
	AO	Administrative Order
	AP	Action Plan
	APCD	Air Pollution Control District
	APCO	Air Pollution Control Officer
	AQMD	Air Quality Management Districts
	ARAC	Atmospheric Release Advisory Capability (DOE)
	ARB	California Air Resources Board
	ARC	American Red Cross
	ARES	Amateur Radio Emergency Services
	ARG	Accident Response Group (DOE)
	ARRL	Amateur Radio Relay League
	ATSDR	Agency for Toxic Substances and Disease Registry
	AWAF	Abandoned Watercraft Abatement Fund
B	**BAL**	Military designation for Lewisite antidote *British Anti-Lewisite.*
	BARDA	Biomedical Advanced Research and Development Authority (US DHHS)
	BCDC	San Francisco Bay and Development Commission

	BDO	Board, Department, and/or Office
	BDRP	Biological Defense Research Program (DOD)
	BIA	Bureau of Indian Affairs
	BLM	Bureau of Land Management
	BLS	Basic Life Support
	B.N.I.C.E.	Acronym for Biological, Nuclear, Incendiary, Chemical and Explosive, as used by National Fire Academy instruction.
	BOE	Board of Equalization
	BOM	Bureau of Mines
	BOR	Bureau of Reclamation
	BPH	Board of Parole Hearings
	BRC	Below Regulatory Concern
	BSEE	Bureau of Safety and Environmental Enforcement
	BTHA	Business, Transportation and Housing Agency (California)
	BW	Biological Warfare
C	**CA**	California
	CAC	County Agricultural Commissioner
	CA-EF	California Emergency Function
	CAER	Community Awareness and Emergency Response
	CAHAN	California Health Alert Network
	CalARP	California Accidental Release Program
	CALCORD	California On-Scene Emergency Coordination Channel
	Cal EMA	California Emergency Management Agency (Renamed Cal OES)
	CalEPA	California Environmental Protection Agency
	Cal FIRE	California Department of Forestry and Fire Protection
	CalHFA	California Housing and Finance Agency
	Cal ISO	California Independent Systems Operator
	CALNET	Automatic Telecommunications Switching System
	Cal OES	California Governor’s Office of Emergency Services
	Cal OSHA	California Occupational Safety and Health Administration
	Caltrans	California Department of Transportation
	CalSTA	California State Transportation Agency
	CalWARN	California Water and Wastewater Agency Response Network
	CALWAS	California Warning System
	CAM	Chemical Agent Monitor; Electronic detection device specifically for nerve agents.
	CAMEO	Computer Aided Management of Emergency Operations
	CANG	California Air National Guard
	CAP	Civil Air Patrol
	CARES	California Animal Response in Emergency System
	CARPA	California Air Response Planning Alliance
	CAS	Chemical Abstract Service

C/B	Chemical/Biological Agent (Military abbreviation)
CBIRF	Chemical-Biological Incident Response Force (US Marine Corps)
CBRED	Chemical, Biological, Radiological, Environmental Defense Response Team (DOD)
CBRNE	Chemical, Biological, Radiological, Nuclear, and Explosive
C/B-RRT	Chemical/Biological Rapid Response Team (DOD)
CBW	Chemical and Biological Warfare (Military abbreviation)
CCA	California Coastal Act of 1976
CCC	California Conservation Corps (or California Coastal Commission)
CCR	California Code of Regulations
CD	Civil Defense
CDA	California Department of Aging
CDAA	California Disaster Assistance Act
CDC	Centers for Disease Control (or California Department of Corrections; or Chemical Decontamination Center [Military abbreviation])
CDCR	California Department of Corrections and Rehabilitation
CDE	California Department of Education
CDF	California Department of Forestry and Fire Protection (Old Term Now Cal Fire)
CDFA	California Department of Food and Agriculture
CDHS	California Department of Health Services (Old Term Now CDPH)
CDI	California Department of Insurance
CDPH	California Department of Public Health
CDRG	Catastrophic Disaster Response Group
CDSS	California Department of Social Services
CDVA	California Department of Veterans Affairs
CEC	California Energy Commission
CEPRC	Chemical Emergency Planning and Response Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
CERT	Community Emergency Response Team
CESA	California Emergency Services Act
CESRS	California Emergency Services Radio System
CFR	Code of Federal Regulations
CG	Military designation for respiratory agent PHOSGENE.
CHEMTREC	Chemical Transportation Emergency Center
CHHS	California Health and Human Services Agency
CHLOREP	Chlorine Emergency Program
CHMIRS	California Hazardous Material Incident Reporting System
CHP	California Highway Patrol
CHRIS	California Historic Resource Information System
CIA	Central Intelligence Agency

	CIRG	Critical Incident Response Group (FBI)
	CISN	California Integrated Seismic Network
	CIWMB	California Integrated Waste Management Board now the California Department of Resources Recycling and Recovery (DRRR)
	CK	Military designation for blood agent CYANOGEN CHLORIDE.
	CLEMARS	California Law Enforcement Mutual Aid Radio System
	CLERS	California Law Enforcement Radio System
	CLETS	California Law Enforcement Telecommunications System
	CN	Military designation for incapacitating agent MACE (chloroacetophenone), early formulation (pre-1959), commercially available for self-protection devices.
	CNG	California National Guard
	COA	Course of Action
	COG	Continuity of Government
	COHWMP	County Hazardous Waste Management Plan
	CONOPS	Concept of Operations
	CONPLAN	US Government Domestic Terrorism Concept of Operations Plan
	COOP	Continuity of Operations
	Corps	California Conservation Corps
	COTP	Captain of the Port (USCG)
	CPG	Civil Preparedness Guide
	CPS	Chemical Protective Shelter (Military abbreviation)
	CPUC	California Public Utilities Commission
	CRC	Coastal Resource Coordinator
	CS	Military designation for incapacitating agent MACE, current formulation (post-1959), favored by law enforcement as it is stronger and faster acting than CS, and is less toxic, formulated by Corson and Stoughton, hence its military designation.
	CSA	Corrections Standards Authority
	CSD	Community Services and Development
	CSP	California Department of Parks and Recreation (California State Parks)
	CST	Civil Support Team
	CSTI	California Specialized Training Institute
	CSU	Chemical Support Unit (DOD)
	CSWC	California State Warning Center
	CUEA	California Utilities Emergency Association
	CUPA	Certified Unified Program Agency
	CVC	California Vehicle Code
	CWA	Clean Water Act (also known ast County Water Authority)
	CWC	California Water Code
	CX	Military designation for vesicant PHOSGENE OXIME.
	CZMA	Coastal Zone Management Act
D	**DBW**	California Division of Boating and Waterways

	DCA	California Department of Consumer Affairs
	DDS	California Department of Developmental Services
	DEA	Drug Enforcement Administration
	DECON	Decontamination
	DEH	Department of Environmental Health (Usually Local)
	DFI	California Department of Financial Institutions
	DFO	Disaster Field Office
	DFW	California Department of Fish and Wildlife
	DGS	California Department of General Services
	DHCS	California Department of Health Care Services
	DHHS	United States Department of Health and Human Services
	DHS	United States Department of Homeland Security
	DIR	California Department of Industrial Relations
	DJJ	Juvenile Justice Division
	DMAT	Disaster Medical Assist Teams
	DMHC	California Department of Managed Health Care
	DMORT	Disaster Mortuary Operational Response Team
	DMV	California Department of Motor Vehicles
	DOC	United States Department of Commerce (or California Department of Corrections or California Department of Corporations or Department Operations Center)
	DOD	United States Department of Defense
	DOE	United States Department of Energy
	DOF	California Department of Finance
	DOGGR	California Department of Oil, Gas, and Geothermal Resources
	DOI	United States Department of the Interior
	DOJ	United States Department of Justice (or California Department of Justice)
	DOL	United States Department of Labor
	DOS	United States Department of State
	DOT	United States Department of Transportation
	DPA	California Department of Personnel Administration
	DPH	California Department of Public Health
	DPR	California Department of Pesticide Regulation
	DRC	Disaster Recovery Center
	DRE	California Department of Real Estate
	DRRR	California Department of Resources Recycling and Recovery
	DTS	California Department of Technology Services
	DTSC	California Department of Toxic Substances Control
	DWR	Department of Water Resources
E	**EAS**	Emergency Alert System
	EDD	California Employment Development Department

	EDIS	Emergency Digital Information Service
	EDO	Executive Duty Officer
	EERU	Environmental Emergency Response Unit
	EF	Emergency Functions
	EF - 10	Emergency Function 10: Hazardous Materials and Oil Emergency
	EHS	Extremely Hazardous Substances
	EMAC	Emergency Management Assistance Compact
	EMB	Environmental Management Branch
	EMMA	Emergency Managers Mutual Aid Plan
	EMS	Emergency Medical Services
	EMSA	Emergency Medical Services Authority
	EO	Executive Order
	EOC	Emergency Operations Center
	EOD	Explosive Ordinance Disposal (Team)
	EOP	Emergency Operations Plan
	EPA	Environmental Protection Agency (United States)
	EPCRA	Emergency Planning and Community Right-to-Know
	ERAMS	Environmental Radiation Ambient Monitoring System (US EPA)
	ERCC	Emergency Response Coordinating Committee
	ERD	Emergency Resource Directory
	ERG	Emergency Response Guidebook
	ERMA	Environmental Response Management Application
	ERMaC	Emergency Response Management Committee
	ERPG	Emergency Response Planning Guidelines
	ERRS	Emergency Response and Remedial Services
	ERT	Environmental Response Team; [or Emergency Response Team; also used for Evidence Response Team (FBI)]
	ERT-A	Emergency Response Team - Advance
	ERT-N	Emergency Response Team - National
	ESA	California Emergency Services Act
	ESF	Emergency Service Function
	ESF - 10	Emergency Service Function: Oil and Hazardous Materials
	EST	Emergency Support Team
F	**F&GC**	Fish and Game Code
	FAA	Federal Aviation Administration
	FBI	Federal Bureau of Investigation
	FCO	Federal Coordinating Officer
	FDA	United States Food and Drug Administration
	FEMA	Federal Emergency Management Agency
	FHA or FHWA	Federal Highway Administration
	FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act

	FIRESCOPE	Firefighting Resources of California Organized for Potential Emergencies
	FIRM	Flood Insurance Rate Map
	FOOT	Field On-Sight Observation Team
	FOSC	Federal On-Scene Coordinator
	FPPC	Fair Political Practices Commission
	FRA	Federal Railroad Administration
	FRERP	Federal Radiological Emergency Response Plan
	FRMAC	Federal Radiological Monitoring and Assessment Center
	FRP	Federal Response Plan
	FRPCC	Federal Radiological Policy Coordinating Committee
	FTB	California Franchise Tax Board
	FTIR	Infrared technology
	FTS	Federal Telephone System
G	**GA**	Military designation for nerve agent TABUN.
	GB	Military designation for nerve agent SARIN.
	GC	Government Code (California)
	GCMS	Gas Chromatographs
	GD	Military designation for nerve agent SOMAN.
	GDP	Gross Domestic Product
	GF	Military designation for a nerve agent, no name.
	GIS	Geographical Information System
	GSA	United States General Services Administration
H	**H&SC**	Health and Safety Code
	H	Military designation for vesicant SULFUR MUSTARD, containing 30% sulfur as a contaminant.
	HAZMAT or HazMat	Hazardous Materials
	HAZWOPER	Hazardous Waste Operations and Emergency Response
	HCD	California Department of Housing and Community Development
	HCl	Chemical formula for Hydrogen Chloride
	HCN	Chemical formula for Hydrogen Cyanide
	HD	Military designation for vesicant distilled SULFUR MUSTARD, a distilled mustard that is very pure.
	HEAR	Hospital Emergency Administrative Radio System
	HHS	Health and Human Services
	HM Tool Kit	Hazardous Material Tool Kit
	HMICP	Hazardous Material Incident Contingency Plan
	HMIS	Hazardous Material Incident Reporting System
	HMIX	Hazardous Material Information Exchange
	HMO	Health Maintenance Organization
	HMRU	Hazardous Materials Response Unit (FBI)
	HN1	Military designation for vesicant NITROGEN MUSTARD derivative.

	HN2	Military designation for vesicant NITROGEN MUSTARD MUSTARGEN.
	HN3	Military designation for vesicant NITROGEN MUSTARD derivative.
	HSEEP	Homeland Security Exercise and Evaluation Program
	HUD	California Housing and Urban Development
	HWSF	Hazardous Waste Strike Force
I	**IA**	Individual Assistance
	IAP	Incident Action Plan
	IC	Incident Commander or Incident Command
	ICAO	International Civil Aviation Organization
	ICS	Incident Command System
	ICt_{50}	Incapacitating concentration of a chemical vapor or aerosol by inhalation measured in mg., which is multiplied by the duration of time (t) of the exposure, with a median disabling rate of 50%.
	IDAT	Insurance Disaster Assessment Team
	IDE	Initial Damage Estimate
	IDLH	Immediately Dangerous to Life and Health
	IHP	Individuals and Households Programs
	IIT	Incident Investigation Team
	IMAAC	Interagency Modeling and Atmospheric Assessment Center
	IMAT	Incident Management Assistance Team
	IMO	International Maritime Organization
	IMT	Incident Management Team
	IND	Improvised Nuclear Devices
	INRP	Initial National Response Plan
	IO	Information Officer
	IRR	Initial Response Resources
	IT	Information Technology
J	**JFO**	Joint Field Office
	JIC	Joint Information Center
	JIS	Joint Information System
	JPA	Joint Powers Agreement
	JTTF	Joint Terrorism Task Force (FBI)
L	**L**	Military designation for vesicant LEWISITE.
	LAC	Local Assistance Center
	LC_{50}	Lethal concentration of a chemical vapor agent or aerosol, with a median mortality rate of 50%.
	LCt_{50}	Lethal concentration of a chemical vapor or aerosol by inhalation measured in mg., which is multiplied by the duration of time (t) of the exposure, resulting in a median mortality rate of 50%.
	LD_{50}	Lethal dose of a chemical liquid agent, with a median mortality rate of 50% of a group of exposed, unprotected individuals.
	LEPC	Local Emergency Planning Committee

	LHMP	Local Hazards Mitigation Planning
M	**MAC**	Multiagency Coordination
	MAC Group	Multiagency Coordination Group
	MACS	Multiagency Coordination System
	MCBAT	Medical Chemical and Biological Advisory Team
	MEDCOM	Medical Command (US Army)
	MHFP	Multi-Hazard Functional Plan
	MMAA	California Disaster and Civil Defense Master Mutual Aid Agreement
	MMC	Multi-hazard Mitigation Council
	MMRS	Metropolitan Medical Response System
	MMS	United States Minerals Management Service (Now BSEE)
	MOA	Memorandum of Agreement
	MOU	Memorandum of Understanding
	MRMIB	Managed Risk Medical Insurance Board
	MSO	Marine Safety Office (Now Sectors)
N	**NAWAS**	National Warning System
	NBC	Nuclear, Biological, and Chemical (weapons)
	NBS	National Biological Service
	NCP	National Contingency Plan
	NCS	National Communications System
	NDMS	National Disaster Medical System
	NEIC	National Earthquake Information Center
	NEPA	National Environmental Policy Act
	NESHAP	National Emission Standards for Hazardous Air Pollutants
	NEST	Nuclear Emergency Support Team (DOE)
	NFPA	National Fire Protection Association
	NGO	Non-Governmental Organization
	NIBS	National Institute of Building Sciences
	NIEHS	National Institute of Environmental Health Sciences
	NIMS	National Incident Management System
	NIMSCAST	National Incident Management System Compliance Assistance
	NIOSH	National Institute for Occupational Safety and Health
	NMFS	National Marine Fisheries Service
	NMRI	Naval Medical Research Institute (US Navy)
	NMRT	National Medical Readiness Team (DHHS)
	NOAA	National Oceanic and Atmospheric Administration
	NPAC	National Poison Antidote Center
	NPFC	National Pollution Fund Center
	NPP	Nuclear Power Plant
	NPS	National Park Service
	NRC	National Response Center (or Nuclear Regulatory Commission)

	NRCS	National Resources Conservation Service
	NRF	National Response Framework
	NRI	Nuclear/Radiological Incident Annex
	NRT	National Response Team
	NSC	National Security Council
	NSF	National Strike Force (or National Science Foundation)
	NTSB	National Transportation Safety Board
	NWS	National Weather Service
O	**OA**	Operational Area
	OAL	Office of Administrative Law
	OASIS	Operational Area Satellite Information System
	OEHHA	California Office of Environmental Health Hazard Assessment
	OES	Office of Emergency Services (Local Jurisdictions)
	OHMT	United States Office of Hazardous Material Transportation
	OHP	California Office of Historic Preservation
	OIG	California Office of the Inspector General
	OISPP	California Office of Information and Security and Privacy Protection
	OP	Military designation for nerve agent ORGANO-PHOSPHATE
	OPR	California Office of Planning and Research
	OREA	California Office of Real Estate Appraisers
	OSC	On-Scene Coordinator
	OSCA	Oil Spill Cleanup Agency
	OSHA	Occupational Safety and Health Administration
	OSHPD	California Office of Statewide Health Planning and Development
	OSPR	Office of Spill Prevention and Response
	OSPRA	Lempert-Keene-Seastrand Oil Spill Prevention and Response Act
	OSRO	Oil Spill Response Organization
	OSLTF	Oil Spill Liability Trust Fund
P	**PA**	Public Assistance
	PCII	Protected Critical Infrastructure Information
	PCR	Polymerase Chain Reaction Technology
	PDA	Preliminary Damage Assessment
	PDD-39	Presidential Decision Directive # 39
	PEL	Permissible Exposure Limit
	PIA	Prison Industry Authority
	PIAT	Public Information Assist Team
	PL	Public Law
	POLREPS	Pollution Reports (US EPA)
	POST	Peace Officer Standards and Training
	PPE	Personal Protective Equipment
	PRC	Public Resources Code

	PST	Pacific Strike Team (USCG)
	PUC	Public Utilities Commission
R	**RACES**	Radio Amateur Civil Emergency Services
	RADEF	Radiological Defense
	RAP	Radiological Assistance Program
	RAPID	Railroad Accident Prevention and Immediate Deployment
	RCP	Regional Contingency Plan
	RDD	Radiological Dispersal Devices
	RDMHC	Regional Disaster Medical Health Coordinators
	REOC	Regional Emergency Operations Center
	RERT	Radiological Emergency Response Team
	RIMS	Response Information Management System
	RMPP	Risk Management and Prevention Program - See California Accidental Release Program (CalARP)
	RP	Responsible Party
	RRCC	Regional Response Coordination Center
	RRIS	Rapid Response Information System
	RRT	Regional Response Team
	RSPA	Research and Special Programs Administration
	RTAP	Real Time Analytical Platform (DOD)
	RTF	Response Task Force (DOD)
	RWQCB	Regional Water Quality Control Board
S	**SA**	Military designation for Arsine
	SAM	State Administrative Manual
	SAMHSA	United States Substance Abuse and Mental Health Services Administration
	SAP	State Safety Assessment Program
	SAR	Search and Rescue
	SARA	Superfund Amendments and Reauthorization Act
	SBA	Small Business Administration
	SCAG	Southern California Association of Governments
	SCAT	Shoreline Cleanup Assessment Team
	SCBA	Self-Contained Breathing Apparatus
	SCO	State Coordinating Officer
	SCSA	State and Consumer Services Agency
	SCUBA	Self-Contained Underwater Breathing Apparatus
	SEB	Staphylococcus Enterotoxin B
	SEL	Standardized Equipment List (Hazardous Materials Teams)
	SEMS	Standardized Emergency Management System
	SEP	State Emergency Plan (State of California Emergency Plan)
	SERC	State Emergency Response Commission
	SFM	California State Fire Marshal

	SHMP	State of California Multi-Hazard Mitigation Plan
	SIC	State Incident Commander
	SIOC	Strategic Information and Operations Center
	SIOSC	State Interagency Oil Spill Committee
	SLC	State lands Commission
	SM	Scene Management
	SOC	State Operation Center
	SOP	Standard Operating Procedures
	SOSCP	State Oil Spill Contingency Plan
	SPB	State Personnel Board
	SPCC	Spill Prevention Containment and Countermeasures
	SRL	Sanitation and Radiation Laboratory
	SSC	Scientific Support Coordinator
	START	Superfund Technical Assistance and Response Team
	STEL	Short Term Exposure Limit
	STORMS	Standard Oil Spill Response Management System
	STP	Standard Temperature and Pressure
	SWAT	Special Weapons and Tactics
	SWP	State Water Project
	SWRCB	State Water Resources Control Board
T	**TAC**	Technical Advisory Committee
	TAT	Technical Assistance Team
	TCL	Target Capabilities List
	TEU	Technical Escort Unit (DOD)
	TLA	Three Letter Acronym
	TLV	Threshold Limit Value
	TLV-STEL	Threshold Limit Value – Short Term Exposure Limit
	Tool Kit	Hazardous Materials Tool Kit
U	**UC**	University of California
	US&R	Urban Search and Rescue
	USACE	United States Army Corps of Engineers
	USCG	United States Coast Guard
	USDA	United States Department of Agriculture
	USDA FS	United States Department of Agriculture Forest Service
	USDA NRCS	United States Department of Agriculture Natural Resources Conservation Services
	US EPA	United States Environmental Protection Agency
	USFWS	United States Fish and Wildlife Service
	USGS	United States Geological Survey
	UTL	Universal Task List
V	**VEE**	Venezuelan Equine Encephalitis

	VMAT	Veterinary Medical Assistance Teams
	VOAD	Voluntary Organizations Active in Disasters
	VX	A persistent chemical nerve agent, the United States standard V agent
W	**WIPP**	Waste Isolation Pilot Program
	WMD	Weapons of Mass Destruction
	WUI	Wildland-Urban Interface

ATTACHMENT 2

Glossary of Terms: Hazardous Materials

The express purpose of this glossary of standardized terms is to provide common and readily understandable definitions for both hazardous materials emergency response and terrorism in order to facilitate communications and operations among emergency responders when dealing with hazardous materials incidents. These definitions may not be the specific legal definition used for your reference so please refer to the proper legal document for such definitions. **This document is NOT intended to be a legal or scientific reference.**

2-PAM Chloride — Used in treatment of nerve agent poisoning.

Abandoned Watercraft Abatement Fund — Is a State endowment that provides funding that covers average costs to remove, store and/or dispose of surrendered vessels and other navigational hazards. The fund gives extra consideration to applicant agencies that are proactive in keeping abandoned vessels out of state waters and maintain a navigational hazard abatement plan. The removal of commercial vessels is not reimbursable.

Abatement — The actions taken to reduce the amount, degree of the hazard, or intensity of the release or threatened release of a hazardous material.

Absorbent Material — A material designed to pick up and hold liquid hazardous material to prevent contamination spread.

Absorption

1) The process of absorbing or “picking up” a liquid hazardous material to prevent enlargement of the contaminated area;
2) Movement of a toxicant into the circulatory system by oral, dermal, or inhalation exposure.

Acceptable Risk — A risk judged to be outweighed by corresponding benefits or one that is of such a degree that it is considered to pose minimal potential for adverse effects.

Access Control Point — The point of entry and exit that regulates traffic to and from control zones.

Acetylcholine — A chemical neurotransmitter produced by nerve cells acting as a chemical “messenger” to stimulate the heart, skeletal muscles, and numerous secretory glands.

Acetylcholinesterase An enzyme that normally hydrolyzes the neurotransmitter acetylcholine, thereby stopping its activity, but can be inhibited by organophosphates, carbamates and certain other “nerve agents”.

ACGIH See “American Conference of Governmental Industrial Hygienists”.

Acid A hydrogen-containing corrosive material that reacts with water to produce hydrogen ions; a proton donor.

Activation

1) Initial activation of an EOC may be accomplished by a designated official of the emergency response agency that implements SEMS as appropriate to accomplish the agency's role in response to the emergency.
2) An event in the sequence of events normally experienced during most emergencies.

Acute Effect An adverse action on a human or animal, generally after a single significant exposure, which may be mild or severe. (See “Chronic Effect”.)

Acute Exposure Exposure that is short in duration.

Acute Release Release of a hazardous material that is short in duration.

Acute Toxicity Any harmful effect produced by a single short-term exposure that may result in severe biological harm or death.

Adjuvant A substance used in pesticide formulation to aid its action. (Also used in the manufacture of drugs.)

Administering Agency (AA) The designated unit of a county or city tasked to administer the local implementation of the State and Federal hazardous material emergency planning and community right-to-know programs. Also known as Certified Uniform Program Agencies (CUPAs).

Adsorption Process of adhering to a surface.

Aerobic Capable of living and growing only in the presence of free oxygen.

Aerosols Liquid droplets, or solid particles dispersed in air, that are of fine enough particle size (0.01 to 100 microns) to remain dispersed for a period of time.

After Action Report A report that examines response actions, application of SEMS, modifications to plans and procedures, training needs and recovery activities. After action reports are required under SEMS after any emergency that requires a declaration of an emergency. Reports must be submitted within 90 days to Cal OES.

Agency A division of government with a specific function offering a particular kind of assistance. In the Incident Command System (ICS), agencies are defined either as jurisdictional (having statutory responsibility for incident management) or as assisting or cooperating (providing resources or other assistance). Governmental organizations are most often in charge of an incident, though in certain circumstances private sector organizations may be

	included. Additionally, Non-Governmental Organizations (NGOs) may be included to provide support.
Agency Specific Plan	An emergency plan written by and addressing an individual agency's response actions, capabilities and resources.
AIHA	See "American Industrial Hygiene Association"
Airborne Pollutants	Contaminants that is carried and/or released into the atmosphere or air.
Air Modeling	Mathematical models used to predict movement and concentrations of chemicals in the atmosphere.
Air Monitoring	To measure, record, and/or detect pollutants in ambient air.
Air Purifying Respirators (APR)	A breathing mask with specific chemical cartridges designed to either filter particulates or absorb contaminants before they enter the worker's breathing zone. They are intended to be used only in atmospheres where the chemical hazards and concentrations are known.
Air Purifying Respirator (Powered)	An APR with a portable motor to force air through the filtering/purifying cartridges for use only in atmospheres where the chemical hazards and concentrations are known.
Air Quality Management District	A local/regional air pollution agency responsible for regulation and monitoring of air quality.
Alkali	A hydroxide containing (-OH) corrosive material that is soluble in water, neutralizes acids, and is irritating or destructive to tissue.
All-Hazards	Any incident, natural or manmade, that warrants action to protect life, property, environment, public health or safety and minimize disruptions of government, social, or economic activities.
Ambient Air Quality	Quality of the surrounding atmosphere or circulating air.
American Conference of Governmental Industrial Hygienists (ACGIH)	A professional society of persons responsible for full-time industrial hygiene programs, who are employed by official governmental units. Its primary function is to encourage the interchange of experience among governmental industrial hygienists, and to collect and make available information of value to them. ACGIH promotes standards and techniques in industrial hygiene, and coordinates governmental activities with community agencies.
American Industrial Hygiene Association (AIHA)	An organization of professionals trained in the recognition and control of health hazards and the prevention of illness related thereto. It promotes the study and control of environmental factors affecting the health of industrial workers, and provides information and communication services pertaining to industrial hygiene.

American National Standards Institute (ANSI)	The Institute serves as a clearinghouse for nationally coordinated voluntary safety, engineering and industrial standards developed by industrial firms, trade associations, technical societies, consumer organizations, and government agencies.
American Society for Testing and Materials (ASTM)	The Society establishes voluntary consensus standards for materials, products, systems, & services. Sponsors research projects, develops standard tests, specifications, and recommended practices now in use.
Anhydrous	Free from water, dry.
Anthrax	A rod shaped aerobic bacteria Bacillus Anthraces that is spore producing and exists in three forms; The pulmonary form is usually 100 % lethal.
Antibiotic	A substance that inhibits the growth of or kills micro-organisms.
Antipersonnel	Agents those are effective directly against humans.
Antitoxin	A substance found or introduced into the blood serum or other body fluid that is specifically antagonistic to a toxin.
Area Plan	A document established to facilitate emergency response to a release or threatened release of a hazardous material within a city or county. (California Health and Safety Code, Section § 25503, Chapter 6.95)
Asbestos	A silicate of calcium or magnesium mineral, the friable form occurring in threadlike fibers; noncombustible and a nonconductor of electricity; a known carcinogen.
Asbestosis	A disease of the lungs caused by the inhalation of fine airborne fibers of asbestos.
Aseptic	Free from infection.
Asphyxiant	A vapor or gas that can cause unconsciousness or death by suffocation (lack of oxygen).
Assessment	The process of determining the nature and degree of hazard of a hazardous material or hazardous materials incident.
Assisting Agencies	Any agency that assists the jurisdictional agency at the scene of a hazardous materials incident by providing a service or support not within the immediate responsibility or capability of the agency having jurisdiction.
Association of American Pesticide Control Officials, Inc.	This association consists of officials charged by law with active execution of the laws regulating the sale of economic poisons, and of deputies designated by these officials employed by State, Territorial, dominion, or Federal agencies.
Association of American Railroads	A central coordinating and research agency of the American railway industry.

Atropine Therapeutic drug used as an antidote for nerve agents, is very effective in blocking the effects of excess acetylcholine.

Authority Having Jurisdiction

1) Provides for the position of Incident Commander at the scene of a hazardous materials incident occurring within their jurisdictional authority boundaries.
2) The organization, office, or individual responsible for approving the equipment, an installation, or a procedure. (NFPA)

Bacillus A rod-shaped bacterium.

Bacteria Single celled living microscopic organism varying in size from 0.5µm to 5 µm with a nucleus, intracellular structure, and a cell wall capable of duplicating itself through cell division. Some types of bacteria can transform into spores that may last for years or decades. Some types of bacteria can produce highly lethal toxins (Botullinum).

Bacterial Agent A pathogenic substance that can cause disease in humans and animals by means of two mechanisms; By invading living tissue or by producing poisonous toxins, or both.

Base (Chemical) A hydroxide containing (-OH) corrosive material that when in a water solution is bitter, more or less irritating, or caustic to the skin.

Base (ICS) The location at which the primary logistics functions are coordinated and administered. The ICS may be collocated with the ICP.

Bioaccumulation Absorption and storage of toxic chemicals from the environment in an organism, usually in body fat.

Bioassay Determination of the relative strength and toxicity of a substance (such as a drug) by comparing its effect on a test organism with that of a standard preparation.

Biohazard Infectious agents presenting a risk or potential risk to living organisms, either directly through infection or indirectly through disruption of the environment.

Biohazard Area Any area in which work has been, or is being performed, with infectious agents or materials.

Biological Agent Usually refers to all agents that may cause disease or death including bacteria, virus, and toxins.

Biological Half-Life The time required for a living organism to eliminate half of a substance which it takes in.

Biological Toxin A chemical substance produced by a living organism, such as bacteria, plant, animal or insect, that by itself can be highly lethal, such as botullinum or ricin.

Biological Treatment A process by which waste is rendered less hazardous, or is reduced in volume, by relying on the action of microorganisms.

Biological Warfare	The intentional use of biological agents as weapons to kill or injure humans, animals, or plants, or to damage equipment.
Biological Warfare Agent	Military use of living organisms or their toxins with the intent to cause death, disability, or damage to humans.
Biomedical Advanced Research and Development Authority (BARDA)	Programs at the US DHHS that develops and purchases medicines to prevent and respond to biological, radiological, or nuclear attack for the United States of America.
Blasting Agent	A material designed for blasting which has been tested and found to be so insensitive that there is very little probability of accidental initiation to explosion or of transition from deflagration to detonation.
Blister Agent	Substances that cause blistering and destruction of the skin through liquid or aerosol contact.
Blood Agent	An antiquated military term implying that the site of action of cyanides is in the blood, but more accurately is described as an oxygen blocker for every cell in the body, beginning with the blood.
Boiling Liquid Expanding Vapor Explosion (BLEVE)	A container failure with a release of energy, often rapidly and violently, which is accompanied by a release of gas to the atmosphere and propulsion of the container or container pieces due to an overpressure rupture.
Boom	A floating physical barrier serving as a continuous obstruction to the spread of a contaminant.
Bootie	A sock like over-boot protector worn to minimize contamination.
Botulism	Poisoning by botulinum toxin that is produced by the bacillus Clostridium Botulinum is anaerobic, and is usually 65% lethal.
Breakthrough Time	The elapsed time between initial contact of the hazardous chemical with the outside surface of a barrier, such as protective clothing material, and the time at which the chemical can be detected at the inside surface of the material.
Breathing Zone Air Sample	A sample collected in the breathing area of a worker to assess exposure to airborne contaminants.
British Anti-Lewisite	Also known as Dimercaprol (INN), it is a therapeutic drug used as an antidote for Lewisite, the now-obsolete arsenic-based chemical warfare agent. Today, it is used medically in treatment of arsenic, mercury, lead, and other toxic metal poisoning.
Buddy System	A system of organizing employees into work groups in such a manner that each employee of the work group is designated to be observed by at least one other employee in the work group. [8 CCR § 5192 (a)(3)]

Buffer Zone	The area of land that surrounds a hazardous waste facility on which certain usages and activities are restricted to protect the public health and safety, and the environment from existing or potential hazards caused by the migration of hazardous waste.
Bureau of Alcohol, Tobacco and Firearms (ATF)	The Federal bureau that enforces and administers firearms and explosive laws, as well as those covering the production, use and distribution of alcohol and tobacco products.
Business Plan	A written plan and inventory developed by a business for each facility, site, or branch that provides emergency response guidelines for a release of hazardous materials meeting the requirements of H&SC § 25505.
California Accidental Release Prevention Program (CalARP)	The California Accidental Release Prevention (CalARP) Program is the federal Accidental Release Prevention (ARP) Program with some state specific requirements. On January 1, 1997, Chapter 6.95, Sections § 25531 to § 25545.3 H&SC repealed statutes for California's former Risk Management and Prevention (RMPP) Program and mandated the new CalARP program.
California Air Resources Board (ARB)	The State board that enforces and implements California and Federal air pollution control laws. Is one of the BDO's under the statewide CalEPA umbrella.
California Department of Fish and Wildlife (DFW)	The State department which enforces provisions of the State Fish and Wildlife Code that prohibits pollution of habitats, waters and ocean waters; and acts as the State Liaison Officer at major off highway hazardous materials incidents.
California Department of Fish and Wildlife, Office of Spill Prevention & Response (OSPR)	The State department with authority over response and cleanup of hazardous materials affecting wildlife and state waters. The Administrator of OSPR has mandate for statewide response to and cleanup of oil spills in state waters, and to oversee the Fish and Wildlife Pollution Account (Fund 207, F&GC § 13010).
California Department of Forestry and Fire Protection (Cal Fire)	A State resources department that protects unincorporated lands from wildfire and responds to public safety emergencies.
California Department of Public Health (CDPH)	The State department containing the Radiological Health Branch, Office of Drinking Water and Office of Risk Assessment in addition to medical and health services.
California Department of Resources Recycling and Recovery (DRRR)	The State department responsible for overseeing municipal solid waste landfills, other non-hazardous waste or recycling facilities, used oil and household hazardous waste facilities, and waste tire facilities.
California Department of Toxic Substances Control (DTSC)	The State department responsible for regulation of storage, transport, treatment, and disposal of hazardous waste; and oversight of remediation and long-term clean up of sites contaminated with hazardous substance. Is one of the BDO's under the statewide CalEPA umbrella.

California Department of Transportation (Caltrans)

The State department responsible for planning, designing, constructing, operating, and maintaining the State's highway system. It will ensure, in cooperation with other public and private agencies, the identification and containment of hazardous materials and restoration of orderly traffic flow. It will contract with cleanup companies to assist with cleanup.

California Disaster and Civil Defense Master Mutual Aid Agreement (MMAA)

An agreement entered into by and between the State of California, its various departments and agencies and the various political subdivisions, municipal corporations and public agencies of the State of California to assist each other by providing resources during an emergency. Mutual Aid occurs when two or more parties agree to furnish resources and facilities and to render services to each other in response to any type of disaster or emergency.

California Division of Boating and Waterways (DBW)

The Division under the Department of Parks and Recreation that provides safe and convenient public access to California's waterways while providing leadership in promoting the public's right to safe, enjoyable, and environmentally sound recreational boating.

California Division of Occupational Safety and Health (Cal OSHA)

The State division responsible for enforcement of worker safety laws.

California Emergency Functions (CA-EF)

The California Emergency Functions (CA-EF) are a grouping of State agencies, departments and other stakeholders with similar functional activities and responsibilities whose responsibilities lend to improving the State's ability to collaboratively prepare for, effectively mitigate, cohesively respond to and rapidly recover from any emergency. CA-EFs unify a broad-spectrum of stakeholders with various capabilities, resources and authorities to improve collaboration and coordination for a particular discipline. They also provide a framework for the State government to support regional and community stakeholder collaboration and coordination at all levels of government and across overlapping jurisdictional boundaries.

The CA-EFs bring together state agencies, departments and others to collaboratively prepare for, cohesively respond to and effectively recover from an emergency. A single state agency is assigned to lead each CA-EF based on its authorities, resources and capabilities. Each CA-EF member agency is responsible to assist in coordinating the State's response to emergencies, including provision of mutual aid and the allocation of essential supplies and resources.

Similarities between the CE-EFs and the Federal Emergency Support Functions (ESFs) exist. ESF have been developed and organized for the purpose of providing Federally-controlled resources to State and Federal agencies during the response and recovery phases of a disaster. While similar to the Federal ESFs, the CA-EFs are established to augment State operations during all four phases of emergency management (Mitigation, Preparedness, Response, and Recovery). Below is a listing of each CA-EF with the lead State agency and Federal ESFs with the closest similarities noted.

- **EF #1 – Transportation**
  Assists in the management of transportation systems and infrastructure during domestic threats or in response to incidents.
  - Lead for EF #1 is the California Business, Transportation and Housing Agency.
  - Federal ESF equivalent is ESF #1 – Transportation.

- **EF #2 – Communications**
  Provides resources, support and restoration of government emergency telecommunications, including voice and data.
  - Lead for EF #2 is the California Office of the Chief Information Officer.
  - Federal ESF equivalent is ESF #2 – Communications.

- **EF #3 – Construction and Engineering**
  Organizes the capabilities and resources of the State government to facilitate the delivery of services, technical assistance, engineering expertise, construction management and other support to local jurisdictions.
  - Lead for EF #3 is the California State and Consumer Services Agency.
  - Federal ESF equivalent is ESF #3 – Public Works and Engineering.

- **EF #4 – Fire and Rescue**
  Monitors the status of fire mutual aid activities. Coordinates support activities related to the detection and suppression of urban, rural and wildland fires and emergency incident scene rescue activities and provides personnel, equipment and supplies to support local jurisdictions.
  - Lead for EF #4 is the California Emergency Management Agency.
  - Federal ESF equivalent is ESF #4 – Firefighting.

- **EF #5 – Emergency Management**
  Coordinates and resolves issues among the CA-EFs in the four phases of emergency management to ensure consistency in the development and maintenance of the SEP annexes. During emergencies, serves in an advisory capacity to the EOC Director.
  - Lead for EF #5 is the California Emergency Management Agency.
  - Federal ESF equivalent is ESF #5 – Emergency Management.

- **EF #6 – Care and Shelter**
  Coordinates actions to assist responsible jurisdictions to meet the needs of victims displaced during an incident including food assistance, clothing, non-medical care and sheltering, family reunification and victim recovery.
  - Lead for EF #6 is the California Health and Human Services Agency.
  - Federal ESF equivalent is ESF #6 – Mass Care, Emergency Assistance, Housing and Human Services.

- **EF #7 – Resources**
  Coordinates plans and activities to locate, procure and pre-position resources to support emergency operations.

- Lead for EF #7 is the California State and Consumer Services Agency.
- Federal ESF equivalent is ESF #7 – Logistics Management and Resource Support.

- **EF #8 – Public Health and Medical**
  Coordinates Public Health and Medical activities and services statewide in support of local jurisdiction resource needs for preparedness, response, and recovery from emergencies and disasters.
  - Lead for EF #8 is the California Health and Human Services Agency.
  - Federal ESF equivalent is ESF #8 – Public Health and Medical Services.

- **EF #9 – Search and Rescue**
  Supports and coordinates response of personnel and equipment to search for and rescue missing or trapped persons. Cal OES, Law Enforcement Branch, supports and coordinates responses to search for, locate and rescue missing or lost persons, missing and downed aircraft, high angle rock rope rescue and investigations of missing person incidents that may involve criminal acts and water rescues. Cal OES, Fire and Rescue Branch supports and coordinates responses to search for, locate and rescue victims of structure collapse, construction cave-ins, trench, confined space, high angle structure rope rescue and similar emergencies and disasters and water rescues.
  - Lead for EF #9 is the California Emergency Management Agency.
  - Federal ESF equivalent is ESF #9 – Search and Rescue.

- **EF #10 – Hazardous Materials and Oil**
  Coordinates State resources and supports the responsible jurisdictions to prepare for, prevent, minimize, assess, mitigate, respond to and recover from a threat to the public or environment by actual or potential hazardous materials releases.
  - Lead for EF #10 is the California Environmental Protection Agency.
  - Federal ESF equivalent is ESF #10 – Oil and Hazardous Materials Response.

- **EF #11 – Food and Agriculture**
  Supports the responsible jurisdictions and coordinates activities during emergencies impacting the agriculture and food industry and supports the recovery of impacted industries and resources after incidents.
  - Lead for EF #11 is the California Department of Food and Agriculture.
  - Federal ESF equivalent is ESF #11 – Agriculture and Natural Resources.

- **EF #12 – Utilities**
  Provides resources and support to responsible jurisdictions and in partnership with private sector to restore gas, electric, water, wastewater and telecommunications.
  - Lead for EF #12 is the California Resources Agency.

- Federal ESF equivalent is ESF #12 – Energy.

- **EF #13 – Law Enforcement**
  Coordinates State law enforcement personnel and equipment to support responsible law enforcement agencies, coroner activities and public safety in accordance with Law Enforcement and Coroner's Mutual Aid Plans.
  - Lead for EF #13 is the California Emergency Management Agency.
  - Federal ESF equivalent is ESF #13 – Public Safety and Security.

- **EF #14 – Long-Term Recovery**
  Supports and enables economic recovery of communities and California from the long-term consequences of extraordinary emergencies and disasters.
  - Lead for EF #14 is the State and Consumer Services Agency and the California Business, Transportation and Housing Agency.
  - Federal ESF equivalent is ESF #14 – Long-Term Community Recovery.

- **EF #15 – Public Information**
  Supports the accurate, coordinated, timely and accessible information to affected audiences, including governments, media, the private sector and the local populace, including the special needs population.
  - Lead for EF #15 is the California Emergency Management Agency.
  - Federal ESF equivalent is ESF #15 – External Affairs.

- **EF #16 – Evacuation**
  Supports responsible jurisdictions in the safe evacuation of persons, domestic animals and livestock from hazardous areas.
  - Lead for EF #16 is the California Business, Transportation and Housing Agency.
  - There is no Federal ESF equivalent for EF #16.

- **EF #17 – Volunteer and Donations Management**
  Supports responsible jurisdictions in ensuring the most efficient and effective use of affiliated and unaffiliated volunteers and organizations and monetary and in-kind donated resources to support incidents requiring a State response.
  - Lead for EF #17 is the California Volunteers.
  - There is no Federal ESF equivalent for EF #17.

California Emergency Services Act (ESA)

An Act within the California Government Code to insure that preparations within the state will be adequate to deal with natural, manmade, or war-caused emergencies which result in conditions of disaster or in extreme peril to life, property and the natural resources of the State and generally to protect the health & safety and preserve the lives & property of the people.

California Environmental Protection Agency (CalEPA)

The State agency consisting of the Departments of Toxic Substances Control and Pesticide Regulation, the Office of Environmental Health Hazard Assessment, the Department of Water Resources and Regional Water Quality Control Boards, and the Air Resources Board. CalEPA sets the policy and direction that the member organizations pursue.

California Environmental Quality Act (CEQA)	The law that may require Environmental Impact Reports (EIRs) at sites where significant activities occur.
California Fire Mutual Aid Plan	A pre-plan agreement comprised of fire jurisdictions within the State of California to respond and assist in the event of any incident that has been determined to be outside the local fire jurisdiction's capabilities.
California Governor's Office of Emergency Services (Cal OES)	The State agency responsible for administration of Health and Safety Code Chapter 6.95 and Title 19 CCR, and development of Statewide disaster response plans, and coordination of Statewide mutual aid.
California Hazardous Materials Incident Reporting System (CHMIRS)	A mandatory post-incident reporting system to collect statistical data on hazardous material incidents in California. This data includes a description of the disaster, the location, the time and date, the State and local agencies responding, the actions taken by the agencies, and the agency, which had primary authority for responding to the disaster. (Chapter 6.95 of the Health and Safety Code, Title 19 CCR, and Government Code Section § 8574.8 (d)). Became obsolete in 2002.
California Highway Patrol (CHP)	The State agency with primary responsibility for traffic supervision and control on all State highways constructed as freeways, all State-owned vehicular crossings, and on most State and county highways and roadways in unincorporated areas of the State. The department enforces hazardous materials transportation laws and acts as Incident Commander, Liaison Officer, and the Statewide information, assistance, and notification coordinator for all hazardous materials incidents within its jurisdiction.
California Law Enforcement Mutual Aid Plan	Establishes the State policy for law enforcement mutual aid and outlines the procedures for coordination of alerting, dispatching, and utilization of law enforcement personnel and equipment resources.
California Specialized Training Institute (CSTI)	The organization within the Cal OES with the responsibility to standardize curriculum and certify instructors, students, and classes in the area of hazardous materials emergency response for the public and private sectors.
California State Emergency Plan	The document established pursuant to Section § 8568 of the California Government Code that addresses the State's response to extraordinary emergency situations associated with natural disasters, technological incidents, and war emergency operations.
California State Fire Marshal (SFM)	A division of the Department of Forestry and Fire Protection for the safety of all interstate and intrastate hazardous liquid pipelines in California.
California State Transportation Agency (CalSTA)	The California State Transportation Agency consists of 8 consists of departments, boards and offices each with a focus on the safety and mobility of California's traveling public.
Canadian Transport Emergency Center (CANUTEC)	A 24 hour, government sponsored hot line for chemical emergencies (the Canadian version of CHEMTREC.)

Carboy	A container, usually encased in a protective basket or crate, used to ship hazardous materials, particularly corrosives.
Carcinogen	An agent that produces or is suspected of producing cancer.
Cardiac	Pertaining to the heart.
Carrier	An individual who harbors specific disease organisms without showing symptoms, thus serving as a means of conveying infection.
Cascade System	Several air cylinders attached in series to fill Self Contained Breathing Apparatus (SCBA) bottles.
Catastrophe	Any natural or manmade incident, including terrorism that results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions.
Catastrophic Incident	An event that significantly exceeds the resources of a jurisdiction.
Cease and Desist Order	Legal direction to stop any and all activities.
Cell	A small mass of protoplasm, generally including a nucleus, surrounded by a semi-permeable membrane.
Celsius (Centigrade) C	The internationally used scale for measuring temperature, in which 100° is the boiling point of water at sea level (1 atmosphere), and 0° is the freezing point.
Center for Disease Control and Prevention (CDC)	The Federally funded research organization tasked with disease control and research.
CFR	1) Crash, Fire, Rescue personnel; trained in aircraft fire fighting and rescue; 2) Code of Federal Regulations; enforced by Federal and State agencies and contains roles for the function of Federal government.
Chemical Abstracts Service (CAS) Number	A numbering system assigned by the American Chemical Society often used by local and State hazardous materials compliance legislation for tracking chemicals in the workplace and in the community.
Chemical Agent	A chemical substance that is intended for use in military operations to kill, seriously injure, or incapacitate people through its physiological effects; See also *Chemical Warfare Agent*.
Chemical Hazards Response Information System/Hazard Assessment Computer System (CHRIS/HACS)	Developed by the Coast Guard, HACS is a computerized model of the CHRIS manuals (containing chemical-specific data), and is used by Federal On-Scene Coordinators during a chemical spill/response.

Chemical Manufacturers Association (CMA)	The parent organization that operates CHEMTREC.
Chemical Protective Clothing Material	Any material or combination of materials used in an item of clothing for the purpose of isolating parts of the wearer's body from contact with a hazardous chemical.
Chemical Protective Suit	Single or multi-piece garment constructed of chemical protective clothing materials designed and configured to protect the wearer's torso, head, arms, legs, hands, and feet.
Chemical Resistance	The ability to resist chemical attack. The attack is dependent on the method of test and its severity is measured by determining the changes in physical properties. Time, temperature, stress, and reagent may all be factors that affect the chemical resistance of a material.
Chemical Resistant Materials	Materials that are specifically designed to inhibit or resist the passage of chemicals into and through the material by the processes of penetration, permeation or degradation.
Chemical Transportation Emergency Center (CHEMTREC)	The Chemical Transportation Center, operated by the Chemical Manufacturers Association (CMA), can provide information and technical assistance to emergency responders. [Phone number (800) 424-9300]
Chemical Warfare Agents	A chemical substance that is intended for use in military operations to kill, seriously injure or incapacitate, and are usually divided into 5 groups: Nerve, Blood, Respiratory (choking), Incapacitating, and Blister (vesicants).
Chemnet	A mutual aid network of chemical shippers and contractors. It is activated when a member shipper cannot respond promptly to an incident involving chemicals. (Contact is made through CHEMTREC.)
Chemotherapy	The treatment of disease by chemicals that affect the causative organism unfavorably without seriously reacting on the patient.
Chlorep	The chlorine emergency plan, established by the Chlorine Institute, enables the nearest producer of chlorine to respond to an incident involving chlorine. (Contact is made through CHEMTREC.)
Chlorine Kits	Standardized kits commercially manufactured by contract with the Chlorine Institute to provide equipment to control or stop leaks in chlorine cylinders, tanks, and transportation tank cars.
Choking Agents	Substances that irritate, inflame, or cause physical injury to the tissues of the respiratory system, throat, nose and mouth.
Cholera	An acute infectious gastrointestinal disease with a mortality rate as high as 30%.
Chronic Effect	Delayed or slowly developing harm resulting from a chemical exposure, which is often hard to recognize.

Clandestine Laboratory	An operation consisting of a sufficient combination of apparatus and chemicals that either have been or could be used in the illegal manufacture/synthesis of controlled substances.
Clean Air Act (CAA)	A set of national standards for ambient air quality that defines the principal types and levels of pollution that should not be exceeded. This law requires States to develop "State implementation plans" for achieving the ambient air standards in each air quality control region in the State.
Clean Water Act (CWA)	Federal legislation to protect the nation's water and set State water quality standards for interstate navigable waters as the basis for pollution control and enforcement. The main objective is to restore and maintain the chemical, physical and biological integrity of the Nation's waters.
Cleanup	Incident scene activities directed toward removing hazardous materials, contamination, debris, damaged containers, tools, dirt, water, and road surfaces in accordance with proper and legal standards, and returning the site to as near a normal state as existed prior to the incident.
Cleanup Company (Hazardous Waste)	A commercial business entity available for hire to specifically remove, transport, and/or dispose of hazardous wastes; and when appropriate, must meet California Highway Patrol and Department of Toxic Substances Control requirements.
Cleanup Operation	An operation where hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleared up, or in any other manner processed or handled with the ultimate goal of making the site safer for people or the environment. (8 CCR § 5192(a)(3))
Cold Zone	See "Safety Zone".
Colorimetric Tubes	Glass tubes containing a chemically treated substrate that reacts with specific airborne chemicals to produce a distinctive color. The tubes are calibrated to indicate approximate concentrations in air.
Combined Liquid Waste Sampler (COLIWASSA)	A tool designed to provide stratified sampling of a liquid container.
Combustibility	The ability of a substance to undergo rapid chemical combination with oxygen, with the evolution of heat.
Combustible Liquid	Liquids with a flashpoint above 100° F. (49 CFR § 173.120 (b)(2).)
Combustion Product	By-products produced or generated during the burning or oxidation of a fuel.
Command	The act of directing, ordering, or controlling by virtue of explicit statutory, regulatory, or delegated authority.
Command/Management	Command is responsible for the directing, ordering, and/or controlling of resources at the field response level. Management is responsible for overall emergency policy and coordination at the SEMS EOC levels.

Command Post	See “Incident Command Post”.
Command Staff	The Command Staff at the SEMS Field Level consists of the Information Officer, Safety Officer and Liaison Officer. They report directly to the Incident Commander. They may have an assistant or assistants, as needed. These officers are also found at the EOC levels in SEMS and they report directly to the EOC Director and comprise the Management Staff. They may have an assistant or assistants, as needed.
Common Terminology	Normally used words and phrases-avoids the use of different words/phrases for same concepts, consistency, to allow diverse incident management and support organizations to work together across a wide variety of incident management functions and hazard scenarios.
Communicable	Capable of being transmitted from one individual to another.
Communications	Process of transmission of information through verbal, written, or symbolic means.
Community Awareness and Emergency Response (CAER)	A program developed by the Chemical Manufacturers Association (CMA) to provide guidance for chemical plant managers to assist them in taking the initiative in cooperating with local communities developing integrated hazardous materials response plans.
Community Right-to-Know	Legislation requiring business establishments to provide chemical inventory information to local agencies or the public.
Company (Fire Usage)	Any piece of fire response equipment having a full complement of personnel. (ICS)
Compatibility	The matching of protective chemical clothing to the hazardous material involved to provide the best protection for the worker.
Compatibility Charts	Permeation and penetration data supplied by manufacturers of chemical protective clothing to indicate chemical resistance and breakthrough time of various garment materials as tested against a battery of chemicals. This test data should be in accordance with ASTM and NFPA standards.
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)	Known as CERCLA or SUPERFUND, it addresses hazardous substance releases into the environment and the cleanup of inactive hazardous waste sites. It also requires those who release hazardous substances, as defined by the USEPA, above certain levels (known as “reportable quantities”) to notify the National Response Center.
Compressed Gas	Any material or mixture having an absolute pressure exceeding 40 p.s.i. in the container at 70° F or, regardless of the pressure at 70° F, having an absolute pressure exceeding 104 p.s.i. at 130° F; or any liquid flammable material having a vapor pressure exceeding 40 p.s.i. absolute at 100° F as determined by testing. Also includes cryogenic or “refrigerated liquids” (DOT) with boiling points lower than -130° F at 1 atmosphere.

Compressed Gas Association (CGA)	An association of firms producing and distributing compressed, liquefied, and cryogenic gases; also manufacturers of related equipment. CGA submits recommendations to appropriate government agencies to improve safety standards and methods of handling, transporting, and storing gases; acts as advisor to regulatory authorities and other agencies concerned with safe handling of compressed gases; collaborates with national organizations to develop specifications and standards of safety.
Computer Aided Management of Emergency Operations (CAMEO)	A computer data base storage-retrieval system of pre-planning and emergency data for on-scene use at hazardous materials incidents.
Confinement	Procedures taken to keep a material in a defined or localized area.
Consignee	The addressee to whom the item is shipped.
Contact	Being exposed to an undesirable or unknown substance that may pose a threat to health and safety.
Contagious	Transmissible from one individual to another.
Container	Any device, in which a hazardous material is stored, transported, disposed of, or otherwise handled.
Container, Intermodal, ISO	An article of transport equipment that meets the standards of the International Organization for Standardization (ISO) designed to facilitate and optimize the carriage of goods by one or more modes of transportation without intermediate handling of the contents and equipped with features permitting ready handling and transfer from one mode to another. Containers may be fully enclosed with one or more doors, open top, tank, refrigerated, open rack, gondola, flat rack, and other designs. Included in this definition are modules or arrays that can be coupled to form an intrinsic unit regardless of intention to move single or in multiplex configurations.
Containment	All activities necessary to bring the incident to a point of stabilization and to establish a degree of safety for emergency personnel greater than existed upon arrival.
Contamination	An uncontained substance or process that poses a threat to life, health, or the environment.
Contamination Control Line	The established line around the contamination reduction zone that separates it from the safety zone.
Contamination Reduction Zone	The area where personnel and equipment decontamination and exclusion zone support takes place. It includes control points for the access corridor and thus assists in reducing the spread of contamination. This is also referred to as the “decontamination zone”, “warm zone”, “yellow zone”, or “limited access zone” in other documents.

Contingency Plan	A pre-planned document presenting an organized and coordinated plan of action to limit potential pollution in case of fire, explosion, or discharge of hazardous materials; defines specific responsibilities and tasks.
Continuity of Government (COG)	Activities that address the continuance of constitutional governance. COG planning aims to preserve and/or reconstitute the institution of government and ensure that a department or agency's constitutional, legislative, and/or administrative responsibilities are maintained. This is accomplished through succession of leadership, the pre-delegation of emergency authority and active command and control during response and recovery operations.
Continuity of Operations (COOP)	Planning should be instituted (including all levels of government) across the private sector and non-governmental organizations as appropriate, to ensure the continued performance of core capabilities and/or critical government operations during any potential incident.
Control	The procedures, techniques, and methods used in the mitigation of a hazardous materials incident, including containment, extinguishment, and confinement.
Control Zones	The designation of areas at a hazardous materials incident based upon safety and the degree of hazard.
Coordination	The process of systematically analyzing a situation, developing relevant information and informing appropriate command authority of viable alternatives for selection of the most effective combination of available resources to meet specific objectives. The coordination process (which can be either intra-or inter-agency) does not involve dispatch actions. However, personnel responsible for coordination may perform command or dispatch functions within the limits established by specific agency delegations, procedures, legal authority, etc. Multiagency or Interagency coordination is found at all SEMS levels.
Coordination Center	Term used to describe any facility that is used for the coordination of agency or jurisdictional resources in support of one or more incidents.
Corrective Actions	Implementing procedures that are based on lessons learned from actual incidents or from training and exercises.
Corrosive	The ability to cause destruction of living tissue or many solid materials surfaces by chemical action.
Cost Recovery	A procedure that allows for the agency having jurisdiction to pursue reimbursement for all costs associated with a hazardous materials incident.
Cost Unit	Functional unit within the Finance/Administration Section responsible for tracking costs, analyzing cost data, making cost estimates and recommending cost-saving measures.
Council on Environmental Alternatives (CEA)	Encourages people to conserve, rather than consume, their environment. The Council concentrates on the area of energy, and provides specific recommendations that encourage individuals to recognize and assume responsibility for environmentally sound choices available to them.

Critical Infrastructure	Systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters.
Cryogenic	Gases, usually liquefied, that induce freezing temperatures of -150° F and below (liquid oxygen, liquid helium, liquid natural gas, liquid hydrogen, etc.).
Cutaneous	Pertaining to the skin.
Cyanogen Chloride (CK)	A *blood agent* chemical warfare agent, causing almost immediate respiratory and cardiac failure within minutes of inhalation; Not as lethal as hydrogen cyanide.
Cytotoxin	A toxin that causes cellular destruction or interfere with metabolic processes, particularly with the respiratory and circulatory systems.
Damage Assessment	Gathering information on the type, extent, and costs of damage after an incident.
Damming	A procedure consisting of constructing a dike or embankment to totally immobilize a flowing waterway contaminated with a liquid or solid hazardous substance. (US EPA, § 600/2-77-277)
Dangerous When Wet	A label required for water reactive materials (solid) being shipped under US DOT, ICAO, and IMO regulations. A labeled material that is in contact with water or moisture may produce flammable gases. In some cases, these gases are capable of spontaneous combustion. (49 CFR § 171.8)
Declared Emergency	An action taken by a jurisdiction according to the California Emergency Services Act and local ordinances in response to the impact of a real or threatened hazard that exceeds local resources.
Decontamination (Decon)	The physical and/or chemical process of reducing and preventing the spread of contamination from persons and equipment used at a hazardous materials incident. Decontamination takes place in the “contamination reduction zone”.
Decontamination Corridor	A distinct area within the warm zone that functions as a protective buffer and bridge between the hot zone and the cold zone, where decontamination stations and personnel are located to conduct decontamination procedures.
Decontamination Officer	A position within the FIRESCOPE ICS HM-120 that has responsibility for identifying the decontamination corridor location & types of decontamination, assigning stations, and managing all decontamination procedures.
Decontamination Team	A group of personnel and resources operating within a decontamination corridor.
Degradation	The loss in physical properties of an item of protective clothing due to exposure to chemicals, use, or ambient conditions.

Delayed Toxic Exposure Effect	The condition in which symptoms of an exposure are not present immediately after the exposure, but are delayed for a relatively short period of time (such as pulmonary edema a few hours after an inhalation exposure).
Deleterious Substances	A substance or material is deleterious if, because of its nature or quantity, it has a harmful effect on fish, plant life or bird life when it is deposited in the waters of the State of California.
Demobilization	The orderly, safe and efficient return of an incident resource to its original location and status.
Department of Commerce, United States (DOC)	A Federal agency whose primary mission is to encourage, serve and promote economic development and technological advancement.
Department of Defense, United States (DOD)	The Federal entity that provides the military forces needed to deter war and protect the security of our country.
Department of Energy, United States (DOE)	The Federal agency which provides the framework for a comprehensive and balanced national energy plan through coordination and administration of the energy functions of the federal government; and to be responsible for long term, high risk research, development and demonstration of energy technology, the marketing of federal power, energy conservation, the nuclear weapons program, regulation of energy production and use, and a central energy data collection and analysis program.
Department of Justice, United States (DOJ)	The Federal department which serves as counsel for the citizens of the Nation; represents them in enforcing the law in the public interest; through its thousands of lawyers, investigators, and agents it plays a key role in protection against criminals and subversion, in insuring healthy competition of business in our free enterprise system, in safeguarding the consumer, and in enforcing drug, immigration, and naturalization laws; plays a significant role in protecting citizens through its efforts for effective law enforcement, crime prevention, crime detection, and prosecution and rehabilitation of offenders; conducts all suits in the Supreme Court in which the United States is concerned; and represents the Federal Government in legal matters.
Department of Labor, United States (DOL)	The purpose of the Department of Labor is to foster, promote, and develop the welfare of the wage earners of the United States, to improve their working conditions, and to advance their opportunities for profitable employment.
Department of State, United States (DOS)	This department advises the President in formulation and execution of foreign policy; promotes long-range security and well-being of the United States; determines and analyzes the facts relating to American overseas interest, makes recommendations on policy and future action, and takes the necessary steps to carry out established policy; engages in continuous consultation with the American public, the Congress, other U.S. departments and agencies, and foreign governments.

Department of Transportation, United States (DOT)	This agency assures the coordinated, effective administration of the transportation programs of the Federal government and develops national transportation policies and programs conducive to the provision of fast, safe, efficient and convenient transportation at the lowest possible cost.
Department Operations Center (DOC)	An Emergency Operations Center (EOC), specific to a single department or agency. Their focus is on internal agency incident management and response. They are often linked to and, in most cases, are physically represented in a combined agency EOC by authorized agent(s) for the department or agency.
Desiccant	A substance, such as silica gel, that removes moisture (water vapor) from the air to maintain a dry atmosphere in containers of food or chemical packaging.
Detectors	
• **Combustible Gas Indicator (CGI) detector**	Measures the presence of a combustible gas or vapor in air.
• **Corrosivity (pH) detector**	A meter or paper that indicates the relative acidity or alkalinity of a substance, generally using an international scale of 0 (acid) through 14 (alkali-caustic). (See “pH”.)
• **Flame Ionization detector (FID)**	A device used to determine the presence of hydrocarbons in air.
• **Gas Chromatograph/ Mass Spectrometer detector (GC/MS)**	An instrument used for identifying and analyzing organics.
• **Heat detector**	An instrument used to detect heat by sensing infrared waves.
• **Photoionization detector (PID)**	A device used to determine the presence of gases/vapors in low concentrations in air.
• **Radiation Beta Survey detector**	An instrument used to detect beta radiation.
• **Radiation Dosimeter detector**	An instrument that measures the amount of radiation to which a person has been exposed.
• **Radiation Gamma Survey detector**	An instrument used for the detection of ionizing radiation, principally gamma radiation, by means of a gas-filled tube.
• **Temperature detector**	An instrument, either mechanical or electronic, used to determine the temperature of ambient air, liquids, or surfaces.
Diarrhea	Abnormal frequency and liquidity of intestinal discharges.

Diazepam	Therapeutic drug used as an antidote for nerve agents, is very effective as an anti-convulsant and to reduce brain damage.
Dike	An embankment or ridge, natural or man-made, used to control the movement of liquids, sludges, solids, or other materials.
Dike Overflow	A dike constructed in a manner that allows uncontaminated water to flow unobstructed over the dike while keeping the contaminant behind the dike.
Dike Underflow	A dike constructed in a manner that allows uncontaminated water to flow unobstructed under the dike while keeping the contaminant behind the dike.
Disaster	A sudden calamitous emergency event bringing great damage loss or destruction.
Disease	Illness or sickness.
Disinfectant	An agent, usually chemical, that destroys infective agents.
Dispersion	To spread, scatter, or diffuse through air, soil, surface or ground water.
Disposal Drum	A reference to a specially constructed drum used to overpack damaged or leaking containers of hazardous materials for shipment.
Distilled Mustard (HD)	A *vesicant* chemical warfare agent used in WWI this sulfur mustard causes severe dermal and eye destruction and burns; is an oily liquid with a garlic odor.
Diversion	The intentional, controlled movement of a hazardous material to relocate it into an area where it will pose less harm to the community and the environment.
Division	The partition of an incident into geographical areas of operation. Divisions are established when the number of resources exceeds the manageable span of control of the Operations Section Chief. A Division is located within the ICS organization between the Branch and resources in the Ops Section.
Documentation Unit	Functional unit within the Planning/Intelligence Section responsible for collecting, distributing, recording and safeguarding all documents relevant to an incident or within an EOC.
Dose	The amount of substance ingested, absorbed, and/or inhaled per exposure period.
Double gloving	A set of gloves worn over those already in place for enhanced protection.
Downwind	In the direction in which the wind blows.
Dust	Solid particles generated by handling, crushing, grinding, rapid impact, detonation, and decrepitation of organic or inorganic materials such as rock, ore, metal, coal, wood, and grain.

Ecology	A branch of science concerned with the interrelationship of organisms and their environments.
Economic Poison	As defined in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), an economic poison is “any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, or weeds, or any other forms of life declared to be pests... any substance intended for use as a plant regulator, defoliant, or desiccant.” As defined, economic poisons are generally known as pesticides.
Ecosystem	A habitat formed by the interaction of a community of organisms with their environment.
Edema	Excessive accumulation of fluid in body tissues or body cavities that causes swelling of said tissues and cavities.
Emergency	Any incident(s), whether natural or manmade, that requires responsive action to protect life or property. Under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, an emergency means any occasion or instance for which, in the determination of the President, federal assistance is needed to supplement state and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States.
Emergency Functions (EF)	See “California Emergency Functions” (CA-EF)
Emergency Management Assistance Compact (EMAC)	A congressionally ratified organization that provides form and structure to interstate mutual aid. Through EMAC, a disaster-affected State can request and receive assistance from other member States quickly and efficiently, resolving two key issues upfront: liability and reimbursement.
Emergency Management Community	The stakeholders in emergency response in California including the residents of California, the private sector and Federal, State, local and tribal governments.
Emergency Medical Services (EMS)	Functions as required to provide emergency medical care for ill or injured persons by trained providers.
Emergency Medical Services Agency (Local)	Plans and coordinates local public and private emergency medical services systems. Sets the local standards for medical care and transport of victims. California H&SC § 1798.6 vests authority for patient care management in the most qualified medical care provider.
Emergency Medical Services Authority (EMSA)	The Emergency Medical Services Authority (EMSA) is the State agency responsible for developing general guidelines for triage and handling of contaminated/exposed patients; develops and promotes hazardous materials training for emergency medical responders in the field and hospital emergency rooms; coordinates mutual aid assistance when local and/or regional resources are depleted including medical personnel, supplies, pharmaceuticals, and state mobile medical resources; and, coordinates the evaluation of casualties to other areas of the State.

Emergency Operations Center (EOC)	The physical location at which the coordination of information and resources to support incident management (on-scene operations) activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOC may be organized by major functional disciplines (e.g., fire, law enforcement and medical services), by jurisdiction (e.g., Federal, State, regional, tribal, city, county), or some combination thereof.
Emergency Operations Plan	A document that identifies the available personnel, equipment, facilities, supplies, and other resources in the jurisdiction, and States the method or scheme for coordinated actions to be taken by individuals and government services in the event of natural, man-made, and attack related disasters.
Emergency Reserve Account for Hazardous Material Incidents	A fund administered by the California Department of Toxic Substances Control to finance actions only for the purpose of remediation or prevention of threats of fire, explosion or human health hazards resulting from a release or potential release of a hazardous substance. (H&SC Section § 25354)
Emergency Resource Directory (ERD)	A directory containing information on agency or organization personnel emergency certifications and qualifications and vendor and support organization supplies, equipment, etc. that may be needed during an emergency. Supplies and equipment can include such items potable water tenders, portable toilets, heavy equipment, prepared meals, bulk foodstuffs, cots, rental office trailers, etc. To the extent possible and when appropriate, equipment should be typed by capability according to a common and accepted typing schematic. Emergency resource directories should only include those items likely to be needed by the preparing agency or organization in the performance of their duties and should not attempt to include everything that may be needed in any emergency.
Emergency Response	Response to any occurrence, which has or could result in a release of a hazardous substance. (8 CCR § 5192), (19 CCR § 2402)
Emergency Response Agency	Any organization responding to an emergency, or providing mutual aid support to such an organization, whether in the field, at the scene of an incident, or to an operations center.
Emergency Response Organization	An organization that utilizes personnel trained in emergency response. (19 CCR § 2402)
Emergency Response Personnel	Personnel affiliated with or sponsored by emergency response agencies.
Empty Packaging	Any packaging having a capacity of 110 gallons or less that contains only the residue of a hazardous material in table 2 of 49 CFR § 172.504.
Encephalitis	Inflammation of the brain.
Endemic	Native to or prevalent in a particular district or region; having a low incidence but is constantly present in a given community or environment.

Endothermic	A process or chemical reaction, which is accompanied by absorption of heat.
Endotoxin	A toxin that is produced within a micro-organism and retained within the cell until it disintegrates.
Engine (fire usage)	Any emergency response vehicle providing specified levels of pumping, water, hose capacity, and personnel.
Entry Point	A specified and controlled location where access into the exclusion zone occurs at a hazardous materials incident.
Entry Team Leader	The entry leader is responsible for the overall entry operations of assigned personnel within the hot zone. (FIRESCOPE ICS-HM)
Environmental Protection Agency, United States (US EPA)	The purpose of the Environmental Protection Agency (US EPA) is to protect and enhance our environment today and for future generations to the fullest extent possible under the laws enacted by Congress. The Agency's mission is to control and abate pollution in the areas of water, air, solid waste, pesticides, noise, and radiation. US EPA's mandate is to mount an integrated, coordinated attack on environmental pollution in cooperation with State and local governments.
EOC Action Plan	The plan developed at SEMS EOC levels, which contains objectives, actions to be taken, assignments and supporting information for the next operational period.
Epidemic	An outbreak of disease that spreads rapidly and attacks many individuals in the same region at the same time.
Erythema	Reddening of skin resembling a good case of sunburn; Typical of moderate exposure to *Mustard Substances* and *Lewisite.*
Essential Facilities	Police, fire, emergency operations centers, schools, medical facilities and other resources that have a role in an effective and coordinated emergency response.
Etiological Agent	A viable microorganism or its toxin, which causes or may cause human disease.
Evacuation	Organized, phased and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas and their reception and care in safe areas.
Exclusion Zone	An area immediately surrounding a hazardous materials incident, which extends far enough to prevent adverse effects from hazardous materials releases to personnel outside the zone. This zone is also referred to as the "hot zone", the "red zone", and the "restricted zone" in other documents.
Exothermic	A process or chemical reaction, which is accompanied by the evolution of heat.
Exotoxin	A toxin excreted by a living organism.

Explosion-proof Equipment	Instruments whose enclosure is designed and constructed to prevent the ignition of an explosive atmosphere. Certification for explosion proof performance is subject to compliance with ASTM standards.
Explosive	Any chemical compound, mixture, or device, of which the primary or common purpose is to function by explosion, i.e., with substantial instantaneous release of gas and heat. (49 CFR § 173.50)
Explosive Ordnance Disposal (EOD)	Military or civilian bomb squads.
Exposure	The subjection of a person to a toxic substance or harmful physical agent through any route of entry.
Extremely Hazardous Substances (EHS)	US EPA uses this term for chemicals that must be reported pursuant to SARA, Title III. The list of these substances and the threshold planning quantities are identified in 40 CFR § 355. Releases of extremely hazardous substances as defined by US EPA must be reported to the National Response Center. In California, the term Acutely Hazardous Material (AHM) is used. They are identical to the EHS in 40 CFR.
Extremely Hazardous Waste	Any hazardous waste or mixture of hazardous wastes which, if human exposure should occur, may likely result in death, disabling injury or serious illness caused by the hazardous waste or mixture of hazardous wastes because of its quantity, concentration or chemical characteristics.
Fahrenheit	The scale of temperature in which 212° is the boiling point of water at 760 mm Hg and 32° is the freezing point.
Federal	Of or pertaining to the Federal government of the United States of America.
Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)	An act that requires pesticides to be registered and labeled, makes it illegal to detach or destroy pesticide labels, and provides for pesticide inspections. An amendment to FIFRA now requires US EPA to determine whether a pesticide "will perform its intended function without causing unreasonable adverse effects on the environment" or human health.
Federal Water Pollution Control Act (WPCA)	See "Clean Water Act".
Fibrosis	A condition marked by an increase of interstitial fibrous tissue.
Filter Canister	A container filled with sorbents and catalysts that removes gases and vapors from air drawn through the unit. The canister may also contain an aerosol (particulate) filter to remove solid or liquid particles. (Air purifying canister type breathing apparatus are not approved for use during emergencies by the fire service in California.)
Finance/Administration Section	The section responsible for all administrative and financial considerations surrounding an incident or EOC activation.

First Responder	The first trained person(s) to arrive at the scene of a hazardous materials incident. May be from the public or private sector of emergency services.
First Responder, Awareness Level	Individuals who are likely to witness or discover a hazardous substance release who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. (8 CCR § 5192(q)(6))
First Responder, Operations Level	Individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. (8 CCR § 5192(q)(6))
Flammable Liquid	Any liquid having a flash point below 100° F (37.8^{o} C). (49 CFR § 173.115(a))
Flammable Range	A mixture of flammable gas, as mixed with air, expressed as a percent. Each gas has a range including a lower limit and upper limit and between these limits the mixture is flammable (explosive).
Flammable Solid	Any solid material, other than one classed as an explosive, which under conditions normally incident to transportation is liable to cause fires through friction, retains heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious transportation hazard. Included in this class are spontaneously combustible and water-reactive materials. (49 CFR § 173.150)
Flashpoint	The minimum temperature of a liquid at which it gives off vapors sufficiently fast to form an ignitable mixture with air and will flash when subjected to an external ignition source, but will not continue to burn.
Food and Drug Administration (FDA)	Performs, directs, and coordinates detection and control activities which protect consumers against adulterated, misbranded, or falsely advertised foods, drugs, medical devices, and hazardous products.
Full Protective Clothing	Protective clothing worn primarily by fire fighters which includes helmet, coat, pants, boots, gloves, and self-contained breathing apparatus designed for structural fire fighting. It does not provide specialized chemical protection.
Fully Encapsulating Suits	Chemical protective suits that are designed to offer full body protection, including Self Contained Breathing Apparatus (SCBA), are gas tight, and meet the design criteria as outlined in NFPA Standard 1991.
Fume	Airborne dispersion consisting of minute solid particles arising from the heating of a solid material such as lead, in distinction to a gas or vapor. This physical change is often accompanied by a chemical reaction, such as oxidation. Fumes flocculate and sometimes coalesce. Odorous gases and vapors should not be called fumes.

Function Function refers to the five major activities in ICS: Command, Operations, Planning, Logistics and Finance/Administration. The same five functions are also found at all SEMS EOC Levels. At the EOC, the term Management replaces Command. The term function is also used when describing the activity involved, (e.g. the planning function). A sixth function, Intelligence/Investigations, may be established, if required, to meet emergency management needs.

Gas A state of matter in which the material has very low density and viscosity; can expand and contract greatly in response to changes in temperature and pressure; easily diffuses into other gases; readily and uniformly distributes itself throughout any container. A gas can be changed to a liquid or solid state by the combined effect of increased pressure and/or decreased temperature.

Gelling A process of adding a specific material that is designed to coagulate a liquid facilitating its isolation and removal.

Grounding Method whereby activities that may generate static electricity will be prevented from discharging a spark and thereby not produce an ignition point.

Group Established to divide the incident management structure into functional areas of operation. Groups are composed of resources assembled to perform a special function not necessarily within a single geographic division. Groups, when activated, are located between branches and resources in the Operations Section. (See “Division”.)

H Refers to Levinstein mustard, a series of persistent blister agents that include distilled mustard (HD), and the nitrogen mustards (HN-1, HN-2, and HN-3).

Habitat The native environment of an animal or plant; the natural place for life and growth of an animal or plant.

Halogens A chemical family that includes fluorine, chlorine, bromine, and iodine.

Halons Fire suppressing gases that are composed of straight chain carbon atoms with a variety of halogen atoms attached.

Hazard Any situation that has the potential for causing damage to life, property, and/or the environment.

Hazard Class The classification of hazardous materials as categorized and defined by the Department of Transportation in 49 CFR. The Hazardous Materials Table (49 CFR Part § 172.101) designates specific materials as hazardous for the purpose of transportation. It also classifies each material and specifies requirements pertaining to its packaging, labeling, and transportation.

- **Class 1: Explosives**
  - Division 1.1 Explosives with a mass explosion hazard
  - Division 1.2 Explosives with a projection hazard
  - Division 1.3 Explosives with predominantly a fire hazard
  - Division 1.4 Explosives with no significant blast hazard
  - Division 1.5 Very insensitive explosives

- Division 1.6 Extremely insensitive explosive articles

- **Class 2: Gases**
  - Division 2.1 Flammable gases
  - Division 2.2 Nonflammable gases
  - Division 2.3 Poison gas
  - Division 2.4 Corrosive gases

- **Class 3: Flammable liquids**
  - Division 3.1 Flashpoint below -18oC (0oF)
  - Division 3.2 Flashpoint -18oC and above, but less than 23oC (73oF)
  - Division 3.3 Flashpoint 23oC and up to 61oC (141oF)

- **Class 4: Flammable solids; spontaneously combustible materials; & materials that are dangerous when wet**
  - Division 4.1 Flammable solids
  - Division 4.2 Spontaneously combustible materials
  - Division 4.3 Materials that are dangerous when wet

- **Class 5: Oxidizers and organic peroxides**
  - Division 5.1 Oxidizers
  - Division 5.2 Organic peroxides

- **Class 6: Poisons and etiologic materials**
  - Division 6.1 Poisonous materials
  - Division 6.2 Etiologic (infectious) materials

- **Class 7: Radioactive materials**
  - Any material, or combination of materials, that spontaneously gives off ionizing radiation. It has a specific activity greater than 0.002 microcuries per gram.

- **Class 8: Corrosives**
  - A material, liquid, or solid that causes visible destruction or irreversible alteration to human skin or a liquid that has a severe corrosion rate on steel or aluminum.

- **Class 9: Miscellaneous**
  - A material which presents a hazard during transport, but which is not included in any other hazard class (such as a hazardous substance or a hazardous waste).

- **ORM-D: Other regulated material**
  - A material, which, although otherwise subjected to regulations, presents a limited hazard during transportation due to its form, quantity and packaging.

Hazardous Air Pollutant An airborne pollutant that may cause or contribute to an increase in mortality or serious illness.

Hazardous Chemical A term used by the United States Occupational Safety and Health Administration (US OSHA) to denote any chemical that would be a risk to employees if exposed in the workplace. The list of hazardous chemicals is found in 29 CFR.

Hazardous Material

A substance or combination of substances which, because of quantity, concentration, physical, chemical or infectious characteristics may cause, or significantly contribute to an increase in deaths or serious illness; and/or pose a substantial present or potential hazard to humans or the environment.

"Hazardous Material" means any of the following materials as defined in H&SC § 25411:

(1) A material listed in subdivision (b) of Section § 6382 of the Labor Code.
(2) A material defined in Section § 25115, § 25117, or § 25316.
(3) Any other material which the director determines, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health, and safety or to the environment if released into the community.

In H&SC § 25501(m) "Hazardous Material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the unified program agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Hazardous Material Categorization (HAZCAT)

A field analysis process to determine basic hazardous materials hazard classification and some chemical and physical properties of unknowns.

Hazardous Materials Emergency

The release or threatened release of a hazardous material that may impact the public health, safety and/or the environment.

Hazardous Material Incident Contingency Plan (HMICP)

The State's hazardous materials emergency plan published by Cal OES in January 1991 pursuant to California Government Code § 8574.17.

Hazardous Materials Response Team (HMRT)

An organized group of employees, designated by the employer, who are expected to perform work to handle and control actual or potential leaks or spills of hazardous substances requiring possible close approach to the substance. The team members perform responses to releases or potential releases of hazardous substances for the purpose of control or stabilization of the incident. A HAZMAT team is not a fire brigade nor is a typical fire brigade a HAZMAT team. A HAZMAT team, however, may be a separate component of a fire brigade or fire department.

Hazardous Materials Response Team -- Technician Level

Consists of an organized group of employees, designated by the employer in compliance with 8 CCR § 5192(q)(6), trained to function at the hazardous materials incident at the Technician Level in accordance with NFPA 472, Chapter 3 (1990). Additionally, personnel on the team are capable of the following:

- The ability to carry out the duties of these positions as identified in FIRESCOPE ICS-HM-120:
    a. Group Supervisor

b. Entry Leader
c. Hazardous Material Safety Officer
d. Site Access Control Officer
e. Decontamination Leader
f. Technical Specialist-Hazardous Material Reference

Note: *Multiple positions can be handled by one person dependent upon the complexity and/or severity of the incident.*

- Members are assigned positions in accordance with 8 CCR 5192 appropriately trained to include but not be limited to entry with splash protective clothing:
  a. Entry Team - 2 b. Backup Team – 2
  c.

Hazardous Materials Response Team -- Specialist Level

Consists of an organized group of employees, designated by the employer in compliance with 8 CCR § 5192(q)(6), trained to function at the hazardous materials incident at the Specialist Level in accordance with NFPA Standard 472, Chapter 4 (1990). Additionally, personnel on the team are capable of the following:

- The ability to carry out the duties of these positions as identified in FIRESCOPE ICS-HM-120:
  a. Group Leader
  b. Entry Team Leader
  c. Hazardous Material Safety Officer
  d. Site Access Control Officer
  e. Decontamination Leader
  f. Technical Specialist-Hazardous Material Reference

Note: *Multiple positions can be handled by one person dependent upon the complexity and/or severity of the incident.*

- Members are assigned positions in accordance with 8 CCR 5192 appropriately trained for entry with vapor protective clothing:
  a. Entry Team - 2 b. Backup Team – 2

Hazardous Materials Response Team -- Specialty

Consists of an organized group of employees, designated by the employer in compliance with 8 CCR § 5192(q)(6), who are trained in the hazards of specific hazardous substances, and/or specific techniques or support services, and/or the provision of specialized technical advice and assistance in compliance with 8 CCR§ 5192(q)(5). The Team is capable, either within their own team or in agreement with a Hazardous Materials Response Team on scene, of the following:

- The ability to carry out the duties of these positions as identified in FIRESCOPE ICS-HM-120:
  a. Group Supervisor
  b. Entry Team Leader
  c. Hazardous Material Safety Officer
  d. Site Access Control Officer
  e. Decontamination Leader
  f. Technical Specialist-Hazardous Material Reference

<u>Note:</u> Multiple positions can be handled by one person dependent upon the complexity and/or severity of the incident.

- Members are assigned positions in accordance with 8 CCR 5192 appropriately trained to include but not be limited to entry with splash protection:
  a. Entry team - 2
  b. Backup team – 2

Hazardous Materials Team Typing

The Cal OES Hazardous Materials Team Typing Programs overall objective is to establish a standardized resource of hazardous materials units and companies within the California Fire Service and Rescue Emergency Mutual Aid Plan (FRMAP). This Team Typing concept standardizes hazardous materials equipment, training and resources that can be used. It also promotes interoperability and standardization between all hazardous materials units and companies in the State. The Hazardous Materials Team Typing program and implementation of the Standardized Equipment List by emergency response agencies will insure increased efficiency and incident intervention in the course of hazardous materials response mutual aid within the State of California.

Hazardous Materials Tool Kit (Tool Kit)

The reference document created by the Cal OES Hazardous Materials Section to provide resources and informational tools to hazardous material teams and stakeholders in the hazardous materials arena.

Hazardous Materials Transportation Act (HMTA)

The Hazardous Materials Transportation Act of 1975 (HMTA), is the major transportation-related statute affecting transportation of hazardous cargoes Regulations apply to ". . . any person who transports, or causes to be transported or shipped, a hazardous material; or who manufactures, fabricates, marks, maintains, reconditions, repairs, or tests a package or container which is represented, marked, certified, or sold by such person for use in the transportation in commerce of certain hazardous materials."

Hazardous Substance

Hazardous Substance, as used by the California Department of Toxic Substances Control, encompasses every chemical regulated by both the Department of Transportation (hazardous materials) and the Environmental Protection Agency (hazardous waste), including emergency response (8 CCR § 5192).

In H&SC § 25501(n) “Hazardous Substance” means any substance or chemical product for which one of the following applies:

(1) The manufacturer or producer is required to prepare a MSDS for the substance or product pursuant to the Hazardous Substances Information and Training Act (Chapter 2.5 (commencing with Section § 6360) of Part 1 of Division 5 of the Labor Code) or pursuant to any applicable federal law or regulation.
(2) The substance is listed as a radioactive material in Appendix B of Chapter 1 of Title 10 of the Code of Federal Regulations, maintained and updated by the Nuclear Regulatory Commission.
(3) Hazardous materials or substances listed pursuant to Title 49 of the Code of Federal Regulations.
(4) The materials listed in subdivision (b) of Section § 6382 of the Labor Code.

Hazardous Waste

1) Waste materials or mixtures of waste which require special handling and disposal because of their potential to damage health and/or the environment;
2) US EPA uses the term hazardous waste for chemicals that are regulated under the Resource Conservation and Recovery Act and are listed in 40 CFR § 261.33 (d). US EPA or California Department of Toxic Substances Control regulated hazardous waste, when in transport, must also meet 49 CFR parts § 170 through § 179. California's definition of hazardous waste is more inclusive than US EPA's, and is found in 22 CCR, Section § 66261.2.

Hazardous Waste Facility

Any location used for the treatment, transfer, disposal or storage of hazardous waste as permitted and regulated by the California Department of Toxic Substances Control.

Hazardous Waste Generation

The act or process of producing hazardous waste.

Hazardous Waste Landfill

An excavated or engineered area on which hazardous waste is deposited and covered. Proper protection of the environment from the materials to be deposited in such a landfill requires careful site selection, good design, proper operation, leachate collection & treatment, and thorough final closure.

Hazardous Waste Leachate

Any liquid that has percolated through or drained from hazardous waste placed in or on the ground.

Hazardous Waste Management

Systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous wastes.

Hazardous Waste Manifest, Uniform

The shipping document originated and signed by the waste generator or an authorized representative that contains the information required by law and must accompany shipments of hazardous waste. (40 CFR 262, Subpart B)

Hazardous Waste Site

A location where hazardous wastes are located, and there is either a threat of a release or an actual release of these wastes which may have an adverse effect on public health or the environment.

Health Hazard, Chemical

Any chemical or chemical mixture, whose physical or chemical properties may cause acute or chronic health effects [8 CCR § 5192 (a)(3)].

Heavy Metal

A high-density metallic element that may demonstrate health hazards as a result of exposure and may contribute to contamination of the environment. This includes chromium (Cr), beryllium (Be), lead (Pb), mercury (Hg), zinc (Zn), copper (Cu), cadmium (Cd) and others.

Hepatotoxic

A substance that negatively affects the liver.

Herbicide

An agricultural chemical intended for killing plants or interrupting their normal growth. (See "Pesticides".)

High Performance Liquid Chromatography (HPLC)	A procedure used in organics analysis to separate chemical mixtures based on differential ionic absorption to various substrates.
Homeland Security Exercise and Evaluation Program (HSEEP)	The Homeland Security Exercise and Evaluation Program (HSEEP) constitute a national standard for all exercises. Through exercises, the National Exercise Program supports organizations to achieve objective assessments of their capabilities so that strengths and areas for improvement are identified, corrected, and shared as appropriate prior to a real incident.
Hot Tapping	A sophisticated method of welding on and the cutting of holes through liquid, compressed gas vessels, and piping for the purpose of relieving pressure and/or removing product.
Hot Zone	See “Exclusion Zone”.
Hydrocyanic Acid (AC)	A *blood agent* chemical warfare agent causing almost immediate respiratory and cardiac failure within minutes of inhalation; Most lethal of the cyanides; Also known as hydrogen cyanide.
Hygroscopic	A substance that has the property of absorbing moisture from the air, such as silica gel.
Hypergolic	Two chemical substances that spontaneously ignite upon mixing.
Ignitable Material	Any material having, as a liquid, a flash point less than 140° F or, if not a liquid, is capable of causing fire through friction, absorption of moisture or spontaneous chemical changes.
Ignition Temperature	The minimum temperature at which a material will initiate or maintain combustion.
Immediately Dangerous to Life or Health (IDLH)	An atmospheric concentration of any toxic, corrosive or asphyxiant substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual’s ability to escape from a dangerous atmosphere. [8 CCR § 5192(a)3]
Incapacitating Agents	A group of chemical warfare agents intended to incapacitate rather that injure or kill, by causing severe eye and nasal distress and irritation; Popular with law enforcement for riot control; Examples are Mace and Pepper Spray.
Incident	An occurrence or event, natural or man caused, that requires a response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, terrorist threats, civil unrest, wild-land and urban fires, floods, hazardous materials spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes, tornadoes, tropical storms, tsunamis, war-related disasters, public health and medical emergencies and other occurrences requiring an emergency response.
Incident Action Plan (IAP)	An oral or written plan containing general objectives reflecting the overall strategy for managing an incident. It may include the identification of operational resources and assignments. It may also include attachments that

provide direction and important information for management of the incident during one or more operational periods. At the SEMS EOC level it is called the EOC Action Plan.

Incident Base — The location at which primary Logistics functions for an incident are coordinated and administered. There is only one base per incident. (Incident name or other designator will be added to the term base.) The Incident Command Post may be co-located with the Base.

Incident Command — Responsible for overall management of the incident and consists of the Incident Commander, either single or unified command and any assigned supporting staff.

Incident Command Post (ICP) — The field location where the primary functions are performed. The ICP may be co-located with the incident base or other incident facilities.

Incident Command System (ICS) — A standardized on-scene emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. ICS is used by various jurisdictions and functional agencies, both public and private, to organize field-level incident management operations.

Incident Commander (IC) — The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.

Incompatible Waste — Waste unsuitable for commingling with another waste or material.

Industrial Wastes — Unwanted materials produced in or eliminated from an industrial operation.

Infection — Invasion of body tissues by organisms, usually pathogenic, which multiply and cause disease.

Infectious Disease — One that is caused by a living agent, such as bacteria, protozoa, virus, or fungi, and may or may not be contagious.

Infectious Waste — Waste containing pathogens; may consist of tissues, organs, body parts, blood, and body fluids.

Information — Pieces of raw, unanalyzed data that identifies persons, evidence, events; or illustrates processes that specify the occurrence of an event. May be objective or subjective and is intended for both internal analysis and external (news media) application. Information is the “currency” that produces intelligence.

Information Officer (IO)	The individual assigned to act as the liaison between the Incident Commander and the news media, as well as other groups.
Ingestion	The process of taking substances such as food, drink, and medicine into the body through the mouth.
Inhibitor	A chemical added to another substance to prevent or slow down an unwanted or sudden occurrence of chemical change.
Inorganic Compounds	Chemical compounds that do not contain the element carbon with the exception of carbon oxides and carbon sulfides.
Insecticide	A chemical product used to kill and control insects. (See “Pesticides".)
Intelligence	Product of an analytical process that evaluates information collected from diverse sources integrates the relevant information into a cohesive package and produces a conclusion or estimate. Information must be real, accurate and verified before it becomes intelligence for planning purposes. Intelligence relates to the specific details involving the activities of an incident or EOC and current and expected conditions and how they affect the actions taken to achieve operational period objectives. Intelligence is an aspect of information. Intelligence is primarily intended for internal use and not for public dissemination.
Intelligence / Investigations	Intelligence gathered within the Intelligence/Investigations function is information that either leads to the detection, prevention, apprehension and prosecution of criminal activities (or the individual(s) involved) including terrorist incidents or information that leads to determination of the cause of a given incident (regardless of the source) such as public health events or fires with unknown origins. This is different from the normal operational and situational intelligence gathered and reported by the Planning Section.
International Air Transport Association (IATA)	An association of air carriers that develop guidelines for transportation of cargo.
International Civil Aviation Organization (ICAO)	An organization that develops the principles and techniques of international air navigation and fosters the planning and development of international air transport so as to insure safe and orderly growth.
Interoperability	Allows emergency management/response personnel and their affiliated organizations to communicate within and across agencies and jurisdictions via voice, data, or video-on-demand, in real-time, when needed and when authorized.
Intoxication	Is the state of being affected by one or more psychoactive drugs. It can also refer to the effects caused by the ingestion of poison or by the overconsumption of normally harmless substances.
Intravenous	Within the vein.

Invasiveness	The ability of a micro-organism to enter the body and spread throughout the tissues.
Investigate	To systematically search or inquire into the particulars of an incident, and collect the necessary evidence to seek criminal and/or civil prosecution.
Irritant	A material that has an anesthetic, irritating, noxious, toxic, or other similar property that can cause extreme annoyance or discomfort. (49 CFR)
Isolating the Scene	Preventing persons and equipment from becoming exposed to a release or threatened release of a hazardous material by the establishment of site control zones.
Joint Information Center (JIC)	A facility established to coordinate all incident-related public information activities. It is the central point of contact for all news media. Public information officials from all participating agencies should co-locate at the JIC.
Joint Information System (JIS)	Integrates incident information and public affairs into a cohesive organization designed to provide consistent, coordinated, accurate, accessible, timely and complete information during crisis or incident operations. The mission of the JIS is to provide a structure and system for developing and delivering coordinated interagency messages; developing, recommending and executing public information plans and strategies on behalf of the IC; advising the IC concerning public affairs issues that could affect a response effort; and controlling rumors and inaccurate information that could undermine public confidence in the emergency response effort.
Jurisdiction	A range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority. Jurisdictional authority at an incident can be political or geographical (e.g., Federal, State, tribal and local boundary lines) or functional (e.g., law enforcement, public health).
Jurisdiction Specific Plan	A plan that details emergency activities, capabilities, responsibilities and resources within an area, agency, facility or political subdivision.
Key Resources	Any publicly or privately controlled resources essential to the minimal operations of the economy and government.
Labpack	Putting multiple small containers of chemicals with compatible chemical characteristics in a disposal drum with absorbent material.
Lacrimation	Tearing produced by eye irritation.
Lacrimator	A compound that causes a large flow of tears and irritates the skin; A Tearing Agent.
LC_{50} (lethal concentration, 50%)	The amount of a toxicant in air that is deadly to 50% of the exposed lab animal population within a specified time.
LD_{50} (lethal dose, 50%)	The amount of a toxicant administered by other than inhalation which is deadly to 50% of the exposed lab animal population within a specified time.

Leak	The uncontrolled release of a hazardous material that could pose a threat to health, safety, and/or the environment.
Leak Control Compounds	Substances used for the plugging and patching of leaks in non-pressure containers.
Leak Control Devices	Tools and equipment used for the plugging and patching of leaks in non-pressure and some low-pressure containers, pipes, and tanks.
Lethal Agents	Biological or chemical agents that could cause significant human mortality.
Level of Protection	In addition to appropriate respiratory protection, designations of types of personal protective equipment to be worn based on NFPA standards. • ***Level A*** - Vapor protective suit for hazardous chemical emergencies. • ***Level B*** - Liquid splash protective suit for hazardous chemical emergencies. • ***Level C*** - Limited use protective suit for hazardous chemical emergencies.
Lewisite (L)	A *vesicant* chemical warfare agent used in WWI as a gas or aerosol, causes moderate to severe dermal and eye destruction and burns, heavily used but not totally successful, was considered a minor military threat.
Liaison	A form of communication for establishing and maintaining mutual understanding and cooperation.
Liaison Officer	A member of the Command Staff (Management Staff at the SEMS EOC Levels) responsible for coordinating with representatives from cooperating and assisting agencies or organizations. At SEMS EOC Levels, reports directly to the EOC Director and coordinates the initial entry of Agency Representatives into the Operations Center and also provides guidance and support for them as required.
Local Disaster Plan	A plan developed and used by local government for extraordinary events.
Local Emergency Planning Committee (LEPC)	A committee appointed by a State emergency response commission, as required by SARA Title III, to formulate a comprehensive emergency plan for its corresponding Cal OES mutual aid region.
Local Government	According to Federal code [Government Code § 8680.2 and special districts as defined in California Code of Regulations, Title 19 Division 2, Chapter 5, CDAA, § 2900 (y)]. a county, municipality, city, town, township, local public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; an Indian tribe or authorized tribal entity, or in Alaska a Native village or Alaska Regional Native Corporation; a rural community, unincorporated town or village, or other public entity.
Localized Exposure	Contact with a limited area, usually an external body surface.

Logistics	Providing resources and other services to support incident management.
Logistics Section	The section responsible for providing facilities, services and material support for an incident or EOC activation.
Lower Explosive Limit (LEL)	The lowest concentration of the material in air that can be detonated by spark, shock, or fire, etc.
MACE® (CN)	An *incapacitating* agent “chloroacetophenone” popular with law enforcement and military to render recipient temporarily incapable of resistance or flight. Less popular than stronger military formulation CS.
Macroencapsulation	The isolation of a waste by embedding it in, or surrounding it with, a material that acts as a barrier to water or air (e.g., clay and plastic liners).
Malaise	A feeling of general discomfort or uneasiness, an "out of sorts" feeling, often the first indication of an infection or other disease.
Manifest, Uniform Hazardous Waste	A document required by 40 CFR § 262 to accompany any shipment of hazardous waste from the point of generation to the point of final disposal/destruction. (See “Shipping Papers” and “Uniform Hazardous Waste Manifest”)
MARK I	Military kit containing antidotes Atropine and Pralidoxime Chloride.
Marking	The required descriptive name, instructions, cautions, weight, or specifications or combination thereof on containers of hazardous materials/hazardous waste.
Material Safety Data Sheet (MSDS)	*See Safety Data Sheet (SDS)*
Melting Point	The temperature at which a material changes from a solid to a liquid.
MEXUSPAC & MEXUS PLAN	The MEXUS Plan’s Pacific Geographic (MEXUSPAC) Annex is an extension of The Joint Contingency Plan between The United Mexican States and the United States of America Regarding Pollution of the Marine Environment By Discharges of Hydrocarbons or Other Hazardous Substances (MEXUS Plan), it provides standard operating procedures with respect to coordination, planning, logistics and response in case of pollution incidents that may represent a threat to coastal waters or the marine environment of the border zone of both countries. Its purpose is to augment the MEXUS Plan with regional details. The MEXUSPAC Annex is to be utilized for the response to oil spills and hazardous substance releases that could affect both nations within the prescribed geographic limits.
Micro-organism	Any organism, such as bacteria, viruses, and some fungi, that can be seen only with a microscope.
Midnight Dumping	Illegal disposal of hazardous materials.
Miosis	Excessive contraction of the pupil.

Mist	Suspended liquid droplets generated by condensation from the gaseous to the liquid state or by breaking up a liquid into a dispersed state, such as by splashing, foaming, or atomizing. A mist is formed when a finely divided liquid is suspended in air.
Mitigation	Provides a critical foundation in the effort to reduce the loss of life and property from natural and/or manmade disasters by avoiding or lessening the impact of a disaster and providing value to the public by creating safer communities. Mitigation seeks to fix the cycle of disaster damage, reconstruction and repeated damage. These activities or actions, in most cases, will have a long-term sustained effect.
Mobilization	The process and procedures used by all organizations – Federal, State, tribal and local-for activating, assembling and transporting all resources that have been requested to respond to or support an incident.
Mobilization Center	An off-emergency location where emergency services personnel and equipment may be temporarily located, pending assignment to emergencies, release, or reassignment.
Monitoring	The act of systematically checking to determine contaminant levels and atmospheric conditions.
Monitoring Environmental Contamination	Use of instruments and other techniques to determine the presence or levels of hazardous materials.
Monitoring Equipment	Instruments and devices used to identify, qualify, and/or quantify contaminants.
Multiagency (or Inter-Agency Coordination)	The participation of agencies and disciplines involved at any level of the SEMS organization working together in a coordinated effort to facilitate decisions for overall emergency response activities, including the sharing of critical resources and the prioritization of incidents.
Multiagency Coordination Group (MAC Group)	Typically, administrators/executives, or their appointed representatives, who are authorized to commit agency resources and funds, are brought together and form MAC Groups. MAC Groups may also be known as multiagency committees, emergency management committees, or as otherwise defined by the System. It can provide coordinated decision making and resource allocation among cooperating agencies and may establish the priorities among incidents harmonize agency policies and provide strategic guidance and direction to support incident management activities.
Multiagency Coordination System(s) (MACS)	Multiagency coordination systems provide the architecture to support coordination for incident prioritization, critical resource allocation, communications systems integration and information coordination. The elements of multiagency coordination systems include facilities, equipment, personnel, procedures and communications. Two of the most commonly used elements are EOC and MAC Groups. These systems assist agencies and organizations responding to an incident.

Mustard (H)	A *vesicant* chemical warfare agent used in WWI as a gas or aerosol, causes severe dermal and eye destruction and burns. The term “mustard” usually refers to “sulfur mustard”; the more pure distilled mustard is referred to as “distilled mustard”.
Mustargen	A *vesicant* chemical warfare agent used in WWI as a gas or aerosol, is HN2 derivative of nitrogen mustard and the most popular during WWI.
Mutagen	A substance capable of causing genetic damage.
Mutual Aid Agreements and/or Assistance Agreements	Written or oral agreements between and among agencies/organizations and/or jurisdictions that provide a mechanism to quickly obtain emergency assistance in the form of personnel, equipment, materials and other associated services. The primary objective is to facilitate rapid, short-term deployment of emergency support prior to, during, and/or after an incident.
Mutual Aid Coordinator	An individual at local government, Operational Area, Region or State Level that is responsible to coordinate the process of requesting, obtaining, processing and using mutual aid resources. Mutual Aid Coordinator duties will vary depending upon the mutual aid system.
Mutual Aid Region	A mutual aid region is a subdivision of Cal OES established to assist in the coordination of mutual aid and other emergency operations within a geographical area of the state, consisting of two or more Operational Areas.
Mycotoxin	A toxic secondary metabolite produced by an organism of the fungus kingdom, including mushrooms, molds, and yeasts. The term “mycotoxin” is usually reserved for the toxic chemical products produced by fungi that readily colonize crops.
Narcosis	Stupor or unconsciousness produced by chemical substances.
National	Of a nationwide character, including the Federal, State, tribal and local aspects of governance and policy.
National Contingency Plan (NCP)	Created by CERCLA to define the federal response authority and responsibility for oil and hazardous material spills.
National Fire Protection Association (NFPA)	An international voluntary membership organization to promote improved fire protection and prevention, establish safeguards against loss of life and property by fire, and writes and publishes the American National Standards.
National Incident Management System (NIMS)	Provides a systematic, proactive approach guiding government agencies at all levels, the private sector and non-governmental organizations to work seamlessly to prevent, protect against, respond to, recover from and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life or property and harm to the environment. One of the functions of the National Response Framework.
National Institute for Occupational Safety and Health (NIOSH)	A Federal agency, which, among other activities, tests and certifies respiratory protective devices, air-sampling detector tubes, and recommends occupational exposure limits for various substances.

National Oceanic and Atmospheric Administration (NOAA)	The agency responsible to serve as scientific support coordinator for a federal on scene coordinator. Assists in oil spill and air toxics modeling and meteorological monitoring and oceanic research.
National Pesticide Telecommunications Network (NPTN)	The 24-hour national hotline (800) 858-PEST operated by the Texas Tech University School of Medicine providing toll-free information about pesticide safety, application, chemistry and toxicology to callers in the U.S., Puerto Rico, and the Virgin Islands. Questions are answered directly or via next day mail.
National Response Center (NRC)	A communications center operated by the USCG headquarters located in Washington, DC. They provide information on suggested technical emergency actions, and must be notified by the spiller within 24 hours of any spill of a reportable quantity of a hazardous substance.
National Response Framework (NRF)	The National Response Framework is a guide to how the Nation conducts all-hazards response. It is built upon scalable, flexible, and adaptable coordinating structures to align key roles and responsibilities across the Nation, linking all levels of government, nongovernmental organizations, and the private sector. It is intended to capture specific authorities and best practices for managing incidents that range from the serious but purely local, to large-scale terrorist attacks or catastrophic natural disasters.
Nausea	Tendency to vomit; sickness of the stomach.
Necrosis	Death of a cell or group of cells in contact with living tissue.
Nephrotoxic	A substance that negatively affects the kidneys.
Nerve Agent	Substances that interfere with the central nervous system primarily through liquid contact (skin) and lesser so through aerosol (lungs).
Neural	Relating or pertaining to the nerves.
Neurotoxic	A substance that negatively affects the nervous system.
Neutralization	The process by which acid or alkaline properties of a solution are altered by addition of certain reagents to bring the hydrogen and hydroxide concentrations to equal value (pH 7 is neutral).
Nitrogen Mustard (HN)	A *vesicant* chemical warfare agent synthesized during WWI, there are three derivatives, HN1, HN2, and HN3.
Non-flammable Gas	Any material or mixture, in a cylinder or tank, other than poison or flammable gas, having an absolute pressure in the container exceeding 40 p.s.i. at 70° F, or having an absolute pressure exceeding 104 p.s.i. at 130° F. (49 CFR)
Non-Governmental Organization (NGO)	An entity with an association that is based on the interests of its members, individuals, or institutions. It is not created by a government, but it may work cooperatively with the government. Such organizations serve a public purpose, not a private benefit. Examples of NGO include faith-based charity organizations and the American Red Cross.

Nonpersistent Agent	An agent that upon release loses its ability to cause casualties after 10 to 15 minutes, typical of most incapacitating agents.
North American (NA) Identification Number	A four-digit number, preceded by “NA”, used in the United States and Canada to identify a hazardous material or group of hazardous materials in transportation.
Not Otherwise Specified (NOS or n.o.s.)	In shipping regulations, the term is used for classes of substances to which restrictions apply, but for which the individual members of the class are not listed in the regulations.
Nucleus	A body within a cell that is the center of reproductive activities of the cell.
Occupational Safety and Health Administration, United States (OSHA)	Component of the United States Department of Labor; an agency with safety and health regulatory and enforcement authorities for most United States industries, businesses and States.
Odor Threshold	The lowest concentration in the atmosphere that can be detected by the human sense of smell. Often a poor indicator of toxicity risk.
Office of Hazardous Materials Safety, United States (OHMS)	A Federal agency tasked with the research and recommended revisions to 49 CFR.
Officer	1) The ICS title for the personnel responsible for the Command Staff (Management Staff at EOC) positions of Safety, Liaison and Public Information. 2) One who holds an office or post; especially one elected or appointed to a position of authority or trust in a corporation, government, institution, etc.
Oil	Any of numerous hydrocarbons, mineral, vegetable, and synthetic substances and vegetable and animal fats those are generally slippery, combustible, viscous, liquid or liquefiable at room temperature.
Oil Spill Cleanup Agent	Any material used in removing oil from the environment, including inert sorbent materials, approved chemical dispersants, surface collecting agents, sinking agents, and biological additives.
Olfactory	Pertaining to the sense of smell.
On-Scene Coordinator (OSC)	As explained in the National Contingency Plan, it is the pre-designated Federal official who coordinates Federal activities at a hazardous material incident, and monitors the incident for compliance with Federal pollution laws.
Operational Area (OA)	An intermediate level of the state emergency organization, consisting of a county and all other political subdivisions within the geographical boundaries of the county.
Operational Period	The time scheduled for executing a given set of operation actions, as specified in the Incident Action Plan. Operational periods can be of various lengths, although usually they last 12-24 hours.

Operations	The coordinated tactical response of all field operations in accordance with the Incident Action Plan.
Operations Section	The section responsible for all tactical incident operations and implementation of the Incident Action Plan. In ICS, it normally includes subordinate branches, divisions, and/or groups. At the SEMS EOC levels the section is responsible for the coordination of operational activities. The Operations Section at an EOC contains branches, groups or units necessary to maintain appropriate span of control.
Oral Toxicity	Adverse effects resulting from taking a substance into the body through the mouth.
Organic Peroxide	Strong oxidizers, often chemically unstable, contain the -o-o- structure. They react readily with solvents or fuels resulting in an explosion or fire.
Organization	Any association or group of persons with like objectives. Examples include, but are not limited to, governmental departments and agencies, private sector, and/or non-governmental organizations.
Organophosphate	A phosphate containing organic compound that inhibit cholinesterase enzymes.
Overpack	An enclosure used to consolidate two or more packages of hazardous material. "Overpack" does not include a freight container.
Oxidizer	A chemical, other than a blasting agent or explosive that initiates or promotes combustion in other materials thereby causing fire either of itself or through the release of oxygen or other gases. (49 CFR § 173.151)
Oxygen Deficiency	A concentration of oxygen insufficient to support life.
Oxygen Deficient Atmosphere	An atmosphere that contains oxygen content less than 19.5% by volume at sea level.
Pacific Strike Team	The National Strike Force pollution control team equipped and trained to assist in responses to oil or chemical incidents occurring in the western United States and administered by the USCG out of Hamilton Field in Northern California.
Pallets	A low portable platform constructed of wood, metal, plastic, or fiberboard, built to specified dimensions, on which supplies are loaded, transported, or stored in units.
Parts Per Billion (ppb)	A unit for measuring the concentration of a particular substance equal to one (1) unit combined with 999,999,999 other units.
Parts Per Million (ppm)	A unit for measuring the concentration of a particular substance equal to one (1) unit combined with 999,999 other units.
Pathogen	Any disease producing micro-organism or material, which includes virus, bacteria, rickettsia, fungi and mycoplasma.

Pathogenic	A biological agent that causes disease or illness to its host.
PCB Contaminated Electrical Equipment	Any electrical equipment, including transformers, that contains at least 50 ppm but less than 500 ppm of PCBs. (40 CFR § 761.3)
PCB Item	An item containing PCBs at a concentration of 5 ppm or greater. (40 CFR § 761.3)
PCB Transformer	Any transformer that contains 500 ppm of PCBs or greater. (40 CFR § 761.3)
Penetration	The movement of liquid molecules through a chemical protective clothing, suit, garment or material.
Percutaneous Agent	Able to be absorbed by the body through the skin.
Permeation	The movement of vapor or gas molecules through a chemical protective garment material.
Permeation Kits	Kits assembled for the purpose of testing on-site an unknown liquid substance for permeability of chemical protective clothing.
Permissible Exposure Limit (PEL)	The employees' permitted exposure limit to any material listed in Table Z-1, Z-2, or Z-3 of OSHA regulations, section 1910.1000, Air Contaminants.
Persistent Agent	An agent that upon release retains its casualty producing effects for an extended period of time, usually from 30 minutes to several days; A substance usually having a low evaporation rate and its vapor is heavier than air.
Persistent Toxic Substance	A material or waste that resists natural degradation or detoxification and may present long term health and environmental hazards.
Personal Protective Equipment (PPE)	Equipment provided to shield or isolate a person from the chemical, physical, and thermal hazards that may be encountered at a hazardous materials incident. Adequate personal protective equipment should protect the respiratory system, skin, eyes, face, hands, feet, head, body, and hearing. Personal protective equipment includes- personal protective clothing, self-contained positive pressure breathing apparatus, and air purifying respirators.
Pesticides	A chemical or mixture of chemicals used to destroy, prevent, or control any living organism considered to be a pest.
pH	A numerical designation of the negative logarithm of hydrogen ion concentration. A pH of 7.0 is neutrality; higher values indicate alkalinity and lower values indicate acidity.
Phosgene	A *respiratory agent* chemical warfare agent used in WWI as a gas, causes severe upper respiratory distress and edema as it hydrolysis to hydrochloric acid.
Phosgene Oxime	A *vesicant* chemical warfare agent, not popular, little used, was a minor military threat, is highly corrosive and an irritant.

Phytotoxin	A phytotoxin, literally meaning "plant poison", refers to any toxin produced by a plant. Examples of phytotoxins include ricin, crotin, and amygdaline, the latter of which is present in harmless levels in apple seeds.
Plague	Or “Black Death”, is an aerobic bacterium *Yersinia Pestis* and occurs in three clinical forms; Pneumonic that can be 90% lethal, Septicemic, and Bubonic, which is the most common and may be 30% lethal; Pneumonic is highly contagious.
Planning Section	The section responsible for the collection, evaluation and dissemination of operational information related to the incident or EOC activities and for the preparation and documentation of the IAP or EOC action plan respectively. This section also maintains information on the current and forecasted situation and on the status of resources assigned to the incident or EOC activation.
Plugging and Patching Kits	Kits commercially available or privately assembled for the purpose of providing capabilities for emergency plugging and patching of leaking containers, pipes, and tanks.
Plume	A vapor, liquid, dust, or gaseous cloud formation that has shape and buoyancy.
Pneumonitis	Inflammation of the lungs characterized by an outpouring of fluid in the lungs.
Poison Control Centers	California is served by four certified and designated regional poison control centers. Each PCC is available 24 hours a day and can provide immediate health effects, scene management, victim decontamination, and other emergency medical treatment advice for hazardous materials emergencies. A physician specializing in medical toxicology is available for back-up consultation.
Political Subdivisions	Includes any city, city and county, county, tax or assessment district, or other legally authorized local governmental entity with jurisdictional boundaries.
Pollution	Contamination of air, water, land, or other natural resources that will or is likely to create a public nuisance and cause health and environmental harm.
Polychlorinated Biphenyl (PCB)	One of several aromatic compounds containing two benzene nuclei with two or more chlorine atoms.
Polymerization	A chemical reaction, usually carried out with a catalyst, heat, or light, and often under high pressure, which generates high temperature and when uncontrolled may be violent.
Post Emergency Response	That portion of an emergency response performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the site has begun.
Post Incident Analysis	The termination phase of an incident that includes completion of the required forms and documentation for conducting a critique.

Pre-incident Planning The process associated with preparing for the response to a hazard by developing plans, identifying resources, conducting exercises, and other techniques to improve an agency's or organization's response capabilities.

Preparedness A continuous cycle of planning, organizing, training, equipping, exercising, evaluating and taking corrective action in an effort to ensure effective coordination during incident response. Within NIMS, preparedness focuses on the following elements: planning, procedures and protocols, training and exercises, personnel qualification and certification and equipment certification.

Prevention Actions to avoid an incident or to intervene to stop an incident from occurring. Prevention involves actions to protect lives and property. It involves applying intelligence and other information to a range of activities that may include such countermeasures as deterrence operations; heightened inspections; improved surveillance and security operations; investigations to determine the full nature and source of the threat; public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and, as appropriate, specific law enforcement operations aimed at deterring, preempting, interdicting, or disrupting illegal activity and apprehending potential perpetrators and bringing them to justice.

Prevention Plan See "California Accidental Release Prevention Program (CalARP)".

Private Sector Organizations and entities that are not part of any governmental structure. The private sector includes for-profit and not-for-profit organizations, formal and informal structures, commerce and industry.

Product Substitution Replacing a hazardous substance in a process with a less hazardous substance.

Proper Shipping Name The DOT designated name for a commodity or material. (49 CFR § 172.101)

Proposition 65 Formally titled "The Safe Drinking Water and Toxic Enforcement Act of 1986", Proposition 65 is a California law that has been in effect since 1986 to promote clean drinking water and keep toxic substances that cause cancer and birth defects out of consumer products. It is administered by OEHHA. Proposition 65 regulates substances listed by California as causing cancer or birth defects or other reproductive harm in two ways. The first regulatory arm of Proposition 65 prohibits businesses from knowingly discharging listed substances into drinking water sources, or onto land where the substances can pass into drinking water sources. The second regulatory arm of Proposition 65 prohibits businesses from knowingly exposing individuals to listed substances without providing a clear and reasonable warning.

Protective Clothing See "Personal Protective Equipment (PPE)".

Protocols Sets of established guidelines for actions (which may be designated by individuals, teams, functions, or capabilities) under various specified conditions.

Public Information Processes, procedures and systems for communicating timely, accurate and accessible information on the incident's cause, size and current situation;

resources committed; and other matters of general interest to the public, responders and additional stakeholders (both directly affected and indirectly affected).

Public Information Officer (PIO) — A member of the Command Staff (Management Staff at the SEMS EOC Levels) responsible for interfacing with the public and media and/or with other agencies with incident-related information requirements.

Pulmonary — Pertaining to the lungs.

Pyrophoric — A substance that ignites spontaneously in dry or moist air at or below 130° F. [49 CFR § 173.115(c)]

Qualitative Fit Test — A physical testing of a breathing apparatus face piece to the wearer, performed in an atmosphere of amyl acetate or irritant smoke to evaluate whether the wearer can detect the contaminant, indicating mask leakage and improper fit.

Radiation Absorbed Dose (RAD) — A basic unit of absorbed dose of ionizing radiation.

Radioactive — The spontaneous disintegration of unstable nuclei accompanied by emission of nuclear radiation.

Radioactive Material (RAM) — Any material or combination of materials, which spontaneously emits ionizing radiation and has a specific activity greater than 0.002 microcuries per gram. (49 CFR § 173.389)

Recorder — See “Technical Specialist - Hazardous Materials Reference”.

Recovery — The development, coordination and execution of service- and site-restoration plans; the reconstitution of government operations and services; individual, private–sector, non-governmental and public assistance programs to provide housing and to promote restoration; long-term care and treatment of affected persons; additional measures for social, political, environmental and economic restoration; evaluation of the incident to identify lessons learned; post incident reporting; and development of initiatives to mitigate the effects of future incidents.

Recovery Drum — See “Disposal Drum”.

Recovery Plan — A plan developed to restore the affected area or community.

Reference Library — A selection of chemical textbooks, reference books, microfiche, and computer data programs typically carried by a hazardous materials response team.

Regional Emergency Operations Center (REOC) — Facilities found in the Cal OES Administrative Regions. REOC provide centralized coordination of resources among Operational Areas within their respective regions and between the Operational Areas and the State Level.

Regional Plan — A hazardous material plan developed pursuant to SARA Title III.

Regional Response Team

Composed of representatives of the Federal agencies and a representative from each State in the ten US EPA regions as specified in the NCP.

Regional Water Quality Control Board (RWQCB)

This agency in conjunction with the State Water Resources Control Board (SWRCB) is charged with managing statewide water quality. Is one of the BDO's under the Secretary of CalEPA.

Regulated Substance

A regulated substance per H&SC § 25532 means any substance that is either of the following:

(1) A regulated substance listed in Section § 68.130 of Title 40 of the Code of Federal Regulations pursuant to paragraph (3) of subsection (r) of Section 112 of the Clean Air Act (42 U.S.C. Section §7412(r)(3)).

(2) (A) An extremely hazardous substance listed in Appendix A of Part 355 (commencing with Section § 355.10) of Subchapter J of Chapter I of Title 40 of the Code of Federal Regulations that is any of the following:

- (i) A gas at standard temperature and pressure.
- (ii) A liquid with a vapor pressure at standard temperature and pressure equal to or greater than 10 millimeters mercury.
- (iii) A solid that is one of the following:
  - (I) In solution or in molten form.
  - (II) In powder form with a particle size less than 100 microns.
  - (III) Reactive with a National Fire Protection Association rating of 2, 3, or 4.
- (iv) A substance that the office determines may pose a regulated substances accident risk pursuant to subclause (II) of clause (i) of subparagraph (B) or pursuant to Section § 25543.3.

Reimbursement

Provides a mechanism to recoup funds expended for incident-specific activities.

Release

Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, including the abandonment or discarding of barrels, containers, and other closed receptacles of any hazardous material. (H&SC § 25501(q))

Remedial Action

Actions taken to mitigate the effects of a release or threatened release of a hazardous material to protect health or the environment.

Removal Action

See "Mitigation".

Reportable Incident

Any incident that has or may impact the public health, safety or the environment, or is otherwise required by law to be reported.

Reportable Quantity (RQ)

The designated amount of a specific material that if spilled or released requires immediate notification to the National Response Center (NRC). (49 CFR § 172.101, 40 CFR § 117.3, § 173, and § 302.6)

Rescue

The removal of victims from an area determined to be contaminated or otherwise hazardous by appropriately trained and equipped personnel.

Residue	A material remaining in a package after its contents have been emptied and before the packaging is refilled, or cleaned and purged of vapor to remove any potential hazard.
Resource Conservation and Recovery Act (RCRA)	The Federal framework for the proper management and disposal of hazardous wastes. This program is administered by US EPA and may be delegated to the States.
Resource Management	Efficient emergency management and incident response requires a system for identifying available resources at all jurisdictional levels to enable timely and unimpeded access to resources needed to prepare for, respond to, or recover from an incident. Resource management under NIMS includes mutual aid agreements and assistance agreements; the use of special Federal, State, tribal and local teams; and resource mobilization protocols.
Resources	Personnel and major items of equipment, supplies and facilities available or potentially available for assignment to incident operations and for which status is maintained. Resources are described by kind and type and may be used in operational support or supervisory capacities at an incident or at an EOC.
Respiratory Agent	Also referred to as pulmonary agents, a reference to chemical agents that attack the mucous membranes of the respiratory tract causing severe pain and edema; Chlorine, phosgene and oxides of nitrogen are examples.
Respiratory Protective Equipment	See “SCBA” and “Air Purifying Respirators”.
Response	Activities that address the short-term, direct effects of an incident. Response includes immediate actions to save lives, protect property and meet basic human needs. Response also includes the execution of EOP and of mitigation activities designed to limit the loss of life, personal injury, property damage and other unfavorable outcomes. As indicated by the situation, response activities include applying intelligence and other information to lessen the effects or consequences of an incident; increased security operations; continuing investigations into nature and source of the threat; ongoing public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and specific law enforcement operations aimed at preempting, interdicting, or disrupting illegal activity and apprehending actual perpetrators and bringing them to justice.
Response Personnel	Includes Federal, State, territorial, tribal, sub-state regional and local governments, private sector organizations, critical infrastructure owners and operators, NGO and all other organizations and individuals who assume an emergency management role. Also known as an “Emergency Responder”.
Responsible Party (RP)	A legally recognized entity (person, corporation, business, or partnership, etc.) that has a legally recognized status of financial accountability and liability for action necessary to abate and mitigate adverse environmental and human health and safety impacts resulting from a non-permitted release or discharge of hazardous material; the person or agency found legally accountable for the

	cleanup of the incident.
Ricin	A poisonous toxin distilled from the seed of the castor oil plant.
Riot Control Agent	An incapacitating agent intended to temporarily render a person inoperative by causing extreme distress and pain, but is not lethal; Examples are CN (MACE) and CS.
Risk Analysis	A process to analyze the probability that harm may occur to life, property, and the environment and to note the risks to be taken to identify the incident objectives.
Risk Management	Decision-making process which involves such considerations as risk assessment, technological feasibility, economic information about costs and benefits, statutory requirements, public concerns, and other factors.
Risk Management Prevention Plan (RMPP)	This program has been replaced by the California Accidental Release Prevention Program (CalARP).
Roentgen	A measure of the charge produced in air created by ionizing radiation, usually in reference to gamma radiation.
Roentgen Equivalent Man (REM)	The unit of dose equivalent; takes into account the effectiveness of different types of radiation.
Rupture	The physical failure of a container or mechanical device, releasing or threatening to release a hazardous material.
Safety Data Sheet (SDS)	A document which contains information regarding the specific identity of hazardous chemicals, including information on health effects, first aid, chemical and physical properties, and emergency phone numbers. Previously known as the Material Safety Data Sheet.
Safety Officer	A member of the Command Staff (Management Staff at the SEMS EOC Levels) responsible for monitoring incident operations and advising the IC on all matters relating to operational safety, including the health and safety of emergency responder personnel. The Safety Officer may have assistants and reports directly to the IC.
Salvage Drum	See “Recovery Drum”.
Sample	To take a representative portion of the material for evidence or analytical purposes.
SARA Title III Regional Plan	See “Regional and Local Plan”.
Sarin (GB)	A nerve agent developed by the Germans during WWII that has an LC_{50} skin dose of 100-200 mg.
SCBA	See “Self Contained Breathing Apparatus”.
Scenario	An outline of a natural or expected course of events.

Scene — The location impacted or potentially impacted by a hazard.

Secondary Materials — Spent materials, sludges, by-products, scrap metal and commercial chemical products recycled in ways that differ from their normal use.

Section

1) The organizational level having responsibility for a major functional area of incident or EOC Management, (e.g. Operations, Planning, Logistics, Finance/Administration) and Intelligence/ Investigations (if established). The section is organizationally situated between the branch and the Incident Command.
2) A separate part or division as:
   a. A portion of a book, treatise, or writing.
   b. A subdivision of a chapter.
   c. A division of law.

Selective Toxicity — The capacity of a chemical to injure one kind of living matter without harming another, even though the two may be in intimate contact.

Self Contained Breathing Apparatus (SCBA) — A positive pressure, self-contained breathing apparatus (SCBA) or combination SCBA and supplied air breathing apparatus certified by the National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA), or the appropriate approval agency for use in atmospheres that are immediately dangerous to life or health (IDLH).

Sensitizer — A substance which on first exposure causes little or no reaction in humans or test animals, but which on repeated exposure may cause a marked response not necessarily limited to the contact site.

Septic — Produced by or due to putrefaction or morbid germs.

Sheltering In Place/In Place Protection — To direct people to quickly go inside a building and remain inside until the danger passes.

Shipping Papers — Generic term used to refer to documents that must accompany all shipments of goods for transportation. These include Uniform Hazardous Waste Manifests, Bills of Lading, Consists, etc. Shipping papers are intended to describe what hazardous materials are contained within the shipment, if any.

Short Term Exposure Limit (STEL) — See “Threshold Limit Value – Short Term Exposure Limit (TLV-STEL)”.

Site — Any facility or location within the scope of 8 CCR § 5192(a)(3).

Situation Report — Often contain confirmed or verified information regarding the specific details relating to the incident.

Skimmer — Physical systems whereby a liquid phase is recovered from another liquid phase due to polarity differences and stored or transferred for further processing. Typical use is to remove petroleum products floating on a water body.

Sludge	Accumulated solids, semisolids, or liquid waste generated from wastewaters, drilling operations, or other fluids.
Smoke	An air suspension (aerosol) of particles, often originating from combustion or sublimation.
Solidification	Process whereby a contaminant is permanently immobilized in a substrate to prevent future migration away from the container.
Solubility	The ability or tendency of one substance to blend uniformly with another.
Solvents	A liquid substance capable of dissolving or dispersing one or more other substances to form a uniformly dispersed mixture.
Soman (GD)	A nerve agent developed by the Germans during WWII that has an LC_{50} skin dose of 50-70 mg.
Span of Control	The number of resources for which a supervisor is responsible, usually expressed as the ratio of supervisors to individuals. (Under SEMS and NIMS, an appropriate span of control is between 1:3 and 1:7, with optimal being 1:5.)
Special District	A unit of local government (other than a city, county, or city and county) with authority or responsibility to own, operate and maintain systems, programs, services, or projects (as defined in California Code of Regulations (CCR) Section 2900(s) for purposes of natural disaster assistance. This may include joint powers authority established under Section 6500 et. Seq. of the Code.
Spill	The release of a liquid, powder, or solid hazardous materials in a manner that poses a threat to air, water, ground, and to the environment. See “Incident”
Spiller	See “Responsible Party”.
Spontaneously Combustible	See “Pyrophoric”.
Spores	A bacteria cell with a hardened shell that is more resistant to cold, heat, drying, chemicals and radiation than the bacterium itself, and may lie dormant for decades; They germinate when conditions are favorable and transform into bacteria cells.
Stabilization	The period of an incident where the adverse behavior of the hazardous material is controlled.
Stafford Act	The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) establishes the programs and processes for the Federal government to provide disaster and emergency assistance to States, local governments, tribal nations, individuals and qualified private nonprofit organizations. The provisions of the Stafford Act cover all-hazards including natural disasters and terrorist events. Relevant provisions of the Stafford Act include a process for Governors to request federal disaster and emergency assistance from the President. The President may declare a major disaster

	or emergency.
Staging Area	Established on an incident for the temporary location of available resources. A Staging Area can be any location on an incident in which personnel, supplies and equipment can be temporarily housed or parked while awaiting operational assignment.
Standard Operating Procedure (SOP)	Complete reference document or an operations manual that provides the purpose, authorities, duration and details for the preferred method of performing a single function or a number of interrelated functions in a uniform manner.
Standard Temperature and Pressure (STP)	1) US EPA's National Ambient Air Standards (25ºC [77ºF] and 1 atmosphere [760 mm Hg, 14.696 psi, or 101.325 kPa]). 2) US EPA's Standards of Performance for New Sources (20ºC [68ºF] and 1 atmosphere). 3) International Union of Pure and Applied Chemistry (IUPAC) (temperature 0 °C [273.15 K, 32 °F] and an absolute pressure of 100 kPa [14.504 psi, 0.986 atm]).
Standardized Emergency Management System (SEMS)	A system required by California Government Code and established by regulations for managing response to multiagency and multijurisdictional emergencies in California. SEMS consists of five organizational levels, which are activated as necessary: Field response, Local Government, Operational Area, Region and State.
Standardized Emergency Management System (SEMS) Guidelines	The SEMS guidelines are intended to assist those responsible for planning, implementing and participating in SEMS.
Standardized Emergency Management System (SEMS) Regulations	Regulations establishing the Standardized Emergency Management System (SEMS) based upon the Incident Command System (ICS) adapted from the system originally developed by the Firefighting Resources of California Organized for Potential Emergencies (FIRESCOPE) program including those currently in use by state agencies, the Multiagency Coordination System (MACS) as developed by FIRESCOPE program, the Operational Area concept and the Master Mutual Aid Agreement and related mutual aid systems. Regulations are found at TITLE 19. DIVISION 2. Chapter 1, § 2400 et. Seq.
State	When capitalized, refers to any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands and any possession of the United States. See Section 2 (14), Homeland Security Act of 2002, Public Law 107−296, 116 Stat. 2135 (2002).
State Operations Center (SOC)	The SOC is operated by the California Emergency Management Agency at the State Level in SEMS. It is responsible for centralized coordination of State resources in support of the three Cal OES Administrative Regional Emergency Operations Centers (REOCs). It is also responsible for providing updated situation reports to the Governor and legislature.

State Warning Center, California State Warning Center, Cal OES Warning Center	The Cal OES Warning Center facilitates emergency communications with government agencies at all levels. The California State Warning Center monitors seismic activity, weather and other conditions that could cause a disaster and is the central reporting office for any release or threatened release of a hazardous material. The California State Warning Center is the initial contact point in the State to initiate coordination and begin to mobilize Federal, State and local agencies during a disaster.
Storage	Containment of hazardous materials on a temporary basis in such a manner as to not constitute disposal of such materials.
Strategy	The general plan or direction selected to accomplish incident objectives.
Strict Liability	The responsible party is liable even though they have exercised reasonable care.
Sublimation	When matter undergoes a phase transition directly from a solid to gaseous form, or vapor, without passing through the more common liquid phase between the two.
Sulfur Mustard (H)	A *vesicant* chemical warfare agent synthesized during WWI, there are two derivatives H, and HD. See also “Mustard”.
Superfund Amendments & Reauthorization Act (SARA)	Created for the purpose of establishing Federal statutes for right-to-know standards, emergency response to hazardous materials incidents, re-authorized the Federal superfund, and mandated States to implement equivalent regulations/requirements.
Support Zone	The area outside of the contamination reduction zone. Equipment and personnel are not expected to become contaminated in this area. This is the area where resources are assembled to support the hazardous materials operation.
Surface Impoundment	A natural depression, human made excavation or diked area designed to hold an accumulation of liquid wastes or waste containing free liquids.
Symptoms	Functional evidence of disease or of conditions, or a change in conditions that indicate a mental or bodily state.
Synergistic Effect	The combined effect of two chemicals that is greater than the sum of the effect of each agent alone.
System	An integrated combination of people, equipment and processes that work in a coordinated manner to achieve a specific desired output under specific conditions.
Systemic	Pertaining to the internal organs and structures of the body.
Systemic Toxic Exposure	Toxic effects to the body as a whole spreading via the bloodstream and often displaying delayed symptoms.
Tabun (GA)	A nerve agent developed by the Germans during WWII that has an LC_{50} skin

	dose of 200-400 mg.
Tear Agent	An incapacitating agent that produces irritating or disabling effects that rapidly disappear within minutes after exposure; A Lacrimator.
Technical Assistance	Support provided to State, tribal and local jurisdictions when they have the resources but lack the complete knowledge and skills needed to perform a required activity (such as mobile-home park design or hazardous material assessments).
Technical Specialist	Personnel with special skills that can be used anywhere within the SEMS organization. No minimum qualifications are prescribed, as technical specialists normally perform the same duties during an incident that they perform in their everyday jobs and they are typically certified in their fields or professions.
Technical Specialist – Hazardous Materials Reference	Person assigned to document activities of the Hazardous Material Team and gather information relevant to the chemicals involved and their hazards.
Teratogen	A substance or agent that can result in malformations of a fetus.
Teratogenicity	Ability to produce birth defects.
Termination	That portion of incident management where personnel are involved in documenting safety procedures, site operations, hazards faced, and lessons learned from the incident. Termination is divided into three phases- Debriefing, Post-Incident analysis, and Critique. (See “Post-Incident Analysis”.)
Terrorism	Involves an act dangerous to human life or potentially destructive of critical infrastructure or key resources; is a violation of the criminal laws of the United States or of any State or other subdivision of the United States in which it occurs; and is intended to intimidate or coerce the civilian population, or influence or affect the conduct of a government by mass destruction, assassination, or kidnapping. See Section 2 (15), Homeland Security Act of 2002, Public Law 107−296, 116 Stat. 2135 (2002).
Thieving Rod	A glass rod used like a COLIWASSA, except the liquid is contained in the tube by a vacuum pressure.
Threat	An indication of possible violence, harm, or danger.
Threshold	The point where a physiological or toxicological effect begins to be produced by the smallest degree of stimulation.
Threshold Limit Value (TLV)	The value for an airborne toxic material that is to be used as a guide in the control of health hazards and represents the concentration to which nearly all workers may be exposed 8 hours per day over extended periods of time without adverse effects.
Threshold Limit Value – Ceiling (TLV-C)	The concentration that should not be exceeded during any part of the working exposure.

Threshold Limit Value – Short Term Exposure Limit (TLV-STEL)	A 15-minute time-weighted coverage exposure which should not be exceeded at any time during a work day, nor repeated more than 4 times per day, even if the 8-hour time-weighted average is within the Threshold Limit Value (TLV).
Threshold Limit Value – Time Weighted Average (TLV-TWA)	An exposure level under which most people can work consistently for 8 hours a day, day after day, with no harmful effects.
Threshold Planning Quantity (TPQ)	The quantity designated for each extremely hazardous substance that triggers a required notification by facilities to the State emergency response commission that such facilities are subject to reporting under SARA Title III.
Tools	Those instruments and capabilities that allow for the professional performance of tasks, such as information systems, agreements, doctrine, capabilities and legislative authorities.
Totally Encapsulated Suits	Special protective suits made of materials that prevent toxic or corrosive substances or vapors from coming in contact with the body. (See “Fully Encapsulated Suit”.)
Toxic	Poisonous; relating to or caused by a toxin; able to cause injury by contact or systemic action to plants, animals or people.
Toxic Chemicals	US EPA uses this term for chemicals whose total emissions and releases must be reported annually by owners and operators of certain facilities that manufacture, process or otherwise use a listed toxic chemical as identified in SARA Title III.
Toxicity	The degree to which a substance is able to damage an exposed organism. Toxicity can refer to the effect on a whole organism, such as an animal, bacterium, or plant, as well as the effect on a substructure of the organism.
Toxin	A chemical substance that is a product of a living organism (plant, animal or bacteria) which produce adverse or lethal effects on humans and animals; True toxins are protein like, more or less unstable particularly on contact with air, and require a short incubation or latent period to produce symptoms.
Traffic Control/Crowd Control	Action(s) by law enforcement to secure and/or minimize exposure of the public to unsafe conditions resulting from emergency incidents, impediments and congestion.
Transmissible Agent	Pathogens that can spread disease from person to person.
Treatment	Any method, technique, or process which changes the physical, chemical, or biological character or composition of any hazardous waste, or removes or reduces its harmful properties or characteristics for any purpose.
Tribal	Any Native American Indian tribe, band, nation, or other organized group or community, including any Alaskan Native Village as defined in or established pursuant to the Alaskan Native Claims Settlement Act (85 stat. 688) [43 U.S.C.A. § 1601 et seq.].

Type	1) An ICS resource classification that refers to capability. Type 1 is generally considered to be more capable than Types 2, 3, or 4, respectively, because of size, power, capacity, or (in the case of incident management teams) experience and qualifications. 2) In ICS can also refer the size and complexity of an incident. Type 5 is minor and routine. Type 1 is a very large incident with national repercussions. 3) A class, kind, or group sharing one or more characteristics; category. 4) A variety or style of a particular class or kind of things.
Unified Command (UC)	An ICS application used when more than one agency has incident jurisdiction or when incidents cross political jurisdictions. Agencies work together through the designated members of the UC, often the senior person from agencies and/or disciplines participating in the UC, to establish a common set of objectives and strategies and a single IAP.
Unit	The organizational element with functional responsibility for a specific incident planning, logistics, or finance/administration activity.
United Nations (UN) Identification Number	When UN precedes a four-digit number, it indicates that this identification number is used internationally to identify a hazardous material.
Upper Explosive Limit (UEL)	The highest concentration of the material in air that can be detonated.
Upwind	In or toward the direction from which the wind blows.
V Agents	Persistent, highly toxic nerve agents developed in mid 1950's and absorbed primarily through the skin; An example is VX with a skin LC_{50} dose of 10-50 mg.
Vaccine	A preparation of killed or attenuated infective toxic agent used as an inoculation to produce active artificial immunity.
Vapor	An air dispersion of molecules of a substance that is normally a liquid or solid at standard temperature and pressure.
Vapor Dispersion	The movement of vapor clouds in air due to turbulence, gravity, spreading, and mixing.
Vapor Protective Footwear	The ensemble element of the protective ensemble that provides chemical protection and physical protection to the feet, ankles, and lower legs. (NFPA 1991)
Vapor Protective Gloves	The ensemble element of the protective ensemble that provides chemical protection to the hands and wrists. (NFPA 1991)
Vapor Protective Suit	The ensemble garment element of the protective ensemble that provides chemical protection to the upper and lower torso, head, arms, and legs. (NFPA 1991)

Vesicant	A vapor or liquid chemical threat to dermal and eyes intended to cause severe burns and blistering with delayed effects appearing hours after contact. Prolong exposure causes bone marrow damage. There are no acceptable and reliable antidotes.
Viable	Capable of living.
Viral Agent	A virus organism that brings about changes in healthy hosts cell such that the hosts cell usually dies.
Virulence	Refers to the relative infectiousness of an organism or its ability to overcome the defenses of the host.
Virus	Extremely small submicroscopic agents from 0.02µm to 0.2µm with a nucleocapsid protein coat or lipid/glycoprotein coat, containing genetic RNA or DNA material, but not having a nucleus and incapable of duplicating itself through cell division; Invades a host cell and takes over the nucleus in order to replicate.
Vital Records	The essential agency records that are needed to meet operational responsibilities under national security emergencies or other emergency or disaster conditions (emergency operating records), or to protect the legal and financial rights of the Government and those affected by Government activities (legal and financial rights records).
Volunteer	For purposes of NIMS, a volunteer is any individual accepted to perform services by the lead agency (which has authority to accept volunteer services) when the individual performs services without promise, expectation, or receipt of compensation for services performed. See 16 U.S.C. § 742f(c) and 29 CFR § 553.101.
Vomiting Agent	An incapacitating agent that encourages uncontrolled vomiting, nausea, coughing, sneezing, tearing, and pain to the affected areas, but rarely causes death.
Vulnerability	The susceptibility of life, the environment, and/or property, to damage by a hazard.
Warm Zone	See “decontamination zone”, “contamination reduction zone”, “yellow zone”, or “limited access zone” in other documents.
Water Reactive	Having properties of, when contacted by water, reacting violently, generating extreme heat, burning, exploding, or rapidly reacting to produce an ignitable, toxic, or corrosive mist, vapor, or gas.

ATTACHMENT 3

On-Scene Checklist

- IF THERE IS A HAZARDOUS MATERIAL EMERGENCY, THIS CHECKLIST CAN BE USED AS A GENERAL **GUIDELINE** FOR ON-SCENE RESPONSE ACTIONS.
- THE FOLLOWING TASKS ARE INCIDENT-SPECIFIC AND THE ORDER OF COMPLETION SHOULD BE BASED ON THE PRIORITIES OF PROTECTING PUBLIC HEALTH, THE ENVIRONMENT, AND PROPERTY:

DISCOVERY AND NOTIFICATION

☑ **Insure safety of life and health.**

- **If necessary, rescue victims - ONLY if rescue can be done safely.**
- **Provide emergency medical care, including decontamination of exposed persons.**
- **Determine need for protective actions (e.g., evacuation or sheltering in place).**

☑ **Isolate the area and deny entry.**

☑ **Stay upwind and upgrade.**

☑ **Eliminate any ignition sources, and avoid contact with the spilled substance.**

☑ **Identify the spilled substance(s), and the potential hazards.**

☑ **Notify the appropriate agencies.**

- **(***without impeding immediate control of the release or medical measures***)**

☑ **Request appropriate response resources and assistance (contractors, agencies).**

☑ **Activate Incident Command System (ICS).**

☑ **Assign ICS roles and responsibilities.**

☑ **Establish Incident Command Post.**

☑ **Prepare Site Safety Plan.**

☑ **Initiate Investigation.**

☑ **Liaison with government agencies (local, tribal, State, Federal) that have jurisdiction.**

PRELIMINARY ASSESSMENT AND INITIAL ACTION

- ☑ **Control the source (stop the discharge).**
- ☑ **Minimize the spread.**
- ☑ **Assess the situation.**
  - **Determine extent of spill;**
  - **Determine objectives and strategies;**
  - **Establish immediate priorities; and**
  - **Prepare Incident Action Plan (IAP).**
- ☑ **Implement IAP.**
- ☑ **Protect sensitive habitats and species.**
- ☑ **Initiate Natural Resources Damage Assessment (NRDA).**

CONTAINMENT, RECOVERY, CLEANUP, & WASTE MANAGEMENT

- ☑ **Contain the spread.**
- ☑ **Recover spilled product.**
- ☑ **Mitigate impacted areas.**
- ☑ **Collect and share pertinent information.**
- ☑ **Continually reassess situation; adjust IAP as needed.**
- ☑ **Manage and coordinate response actions and operations.**
- ☑ **Ensure proper disposition of recovered product and contaminated materials.**
- ☑ **Demobilize response equipment and personnel.**

Documentation, Cost Recovery, and Closure

- ☑ **Compile response documentation.**
- ☑ **Recover response costs.**
- ☑ **Develop plan for site rehabilitation and/or restoration.**
- ☑ **Rehabilitate and/or restore natural resources and property; monitor recovery.**
- ☑ **Recover damages to natural resources and property.**
- ☑ **Close incident; release Responsible Party from further cleanup action.**

ATTACHMENT 4

☎ IMPORTANT TELEPHONE NUMBERS ☎

FOR **IMMEDIATE** NOTIFICATION PURPOSES,
THE FOLLOWING AGENCIES MUST BE CALLED ACCORDINGLY:

- **Local Government……..…… 911** (*or appropriate local number*)
- **State Government (California State Warning Center)…… (800) 852-7550 or (916) 845-8911**
- **Federal Government (National Response Center)…… (800) 424-8802 or (202) 267-2675**

If the call to 911 does NOT contact the Certified Unified Program Agency/Administering Agency/Program Agency (CUPA/AA/PA), then the CUPA/AA/PA must also be notified.

OTHER TELEPHONE NUMBERS: State Agencies

AGENCY	PHONE NUMBER	AGENCY ROLE
Air Resources Board (ARB)	VIA THE CALIFORNIA STATE WARNING CENTER: (800) 852-7550	Protects and enhances the ambient air quality of the state, through local and regional air pollution authorities.
San Francisco Bay Conservation & Development Commission (BCDC)	VIA THE CALIFORNIA STATE WARNING CENTER: (800) 852-7550	Responsible for planning, permitting and enforcement of development within San Francisco, San Pablo, & Suisun Bays and within a 100-foot band of surrounding shoreline; issues emergency permits to expedite response activities and provides technical advice during an oil/hazardous materials spill.
California Coastal Commission (CCC)	VIA THE CALIFORNIA STATE WARNING CENTER: (800) 852-7550	Responsible for planning, permitting and enforcement of development of California's coastline; issues emergency permits to expedite response activities and provides technical advice during an oil/hazardous materials spill.

Department of Fish & Wildlife, Office of Spill Prevention & Response (OSPR)	CALIFORNIA STATE PARKS NORTHERN COMMAND CENTER (NORCOM): (916) 358-1300	Natural Resource Trustee for the state of California; ensures that fish, wildlife and their habitats are protected & any issues are addressed by the IC/UC during response and cleanup phases; ensures that cleanup, remediation and restoration are done appropriately.
Division of Oil, Gas, & Geothermal Resources (DOGGR)	• **District #1** (Cypress)**:** (714) 816-6847 • **District #2** (Ventura)**:** (805) 654-4761 • **District #3** (Santa Maria)**:** (805) 937-7246 • **District #4** (Bakersfield)**:** (661) 322-4031 • **District #5** (Coalinga)**:** (209) 935-2941 • **District #6** (Sacramento)**:** (916) 322-1110	Responsible for preventing damage to life, health, property, and the environment resulting from oil, gas and geothermal drilling, production, or plugging and abandonment operations.
Department of Public Health (CDPH)	VIA THE CALIFORNIA STATE WARNING CENTER: (800) 852-7550	Ensures the safety and reliability of the public water supplies; ensures the safety of interim/emergency water supplies; interfaces with local governments for safe drinking water, food, and medical.
Department of Toxic Substances Control (DTSC)	Normal Business Hours (916) 255-6504 After Normal Business Hours VIA THE CALIFORNIA STATE WARNING CENTER: (800) 852-7550	Protects human health and the environment; provides local assistance from requests via the Hazardous Substance Account; regulatory authority for emergency removals.
	TOXICS HOTLINE: (800) 698-6942	To report violations of hazardous waste laws.

NOTE: *ALL STATE AGENCIES can be accessed via the California State Warning Center at (800) 852-7550*

OTHER TELEPHONE NUMBERS: Federal Agencies

U.S. Environmental Protection Agency, Region IX (US EPA)	**General Number:** (800) 321-7349 or (415) 947-8000	**FOSC** for inland hazardous materials and oil spills; ensures that response actions are taken to control and remove discharges of oil and hazardous materials into the inland zone. Under CERCLA/OPA '90, provides limited, pre-declaration assistance for hazardous materials release assessment and cleanup.
	US EPA SPILL PHONE: (415) 947-4400	For spills of oil or hazardous materials.
	SARA TITLE III HOTLINE: (800) 424-9346	For questions on the federal Emergency Planning and Community Right-to-Know Act.
U.S. Coast Guard (USCG)	**SECTORS:** • **San Francisco**: (415) 399-3547 • **Los Angeles/ Long Beach**: (310) 521-3805 • **San Diego**: (619) 278-7033	**FOSC** for marine hazardous materials and oil spills; ensures that response actions are taken to control and remove discharges of oil and hazardous material releases into the coastal zone; access to OPA '90 (oil) and CERCLA (hazardous materials) funding; control of navigable waterways.
Federal Emergency Management Agency, Region IX (FEMA)	24 Hour Duty Officer (510) 627-7250	Administers the Federal Disaster Assistance Program; supports state and local response efforts upon request after declaration of an emergency; provides federal funding for hazardous materials response & cleanup efforts (ESF #10).
Regional Response Team IX	Via USCG Command (510) 437-3701	Call to request approval for use of Applied Response Technologies such as dispersants and surface-washing agents.

NOTE: ***ALL FEDERAL AGENCIES can also be accessed via the National Response Center at (800) 424-8802. Make sure you request the proper agency and region.***

Poison Control Center	(800) 222-1222	Provides: regional hospital capabilities for hazardous materials victims; poison/exposure information to hospital staff, emergency response personnel, and the general public; assist with drug identification for law enforcement agencies.
CHEMTREC	(800) 424-9300	Provides: emergency information for chemical releases & fire control measures; precautionary information; assist with chemical identification if unknown; notification of manufacturer and/or shipper.

IMPORTANT TELEPHONE NUMBERS
for EMERGENCY FUNDING

When accessing emergency funding. The Responsible Party (RP) is liable for the costs associated with the abatement and mitigation of a hazardous material spill. If the RP is unknown, unwilling or unable to provide a safe and adequate response, government may have to ensure the protection of the public health and safety, and the environment by providing abatement and mitigation of the spill. The following telephone numbers are provided to assist responding agencies.

Remember: Use the responsible party and local resources first, before calling on State and Federal resources!

State:

IMPACT	AGENCY AND FUND NAME	TELEPHONE NUMBER
Human Health and **Environment**	**Department of Toxic Substances Control** • Emergency Reserve Account	(916) 255-6504 or (800) 260-3972 … ask for the DTSC Duty Officer
Illegal Drug Labs	**Department of Toxic Substances Control** • Illegal Drug Lab Cleanup Account	(916) 255-6504 or (800) 260-3972 … ask for the DTSC Duty Officer
Fish, Wildlife, and/or **Habitat**	**Department of Fish and Wildlife** • Fish and Wildlife Pollution Account	(916) 358-1300 California State Parks Northern Command Center (NORCOM)
Marine Oil Spill	**Oil Spill Prevention and Response** • Oil Spill Response Trust Fund	(916) 358-1300 California State Parks Northern Command Center (NORCOM)
Surface and Groundwater	**State Water Resources Control Board** • Water Pollution Cleanup and Abatement Account	(916) 341-5671

NOTE: *ALL STATE AGENCIES can be accessed via the California State Warning Center at (800) 852-7550*

Federal:

IMPACT	AGENCY AND FUND NAME	TELEPHONE NUMBER
• **Oil Spill**	Oil Spill Liability Trust Fund	Accessed by the FOSC (US EPA or USCG)
• **Hazardous Materials**	Superfund (CERCLA)	Accessed by the FOSC (US EPA or USCG)

NOTE: *ALL FEDERAL AGENCIES can be accessed via the National Response Center at (800) 424-8802.*

ATTACHMENT 5

Hazardous Materials Responder

Levels of Training

Introduction

According to federal (29 CFR 1910.120) and state (8 CCR 5192) regulations, there are five levels of "employees who participate, or are expected to participate, in emergency response....". These are minimum levels of training and should be considered the basis for all responders. Training should be based on the hazards that are expected to be encountered, and higher degrees of initial and continuing training are recommended.

FIRST RESPONDER (AWARENESS LEVEL- 8 CCR § 5192(q)(6)(A))

First Responder, Awareness Level (FRA): First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

- An understanding of what hazardous substances are, and the risks associated with them in an incident.
- An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.
- The ability to recognize the presence of hazardous substances in an emergency.
- The ability to identify the hazardous substances, if possible.
- An understanding of the role of the first responder awareness individual in the employer's emergency response plan (including site security and control), and the U. S. Department of Transportation's Emergency Response Guidebook.
- The ability to realize the need for additional resources, and to make appropriate notifications to the communication center.

FIRST RESPONDER (OPERATIONS LEVEL- 8 CCR § 5192(q)(6)(B))

First Responder, Operations Level (FRO): First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They

are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. First responders at the operational level shall have received at least eight hours of training or have had sufficient experience to objectively demonstrate competency in the following areas in addition to those listed for the awareness level; and the employer shall so certify:

- Knowledge of the basic hazard and risk assessment techniques.
- Know how to select and use proper PPE provided to the first responder operational level.
- An understanding of basic hazardous materials terms.
- Know how to perform basic control, containment, and/or confinement operations and rescue injured or contaminated persons within the capabilities of the resources and PPE available with their unit.
- Know how to implement basic equipment, victim, and rescue personnel decontamination procedures.
- An understanding of the relevant standard operating procedures and termination procedures.

HAZARDOUS MATERIALS TECHNICIAN – (8 CCR § 5192(q)(6)(C))

Hazardous Materials Technician: Hazardous materials technicians are individuals who respond to releases or potential releases of hazardous substances for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch, or otherwise stop the release of a hazardous substance. Hazardous materials technicians shall have received at least 24 hours of training of which 8 hours shall be equivalent to the first responder operations level and in addition have competency in the following areas; and the employer shall so certify:

- Know how to implement the employer's emergency response plan.
- Know the classification, identification, and verification of known and unknown materials by using field survey instruments and equipment.
- Be able to function within an assigned role in the ICS.
- Know how to select and use proper specialized chemical PPE provided to the hazardous materials technician.
- Understand hazard and risk assessment techniques.
- Be able to perform advanced control, containment, and/or confinement operations and rescue injured or contaminated persons within the capabilities of the resources and PPE available with the unit.
- Understand and implement equipment, victim, and rescue personnel decontamination procedures.
- Understand termination procedures.
- Understand basic chemical and toxicological terminology and behavior.

HAZARDOUS MATERIALS SPECIALIST – (8 CCR § 5192(q)(6)(D))

Hazardous Materials Specialist: Hazardous materials specialists are individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist would also act as the site liaison with Federal, state, local, and other government authorities in regards to site activities. Hazardous materials specialists shall have received at least 24 hours

of training equal to the technician level and in addition have competency in the following areas; and the employer shall so certify:

- Know how to implement the local emergency response plan.
- Understand classification, identification and verification of known and unknown materials by using advanced survey instruments and equipment.
- Know of the state emergency response plan.
- Be able to select and use proper specialized chemical PPE provided to the hazardous materials specialist.
- Understand in-depth hazard and risk techniques.
- Be able to perform specialized control, containment, and/or confinement operations within the capabilities of the resources and PPE available.
- Be able to determine and implement decontamination procedures.
- Have the ability to develop a site safety and health control plan.
- Understand chemical, radiological, and toxicological terminology and behavior.

INCIDENT COMMANDER/ON-SCENE MANAGER – (8 CCR § 5192(q)(6)(E))

Incident Commander/On-Scene Manager: Incident commanders, who will assume control of the incident scene beyond the first responder awareness level, shall receive at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas; and the employer shall so certify:

- Know and be able to implement the employer's incident command system.
- Know how to implement the employer's emergency response plan.
- Know and understand the hazards and risks associated with employees working in chemical protective clothing.
- Know how to implement the local emergency response plan.
- Know of the state emergency response plan and of the Federal Regional Response Team.
- Know and understand the importance of decontamination procedures.

All of the above must have annual refresher training. Upon completion of the above levels of training, each participant receives a written certificate. Hazardous materials responders must have one or more of the above levels of training, depending on their responsibilities at an emergency response. In some instances, proof of training is required before entering a response or cleanup site; therefore, be prepared to have a copy of the certificate(s) or a card showing proof of the requisite training. Public agency employees that have the potential of being involved in a hazardous materials response or cleanup site should have, at the minimum, First Responder (Awareness Level) Training.

** *Do not make assumptions on the level of training that the responders might have* **

Personal Protective Equipment

Introduction

Personal Protective Equipment (PPE) is required to protect a person from chemical, biological, radiological, and physical hazards that may be encountered at a hazardous materials incident. Adequate personal protective equipment should protect the respiratory system, skin, eyes, face, hands, feet, head, body, and hearing. Personal protective equipment includes both personal protective clothing and respiratory protection. PPE is divided into four categories based on the degree of protection needed. The following descriptions are not definitive. Refer to appropriate documents for a complete description (e.g.; US OSHA regulations 29 CFR § 1910.120, NIOSH, ACGIH, and NFPA standards address PPE selection in greater detail for response to different types of hazardous materials).

An unidentified product with unknown properties should be approached only in Level A or B protection. Never use personal protection equipment unless you are properly trained and feel comfortable with its use. PPE does not protect against fire or explosion unless additional types of protection are used.

Selection of the appropriate PPE is a complex process which must take into consideration a variety of factors, including, but not limited to:

- Identification of the hazards, or suspected hazards
- Routes of exposure (inhalation, skin absorption, ingestion, skin or eye contact)
- Performance of the PPE materials in providing a barrier to the hazards
- Break-through time of the PPE
- Responder's tasks and duration
- Temperature

Level A is to be selected when the greatest level of skin, respiratory, and eye protection is required. Level A protection should be used when:

- The hazardous substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on either the measured (or potential for) high concentration of atmospheric vapors, gases, or particulates; or the site operations and work functions involve a high potential for splash, immersions, or exposure to unexpected vapors, gases, or particulates that are harmful to the skin or are capable of being absorbed through the skin;
- Substances with a high degree of hazard to the skin are known or suspected to be present and skin contact is possible; and
- Operations are being conducted in confined, poorly ventilated areas, and the absence of conditions requiring Level A protection has not yet been determined.

Primary required equipment are:

- Positive pressure, full face-piece, self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA; and
- Totally encapsulating chemical-protective suit.

Other required equipment are:

- Inner and outer chemical resistant gloves and chemical resistant boots with steel toe and shank.

Optional equipment are:

- Long underwear, hardhat, disposable suit, gloves, boots, and coveralls.

Level B is to be selected when the highest level of respiratory protection is necessary, but a lesser level of skin protection is needed. Level B should be used when:

- The type and atmospheric concentration of substances have been identified and require a high level of respiratory protection, but less skin protection;
- The atmosphere contains less that 19.5 percent oxygen; or
- The presence of incompletely identified vapors or gasses is indicated by a direct-reading organic vapor detection instrument, but vapors and gases are not suspected of containing high levels of chemicals harmful to the skin or capable of being absorbed through the skin. Note: This involves atmospheres with immediately dangerous to life and health (IDLH) concentrations of specific substances that present severe inhalation hazards and that do not represent severe skin hazards; or that do not meet the criteria for use of air-purifying respirators.

Primary required equipment are:

- Positive pressure, full face-piece, self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA;
- Hooded chemical-resistant clothing (overalls and long-sleeved jacket, coveralls, one or two piece chemical-splash suit, and disposable chemical-resistant overalls).

Other required equipment are:

- Inner and outer chemical resistant gloves, and chemical resistant boots with steel toe and shank.

Optional equipment are:

- Coveralls, hardhat, boot covers, and face shield.

Level C is to be selected when respiratory protection can be provided with respirators and skin contact with the material will not cause an adverse affect or be absorbed through any exposed skin. Level C protection should be used when:

- The atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect or be absorbed through any exposed skin;
- The types of air contaminants have been identified, concentrations measured, and an air-purifying respirator is available that can remove the contaminants; and
- All criteria for the use of air-purifying respirators are met.

Primary required equipment are:

- Full-face or half-mask, air purifying respirators; and
- Hooded chemical-resistant clothing (overalls and long sleeved jacket,

coveralls, one or two piece chemical-splash suit, and disposal chemical-resistant overalls).

Other required equipment are:

- Inner and outer chemical resistant gloves.

Optional equipment are:

- Coveralls, chemical resistant boots with steel toe and shank, boot covers, hardhat, escape mask, and face shield.

Level D is a work uniform affording minimal protection, used for nuisance contamination only. Level D protection should be used when:

- The atmosphere contains no known hazard; and
- Work conditions preclude splashes, immersion, or the potential for unexpected inhalation of, or contact with, hazardous levels of any chemicals.

Primary required equipment are:

- Coveralls, chemical resistant boots/shoes with steel toe and shank.

Optional equipment are:

- Gloves, outer boots, safety glasses or chemical resistant goggles, hardhat, escape mask, and face shield.

An unidentified product with unknown properties should be approached only in Level A (vapor protective suit) or B (liquid splash protective suit) positive pressure protection with self-contained breathing apparatus (SCBA). Never use personal protection equipment unless you are properly trained and feel comfortable with its use. Hazardous materials PPE does not protect against fire or explosion unless additional types of protection are used.

NOTE: Combinations of personal protective equipment, other than those described for Levels A, B, C, and D protection, may be more appropriate and may be used to provide the proper level of protection.

Specialized Equipment

Hazardous material incidents often require specialized equipment to accomplish the task of abatement of the release or threatened release. Some of the resources needed are readily available to emergency responders such as sand, water and foam from a fire engine, or the DOT Emergency Response Guidebook. Other forms of equipment are highly specialized and not widely distributed. Examples include sophisticated monitoring and sampling devices and totally encapsulating suits.

The space constraints of this Plan do not permit a thorough discussion of Specific equipment used in hazardous material incidents. Equipment use and familiarity should be addressed during responder training. All agencies are encouraged to ascertain what equipment is available for hazardous material response, both within their organization or otherwise acquirable.

ATTACHMENT 6

Hazardous Materials Control Zones

Introduction

Control zones are the geographical areas within the control lines set up at a hazardous material incident. The size and configuration of the zones are not static and should be constantly re-evaluated based on factors such as wind direction, release rate, etc.

Control Zones

The three most commonly used terms for the control zones are as follows:

Exclusion Zone - that area immediately around the spill where contamination occurs or could occur. The innermost of the three zones at a site. Special protection is required for all personnel while in this zone (formerly referred to as the Hot Zone, or Red Zone).

Contamination Reduction Zone - that area between the Exclusion Zone and the Support Zone. This zone contains the personnel decontamination station and may require a lesser degree of personnel protection than the Exclusion Zone. This area separates the contaminated area from the Support Zone and acts as a buffer to reduce contamination of the Support Zone (formerly referred to as the Warm Zone, or Yellow Zone).

Support Zone - the clean area outside of the Decontamination Control line where equipment or personnel are not expected to become contaminated and where special protective clothing is not required. This is where resources immediately supporting the hazardous material operation are located. The Command Post and media-briefing site are located within the support zone (formerly referred to as the Cold Zone, or green Zone).

SPECIAL NOTE ON THE USE OF EXPOSURE VALUES: The effect of a hazardous substance is based on a reaction of exposed/unprotected organisms or ecosystems to exposure/contamination. Various criteria are used to establish exposure limits to chemicals, such as the threshold limit value (TLV), short-term exposure limit (STEL), immediately dangerous to life and health (IDLH), permissible exposure limits (PEL), emergency response planning guidelines (ERPG), etc. Recommended protection may vary widely based on the methodology used to determine these values. Care should be taken in using exposure values as the primary determinant of zone locations and protective action decisions. Victims can be allergic (hypersensitive), old, young, or infirm, and thus be more at risk from exposure.

Activities within the Control Zones

Within the **exclusion zone**, responsibilities would include, but not be limited to:

- Identifying the material(s) involved or threatened to be released;
- Conducting rescue, if appropriate; and
- Containing and abating the release or threatened release.
- Cleanup and recovery operations.

Within the **contamination reduction zone**, responsibilities would include, but not be limited to:

- Decontamination of victims and emergency personnel; and
- Establishing a safe refuge area.

Within the **support zone**, responsibilities would include, but not be limited to:

- Providing for emergency medical care;
- Providing an area for resources and staging;
- Controlling access to all zones; and
- Maintaining contact with the Incident Commander at the Incident Command Post.

Outside of the control zones, responsibilities would include, but not be limited to:

- Providing evacuation of endangered persons.

Decontamination

Decontamination (or *contamination reduction*) is the physical and/or chemical process of reducing and preventing the spread of contamination from persons and equipment used at a hazardous material incident.

At every incident involving hazardous materials there is a possibility that response personnel and their equipment will become contaminated. The contaminant poses a threat, not only to the persons contaminated, but also to other personnel who may subsequently have contact with them or the equipment.

Incident responders should have an established procedure to minimize contamination or contact, to limit migration of contaminants, and to properly dispose of contaminated materials. Decontamination procedures should be established upon arrival at the scene, should provide for an adequate number of decontamination personnel, and should continue until the incident commander determines that decontamination procedures are no longer required. Decontamination of victims may be required.

Decontamination consists of removing the contaminants by chemical or physical processes. The conservative action is always to assume contamination has occurred and to implement a thorough, technically sound decontamination procedure until it is determined or judged to be unnecessary.

Decontamination
(continued)

Procedures for all phases of decontamination must be developed to reduce the possibility of spreading contamination to personnel and equipment. If protective equipment is grossly contaminated, use appropriate decontamination methods for the chemicals encountered. Initial procedures should be upgraded or downgraded as additional information is obtained concerning the type of hazardous materials involved, the degree of hazard, and the probability of exposure of response personnel and equipment.

ATTACHMENT 7

Protective Actions

Introduction

When a circumstance exists where a hazardous atmosphere may place the public in danger, there are **two** main options available to emergency responders:

1. **Evacuation**; or
2. **Sheltering-In-Place** (also known as in-place protection).

The Incident Commander may have to decide whether an evacuation of an area or a sheltering in-place is warranted. The need to take some form of protective action is a decision that must be determined quickly and often with a lack of definitive data to assist the decision-makers.

Evacuations have the benefit of removing impacted individuals from the area, but may result in a greater exposure than by allowing the individuals to remain in a protected area within the exposure zone.

Sheltering-In-Place activities operate on the theory that toxic vapors pass over structures without moving inside them. Research and accident investigations indicate that staying indoors may provide safe haven during toxic cloud releases; however, sustained continuous releases may eventually filter into a structure and endanger the occupants.

Which to Choose?

To choose either **evacuation** or **sheltering in-place**, the following information should be obtained:

- The hazardous material(s) involved, its (their) characteristics, amount, condition, configuration location, level of certainty of information, and other relevant data;
- The effect of present and predicted meteorological conditions on the control and movement of hazardous materials and feasibility of protective actions;
- The capability to communicate with both the population at risk and emergency response personnel during and after the emergency;
- The capabilities and resources of the response organizations to implement, control, monitor, and terminate the protective action;

- The population at risk and its capability and resources to implement the recommended protective action; and

- The time factors involved in the emergency and their effect on the selected protective action.

Authority

In California, the authority to close an area is generally vested in persons with certain **peace officer** powers or the **local health officer**, by authority of Section § 409.5 (a) and (c) of the California Penal Code.

Public highways may be closed for the protection of the public by the department of Public Works, the California Highway Patrol, county board of supervisors, police departments, or the sheriff's office by authority of various sections of the California Vehicle and Streets and Highways Codes.

In situations where the Governor has declared a State of Emergency or local government has declared a local emergency, the appropriate official may authorize an evacuation as according to provisions of the California Government Code.

In some instances, specific state or local agencies, in conjunction with a court order, may be empowered to close or isolate an area.

The question of who actually orders an evacuation may be decided on a case-by-case basis. Issues to be considered are the ownership of the property; the level, type, and impact of the problem; operating agreements or plans; applicable court orders; statutory authorities; and any overlapping responsibilities. It is quite likely that concurrent, and perhaps even conflicting, responsibilities exist and should be worked out by mutual agreement. For more information, refer to Cal OESs' guidance document "*Legal Guidelines for Controlling Movement of People and Property During an Emergency*".

Termination

Similarly, the power to terminate an evacuation may be concurrent with several entities and it would be possible for those entities to have differing opinions and considerations as to when and where an area needs to be closed or to remain closed. Theoretically, one entity might terminate the closure and another re-institute it because of its particular concerns. This would be possible whenever concurrent powers are involved and where no operating agreement or plan defining those types or command decisions has been adopted by all of the concerned parties.

ATTACHMENT 8

Information Officer

The following are examples of information material to assist the Information Officer (IO):

Media right to access

In exercising their First Amendment rights, duly authorized representatives of the media (any news service, newspaper, or radio or television station or network) are allowed to enter a closed area, according to the California Penal Code § 409.5 (d).

All reasonable efforts should be made to accommodate members of the media in their collection of the news; however, "upon determination by authorized personnel (§ 409.5 of the Penal Code authorizes more than just police to close areas) that unrestricted access of press representatives to a disaster site will interfere with emergency operations, restrictions on media access may be imposed for only so long and only to such extent as is necessary to prevent actual interference, and members of the press must be accommodated with whatever limited access to site may be afforded without interference [Leiserson v. City of San Diego (Appellate.4 Dist.1986)]."

Further, "a sheriff has a statutory duty to enforce the laws of the state and maintain public order and safety, and such duty implicitly carries authority to limit public access to certain events, including discretion to permit or not permit press and reporters to cross police lines [Los Angeles Free Press, Inc. v. City of Los Angeles (1970)]." Members of the media should be aware that any personnel and/or equipment exiting the Exclusion Zone (Hot Zone) may be subject to decontamination. Access may also be restricted if a site is determined to be a crime scene.

Emergency Public Information Checklist

The following Emergency Public Information (EPI) Checklist is specific to hazardous material incidents and should be considered in addition to the basic EPI Checklist within a jurisdiction's emergency plan. EPI actions are initially taken by the On-Scene IO Team, using personnel assigned by the primary responding agency (additional EPI Staff may be requested from the jurisdiction). The EPI staff at the Emergency Operating Center (EOC) will be mobilized depending on the extent of the hazard. Media should be briefed periodically throughout the year on hazardous material incident response procedures and related EPI procedures.

NOTE: *According to ICS, all press releases **must** be cleared through the on-scene Incident Commander/Unified Command. The EOC Manager is authorized to release information about EOC issues only.*

Unidentified Material

☑ If the incident is in a heavy traffic area and alternate routes are available, notify media (radio) and request frequent announcements of instructions to avoid the area (coordinate announcements with responding law agency).

☑ Notify media with full explanation as soon as material has been identified (clear with Incident Commander and technical adviser to avoid unduly alarming or confusing the public).

☑ If traffic will not impede response efforts, simply respond to media inquiry as necessary.

Low Hazard/Confined Incident (No General Evacuation)

☑ If appropriate, notify media (primarily radio) that incident has occurred. Indicate alternate routes for traffic and request frequent announcements of instructions to avoid the area.

- Indicate nature of incident and precautions for the public.
- Release hotline number for public inquiries (if available and staffed).
- Indicate response agencies involved (coordinate with response agency IOs), cleanup efforts underway, and time frame for resumption of normal traffic patterns, if known.

High Hazard Incident (General Evacuation Requested/Mandatory)

- Release all of the above information.
- Release evacuation instructions to media (radio). Use established **Emergency Alert System (EAS)** procedures as appropriate.

- Release mass care information when known (coordinate with the care and Shelter Branch at the incident and the American Red Cross).

- Have medical/technical spokesperson(s) available to describe the nature of the toxic substance, possible symptoms, and precautions for the public to take.

☑ Hold media briefing(s) at scene where Incident Commander and medical/technical spokesperson can answer media questions. Arrange for Emergency Manager to hold similar media briefings at the EOC if needed. Spokespersons should be prepared to answer questions similar to those listed below. Suggested responses or cautions are given in quotations:

1. How many deaths/injuries were there? Any property damage?
2. What response agencies were involved?
3. Why was evacuation ordered? Why wasn't evacuation ordered? Number of persons evacuated.
4. What are the long-term effects on people and the environment? Note: Long-term studies have not been done on most chemicals. Be careful not to speculate.
5. What chemicals are involved? How toxic are they? What symptoms are produced? What are their normal uses? What precautions should residents take?
6. What company/agency was involved? Is legal action being considered? Unless a definite Yes or No answer is known, do not speculate. Indicate "I don't know at this time," or "That would be the responsibility of the _____ and I can't answer for them."
7. Has the company been involved in any other incidents recently?
8. Does this jurisdiction have a plan for response to such incidents? If not, why? If so, how did it work? Answer honestly. If there are areas of improvement needed, or if more time is required to fully evaluate response procedures used, so indicate.
9. What hazardous material incident training is required for your response personnel? How can such incidents be avoided in the future? Do not speculate. "This is a subject all the agencies involved, including the _____ company, will be delving into during the next few months. We all want to avoid incidents of this type if at all possible."

Sample News Releases

Sample Media Message #1: Unidentified Spill/Release in Heavy Traffic Area

This is _____ at the _____. An unidentified substance, which may be hazardous, has been spilled/-released at_____ (specific location). Please avoid the area, if possible, while crews are responding. The best alternate routes are _____. If you are already in the area, please be patient and follow the directions of emergency response personnel. The substance will be evaluated by specially trained personnel, and further information will be released as soon as possible.

Thank you for your cooperation.

Sample Media Message #2: Low Hazard/Confined Incident (No General Evacuation)

This is _____ at the _____. A small amount of _____, a hazardous substance, has been spilled/released at _____. Streets are blocked, traffic is restricted, and authorities have asked residents in the immediate _____ block area to evacuate. Please avoid the area. The material is slightly/highly toxic to humans and can cause the following symptoms (list): _____. If you think you may have come in contact with this material, you should (give health instructions and hotline number, if available). For your safety, please avoid the area if at all possible. Alternate routes are_____ and traffic is being diverted. If you are now near the spill/release area, please follow the directions of emergency response personnel. Cleanup crews are on the scene.

Thank you for your cooperation.

- *Suggest:* EAS use; request repeated broadcast.
- *Optional:* Close windows and vents. Do not use heaters or air conditioners and other in place protection information.

Sample Media Message #3: High Hazard (General Evacuation Requested/Mandatory)

This is _____ at the _____. A large/small amount of _____, a highly hazardous substance, has been spilled/released at _____. Because of the potential health hazard, authorities are requesting/requiring all residents within _____ blocks/miles of the area to evacuate. If you are (give evacuation zone boundaries), you and your family should/must leave as soon as possible/now. Go immediately to the home of a friend or relative outside the evacuation area or to _____. If you can drive a neighbor who has no transportation or notify friends or neighbors with hearing impairments, please do so. If you need transportation, call _____. Children attending the following schools (list): _____ will be evacuated to _____.

Do not drive to your child's school! Pick your child up from school authorities at the evacuation center. Listen to this station for further instructions.

- *Suggest:* EAS use; request repeated broadcast

- *Optional:* The material is highly toxic to humans and can cause the following symptoms: _____. If you are experiencing any of these symptoms, seek help at a hospital outside the evacuation area, or at the evacuation center at _____. To repeat, if you are in the area of _____, you should/must leave, for your own safety. Do not use your telephone unless you need emergency assistance.

Summary Statement for Media: Hazardous Material Incident

At approximately _____ a.m./p.m. today, a spill/release of a potentially hazardous substance was reported to this office by (a private citizen, city employee, etc.). (Police/fire) units were immediately dispatched to cordon off the area and direct traffic. The material was later determined to be (describe), a (hazardous/harmless) (chemical/substance/material/gas) which, upon contact, may produce symptoms of _____. Precautionary evacuation of the (immediate/X-block) area surrounding the spill was (requested/required) by (agency). Approximately (number) persons were evacuated. Cleanup crews from (agency/company) were dispatched to the scene, and normal traffic had resumed by (time), at which time residents were allowed to return to their homes. There were no injuries reported/or _____ persons, including (fire, police) personnel, were treated at area hospitals for _____ and (all, number) were later released. Those remaining in the hospital are in _____ condition. The response agencies involved were _____.

To be Adapted According to the Situation

ATTACHMENT 9

FIRESCOPE Hazardous Materials Module to the Incident Command System

Introduction

The Hazardous Materials organizational module is designed to provide an organizational structure that will provide necessary supervision and control for the essential functions required at virtually all hazardous materials incidents. This is based on the premise that controlling the tactical operations of companies and movement of personnel and equipment will provide a greater degree of safety and also reduce the probability of spreading of contaminants. The primary functions will be directed by the Hazardous Materials Group Supervisor, and all resources that have a direct involvement with the hazardous materials incident will be supervised by one of the functional leaders or the Hazardous Materials Group Supervisor. Additional information and documentation can be obtained from the following sources:

- State Board of Fire Services
  State Fire Marshal
  Training Division, Suite 410
  P.O. Box 944246
  Sacramento, CA 94244-2460
  (916) 262-1958
- Document Control
  Operations Coordination Center
  2524 Mulberry Street
  Riverside, Ca 92501
  (909) 782-4174

Position Checklists

Hazardous Materials Group Supervisor
(ICS-HM-222-1)

The Hazardous Materials Group Supervisor reports to the Operations Section Chief. The Hazardous Materials Group Supervisor is responsible for the implementation of the phases of the Incident Action Plan dealing with the Hazardous Materials Group operations. The Hazardous Materials Group Supervisor is responsible for the assignment of resources within the Hazardous Materials Group, reporting on the progress of control operations and the status of resources within the Group. The Hazardous Materials Group Supervisor directs the overall operations of the Hazardous Materials Group.

- Review common responsibilities.
- Ensure the development of Control Zones and Access Control Points and the placement of appropriate control lines.
- Evaluate and recommend public protection action options to the Operations Chief or Branch director (activated).

- Ensure that current weather data and future weather predictions are obtained.
- Establish environmental monitoring of the hazard site for contaminants.
- Ensure that a Site Safety Plan is developed and implemented.
- Conduct safety meetings with the Hazardous Materials Group.
- Participate, when requested, in the development of the Incident Action Plan.
- Ensure that recommended safe operational procedures are followed.
- Ensure that the proper Personal Protective Equipment is selected and used.
- Ensure that the appropriate agencies are notified through the Incident Commander.
- Maintain Unit/Activity Log (ICS Form 214).

Entry Leader
(ICS-HM-222-2)

Reports to the Hazardous Materials Group supervisor. The Entry Leader is responsible for the overall entry operations of assigned personnel within the Exclusion Zone.

- Review Common Responsibilities.
- Supervise entry operations.
- Recommend actions to mitigate the situations within the Exclusion Zone.
- Carry out actions, as directed by the Hazardous Materials Group Supervisor, to mitigate the hazardous materials release or threatened release.
- Maintain communications and coordinate operations with the Decontamination Leader.
- Maintain communications and coordinate operations with the Side Access Control Leader and the Safe Refuge Area Manager (if activated).
- Maintain communications and coordinate operations with Technical Specialist-Hazardous Materials Reference.
- Maintain control of the movement of people and equipment within the Exclusion zone, including contaminated victims.
- Direct rescue operations, as needed, in the Exclusion Zone.
- Maintain Unit/Activity Log (ICS Form 214).

Decontamination Leader
(ICS-HM-222-3)

Reports to the Hazardous Materials Group Supervisor. The Decontamination Leader is responsible for the operations of the decontamination element, providing decontamination as required by the Incident Action Plan.

- Review Common Responsibilities.
- Establish the Contamination Reduction Corridor(s).
- Identify contaminated people and equipment.
- Supervise the operations of the decontamination element in the process of decontaminating people and equipment.
- Maintain control of movement of people and equipment within the Contamination Reduction Zone.
- Maintain communications and coordinate operations with the Entry Leader.
- Maintain communications and coordinate operations with the Site Access Control Leader and the Safe Refuge Area Manager (if activated).
- Coordinate the transfer of contaminated patients requiring medical attention (after decontamination) to the Medical Group.
- Coordinate handling, storage, and transfer of contaminants within the Contamination Reduction Zone.
- Maintain Unit/Activity Log (ICS Form 214).

Site Access Control Leader
(ICS-HM-222-4)

Reports to the Hazardous Materials Group supervisor. The site Access Control Leader is responsible for the control of the movement of all people and equipment through appropriate access routes at the hazard site and ensures that contaminants are controlled and records are maintained.

- Review Common Responsibilities.
- Organize and supervise assigned personnel to control access to the hazard site.
- Oversee the placement of the Exclusion Control Line and the Contamination Control line.
- Ensure that appropriate action is taken to prevent the spread of contamination.
- Establish the Safe Refuge Area within the Contamination Reduction Zone and appoint a Safe Refuge Area Manager (as needed).
- Ensure that injured or exposed individuals are decontaminated prior to departure from the hazard site.
- Track the movement of persons passing through the Contamination Control Line to ensure that long-term observations are provided.
- Coordinate with the Medical Group for proper separation and tracking of potentially contaminated individuals needing medical attention.
- Maintain observations of any changes in climatic conditions or other circumstances external to the hazard site.
- Maintain communications and coordinate operations with the Entry Leader.
- Maintain communications and coordinate operations with the Decontamination Leader.
- Maintain Unit/Activity Log (ICS Form 214).

Assistant Safety Officer - Hazardous Materials
(ICS-HM-222-5)

Reports to the Incident Safety Officer as an Assistant Safety Officer and coordinates with the Hazardous Materials Group Supervisor (or Hazardous Materials Branch Director, if activated). The Assistant Safety Officer-Hazardous Materials coordinates safety related activities directly relating to the Hazardous Materials Group operations as mandated by 29 CFR, Part 1910.120 and applicable state and local laws. This position advises the Hazardous Materials Group Supervisor (or Hazardous Materials Branch Director) on all aspects of health and safety and has the authority to stop or prevent unsafe acts. It is mandatory that an Assistant Safety Officer-Hazardous Materials be appointed at all hazardous materials incidents. In a multi-activity incident, the Assistant Safety Officer-Hazardous Materials does not act as the Safety Officer for the overall incident.

- Review Common Responsibilities.
- Obtain briefing from the Hazardous Materials Group Supervisor.
- Participate in the preparations of, and implement the Site Safety Plan.
- Advise the Hazardous Materials Group Supervisor (or Hazardous Materials Branch Director) of deviations from the Site Safety Plan or any dangerous situations.
- Has authority to alter, suspend, or terminate any activity that may be judged to be unsafe.
- Ensure the protection of the Hazardous Materials Group personnel from physical, environmental, and chemical hazards/exposures.
- Ensure the provision of required emergency medical services for assigned personnel and coordinate with the Medical Unit Leader.
- Ensure that medical related records for the Hazardous Materials Group personnel are maintained.
- Maintain Unit/Activity Log (ICS Form 214).

Technical Specialist - Hazardous Materials Reference
(ICS-HM-222-6)

Reports to the Hazardous Materials Group Supervisor (or Hazardous Materials Branch Director if activated). This position provides technical information and assistance to the Hazardous Materials Group using various reference sources such as computer databases, technical journals, CHEMTREC, and phone contact with facility representatives. The Technical Specialist-Hazardous Materials Reference may provide product identification using hazardous categorization tests and/or any other means of identifying unknown materials.

- Review Common Responsibilities.
- Obtain briefing from the Planning Section Chief.
- Provide technical support to the Hazardous Materials Group Supervisor.
- Maintain communications and coordinate operations with the Entry Leader.
- Provide and interpret environmental monitoring information.
- Provide analysis of hazardous material sample.
- Determine personal protective equipment compatibility to hazardous material.
- Provide technical information of the incident for documentation.
- Provide technical information management with public and private agencies, i.e., Poison Control Center, Tox Center, CHEMTREC, State Department of Food and Agriculture, National Response Team.
- Assist Planning Section with projecting the potential environmental effects of the release.
- Maintain Unit/Activity Log (ICS Form 214).

Safe Refuge Area Manager
(ICS-HM-222-7)

The Safe Refuge Area Manager reports to the Site Access Control Leader and coordinates with the Decontamination Leader and the Entry Leader. The Safe Refuge Area Manager is responsible for evaluating and prioritizing victims for treatment, collecting information from the victims, and preventing the spread of contamination by these victims. If there is a need for the Safe Refuge Area Manager to enter the Contamination Reduction Zone to fulfill assigned responsibilities, then the appropriate Personal Protective Equipment shall be worn.

- Review Common Responsibilities.
- Establish the Safe Refuge Area within the Contamination Reduction Zone adjacent to the Contamination Reduction Corridor and the Exclusion Control Line.
- Monitor the hazardous materials release to ensure that the Safe Refuge Area is not subject to exposure.
- Assist the Site Access Control Leader by ensuring the victims are evaluated for contamination.
- Manage the Safe Refuge Area for the holding and evaluation of victims who may have information about the incident, or if suspected of having contamination.
- Maintain communications with the Entry Leader to coordinate the movement of victims from the Refuge Area(s) in the Exclusion Zone to the Safe Refuge Area.
- Maintain communications with the Decontamination Leader to coordinate the movement of victims from the Safe Refuge Area into the Contamination Reduction Corridor.
- Maintain Unit/Activity Log (ICS Form 214).

Assisting Agencies

Law Enforcement

Depending on incident factors, law enforcement may be an Incident Commander, part of the Unified Command, or may participate as an assisting agency. Some functional responsibilities that may be handled by law enforcement are:

- Isolate the incident area;
- Manage crowd control;
- Manage traffic control;
- Manage public protective action;
- Provide scene management for on-highway incidents; and
- Manage criminal investigations;

Environmental Health Agencies

In most cases the local or state environmental health agency will be at the scene as a partner of the Unified Command if they have jurisdictional authority, or may participate as an assisting agency. Some functional responsibilities that may be handled by environmental health agencies are:

- Determine the identity and nature of the hazardous materials;
- Establish the criteria for cleanup and disposal of the hazardous materials;
- Declare the site safe for re-entry by the public;
- Provide the medical history of exposed individuals;
- Monitor the environment;
- Supervise the cleanup of the site;
- Enforce various laws and acts;
- Determine legal responsibility;
- Provide technical advice; and
- Approve or obtain funding for the cleanup.

ATTACHMENT 10

HAZARDOUS MATERIALS TEAM TYPING

Introduction

The Fire & Rescue Branch of the Cal OES, along with California FIRESCOPE (**Fi**refighting **Res**ources of **C**alifornia **O**rganized for **P**otential **E**mergencies) has been actively working on a long range program of certifying response competency of Metropolitan HazMat Teams in the State. The focus of this project is to insure that Metropolitan HazMat response teams can be brought into the state *Master Mutual Aid Plan* for California in accordance to accepted FIRESCOPE mutual aid response standards. The scope includes ensuring that there is a mechanism available for local authorities to access in the event of any major incident requiring numerous additional resources when local and Operational (County) hazardous materials resources have been exhausted. This program has four (4) significant objectives:

1) Training Requirements, Standardized and Certified;
2) Development of a Hazardous Materials Standardized Equipment List – based on Performance;
3) Development of a HazMat Team Typing concept – based on Intervention Capability; and
4) Institution of On-Site Inspections of the Teams – to assure Compliance and Standardization.

Training Requirements

The California Specialized Training Institute (CSTI), and the California State Fire Marshal's Office (SFM), adopted standardized training criteria for hazardous materials technicians and specialists in 1989.

- *Hazardous Materials Technician* (HMT) course (four week 160 hours).
- *Hazardous Materials Specialist* (HMS) course (six week 240 hour).

The lesson plans for these classes were developed over a five year period using experienced hazardous materials responders from emergency response agencies in California. The criteria base upon which these lesson plans were developed was the NFPA Standard #472: *Standard for Professional Competence of Responders to Hazardous Materials Incidents*. Over the last twenty years these courses have become a staple for hazardous materials responders throughout the country.

Standardized Equipment List (SEL)

Once the training for hazardous materials responders was established and standardized the next step was to standardize the types and kinds of equipment normally carried by a HazMat response team. In the early days it was noted that there was great variances from team to team within certain intervention capabilities. It was further noted that there was a great variance in the adherence to industry and safety standards or requirements with regard to the purchase of specific items. The development of a *Hazardous Materials Standardized Equipment List* (SEL) was seen to be vitally important in an effort to standardize the equipment inventory of all HazMat teams in the State.

The SEL is divided into 13 different sections based on anticipated use or performance of the tools and equipment. Those sections are:

1) Field Testing and Detection;
2) Air Monitoring;
3) Sampling;
4) Radiation Monitoring and Detection;
5) Chemical Protective Clothing;
6) Ancillary Protective Equipment;
7) Technical Reference;
8) Special Capabilities;
9) Intervention (Mechanical, Chemical, and Environmental);
10) Decontamination;
11) Communications;
12) Respiratory Protection; and
13) Tools, General Purpose and Hand.

Each section is defined with regard to specific intervention criteria. Within each section the appropriate tools or equipment are listed numerically and are further described and defined with regard to use, application, and performance. Minimum units or quantities are specified. If there is an appropriate performance standard (i.e. NFPA 1991, 1992, and 1994) or standards (i.e. Underwriters Laboratories Intrinsically Safe testing criteria) that apply to a specific tool, it is indicated in a separate column marked “Certification or Standard”. For example, many of the individual items listed in Section 5, Chemical Protective Clothing, must meet specified certifications; Vapor protective clothing must meet NFPA Standard # 1991; Liquid splash-protective clothing must meet NFPA Standard # 1992; Safety helmets must meet ASTM standards, etc. Adoption of the SEL was achieved by 2003, and the latest 2009 edition is now posted on the FIRESCOPE web site.

http://www.firescope.org/ics-hazmat/pos-manuals/haz-equiplist.pdf

Team Typing

FIRESCOPE provides California the criteria by which all fire, rescue, and hazardous materials resources are typed. This is important when any emergency response agency participates within the California Mutual Aid System. The request by Cal OES for the mobilization of specific apparatus from Metropolitan agencies is in accordance to resource (pumper, grass units, Urban Search and Rescue, HazMat teams, etc) and then by type (Type I, II, III, etc).

HazMat Team Typing is dependent upon Intervention Capability. In developing a tiered typing scheme for hazardous materials units, a three-tier system was created. An Intervention Capability has been developed for each of the 13 Criteria sections paralleling the *SEL*. The three types are:

- **Type III HazMat Team (Type III)**
  Required staffing for a Type III HazMat Resource is **five** members. All members of this team must meet the minimum training criteria of a CSTI Certified Hazardous Materials Technician with one member having the training required for an Assistant Safety Officer-HazMat. The standardized equipment inventory for a Type III Resource requires the minimum in intervention capabilities. This includes only those tools and resources necessary to intervene, manage and mitigate liquids and/or powders, and the HazMat Type III Resource's overall intervention capability is limited to only known chemicals. There are 179 inventory items required for a Type III inspection.

- **Type II HazMat Team (Type II)**
  A Type II HazMat Resource is an upgrade from a Type III. Required staffing for a Type II HazMat Resource is **five** members. However, all members of this team must meet the minimum training criteria of a Hazardous Materials Specialist with one member having the training required for an Assistant Safety Officer-HazMat. The standardized equipment inventory for a Type II Resource includes all of those necessary for a Type III as well as those necessary to intervene, manage and mitigate any gas or vapor threat. Further, the HazMat Type II Resource's overall intervention capability includes both known and unknown chemicals. There are 222 inventory items required for a Type II inspection.

- **Type I HazMat Team (Type I)**
  A Type I HazMat Resource is an upgrade from a Type II. Required staffing for a Type I HazMat Resource is **seven** members. All members of this team must also meet the minimum training criteria of a Hazardous Materials Specialist with one having the training required for an Assistant Safety Officer-HazMat. In addition, all members must have a minimum of 16 more hours of specialized WMD/CBRN training. The standardized equipment inventory for a Type I Resource includes all of those necessary for a Type II as well as those necessary to intervene, manage, and mitigate incidents involving WMD/CBRN threat agents. A Type I HazMat Resource represents the highest level of intervention capability. There are 251 inventory items required for a Type I inspection.

This team typing concept has been modeled Nationally by the National Incident Management System (NIMS) and the National Mutual Aid Resource Typing Group.

It should be noted that participation in the California Mutual Aid System by all emergency response organizations is voluntary. The requirements for equipment and staffing of the HazMat teams are only for when they have been activated to participate in the Cal OES Fire & Rescue Mutual Aid System.

On-Site Inspections (Certification and Compliance)

To ensure that HazMat teams in California meet the team typing requirements, Metropolitan fire departments and other participating agencies are encouraged to submit a "Letter of Request" for an inspection. As mentioned before this is a voluntary process.

Once a "Letter of Request" has been received, the Cal OES, Hazardous Materials Section of the Fire & Rescue Branch arranges for an "On-Site" inspection. A team of experienced hazardous materials specialists from Cal OES will then visit the agency to review and inspect all equipment and training records necessary for the team typing level requested. During this "On-Site" inspection equipment adherence to noted industry standards (NFPA, OSHA, US EPA, ASTM, etc.) is also verified.

If the unit (and agency) passes the inspection, a congratulatory letter is sent to the Chief of the Department. The specified unit is then noted as meeting the minimum requirements of HazMat Team Typing, and various databases within Cal OES are amended. Once these units are added to the databases, they are voluntarily availing themselves to a potential request for mobilization statewide.

Statewide Projections for HazMat Team Typing

It is estimated that there are approximately 90 hazardous materials response team programs operating in the State of California. The goal of the HazMat Team Typing Project is to encourage as many of these HazMat teams to adopt and abide by the SEL, request an inspection in order to have their resource typed and certified, and brought into the Cal OES Fire & Rescue Mutual Aid System.

California's Mutual Aid System will benefit by having these HazMat Teams available for State activation and mobilization in the event of disasters, declared emergencies, or at any other time when all local HazMat resources are exhausted. These HazMat Teams will augment the State of California resource mobilization capabilities.

REQUESTING A HAZMAT TEAM TYPING INSPECTION

Letter of Request

When an agency feels they are reasonably close to satisfying the requirements of the SEL, they are to submit an official "Letter of Request" for a hazardous materials team typing inspection. The letter should include:

- Be on the requesting agency's official letterhead.
- Be issued / signed by the Chief of the department or a designee (Deputy Chief, Assistant Chief, etc.).
- Be brief, only a few paragraphs.
- Indicate interest by the requesting agency in participating in the Cal OES Fire & Rescue Branch hazardous materials mutual aid program.
- Indicate a designated "Point Of Contact" person for all future communications.

Team Typing File

Upon receipt of the "Letter of Request", the Cal OES HazMat Section will initiated the following:

- A file will be opened in the name of the requesting agency.
- A "Point Of Contact" letter will be sent to the requesting agency, prompting for additional information regarding communication contact. This includes the following:
    - The unit(s) to be typed, indicated by their regular departmental designation;
    - Their street address location(s) including ZIP;
    - The level of team typing (Type I, Type II, or Type III) requested;
    - Suggested inspection dates.

- This "Point Of Contact" letter should be returned promptly to:

  Cal OES, Fire & Rescue Branch
  Hazardous Materials Section
  Attention: HazMat Team Typing Program
  3650 Schriever Avenue
  Mather, CA 95655

Next Steps

Upon receipt of the "Point Of Contact" letter, the Cal OES HazMat Section will initiated the following:

- A packet of approximately 30 (or more) HazMat Bulletins will be sent to the requesting agency. It is vitally important that all of these Bulletins be reviewed in detail prior to the inspection. They are very helpful in answering a number of questions, and they also will help in preparing the requesting agency for the inspection.
- A "Sample Copy" of the actual inspection forms used by the Inspection Team will be sent to the point of contact person. This document should be used by the requesting agency to conduct a "self-inspection". This helps insure that the designated response unit to be inspected is reasonably close to passing the inspection.
- The submitted suggested dates for inspection will be reviewed, and one date will be selected that is compatible with the inspection team calendar.
- The requesting agency will be notified of the date selected.

THE HAZMAT TEAM TYPING INSPECTION PROCESS

Inspection Process

Upon the selection of an inspection date by the HazMat Team Typing Inspection Team, the requesting agency will be notified. A detailed memo (usually by e-mail communications) outlining the inspection process will be sent to the "Point-Of-Contact" person. It will verify:

- The inspection date and time;
- The inspection location by proper street address and ZIP code;
- The lead person that will be present as the Point-Of-Contact.

Equipment

The inspection process is as follows:

- On inspection day, all SEL hazardous materials items, tools, and equipment should be removed from the apparatus prior to the arrival of the inspection team.

- It is recommended that the equipment be displayed on the apparatus room floor, and/or on tables. This facilitates the inspection process of individual items and kits.

    - Some of the electronic detection devices may be required to be turned on at the request of an inspector to verify substance agent capability.
    - Chemical protective clothing will be inspected to insure proper NFPA label requirements are present.
    - Absorption substances will need to be inspected to insure the label correctly corresponds to the SEL requirements.
    - Absorption pads, pillows, and pigs will need to be inspected to insure proper labeling.
    - Mechanical plugging and patching kits will be inspected to insure inventory of all required parts are present.
    - Other kits, such as Zone Marking Kit, Trauma Kit, hand tools kits, sampling kits, etc., will be spot-checked for proper inventory.

- It is recommended that one or two members of the on-duty HazMat Team be assigned to accompany the inspection team to help in identifying the location and type of specific inventory equipment, once the inspection begins.

- The inspection process closely follows the listing of the SEL equipment items in chronological order.

- The inspection team will take time to inspect for (but not limited to):

    - ***Standards:*** Various equipment items that must meet a specified <u>performance standard</u> (i.e. NPFA labels inside CPC suits; intrinsically safe labels on radio equipment, etc.) as noted in the *SEL* will be documented;
    - ***Certifications:*** Compliance to specific <u>certification requirements</u> as noted in the *SEL* will be documented (i.e. Specific capabilities of specified absorbent substances are indicated on the label; Sampling containers meet US EPA sterile protocols, etc.);
    - ***Inventory:*** The exact number and type of articles and/or parts that are specified to be present in designated “kits” or individual *SEL* inventory item number will be documented. Kits and/or equipment items must be complete;
    - ***Functionality:*** Complete <u>functionality</u> of selected equipment and/or items may be spot-checked. Regarding the computer system and associated software, all required software, electronic databases, and document/graphics formats will be checked, as described in the *SEL*.

Training Records

- HazMat Team should be prepared to provide <u>certified documentation of completion</u> of the required training for the appropriate HazMat Team Type:

  - **Type III** – Five members trained to CSTI *HMT* (160 hour)
  - **Type II** – Five members trained to CSTI *HMS* (80 additional hours), in addition to the HMT requirements
  - **Type I** – Seven members trained to CSTI *HMS*, <u>and also</u> trained to CSTI *HM/Weapons of Mass Destruction: Terrorism* [Title 19 CCR § 2520(ff)] or equivalent.

- HazMat Team should be prepared to provide <u>certified documentation of completion</u> of at least one (1) member of the those indicated in (a) above to the CSTI Assistant Safety Officer/HazMat course [Title 19 CCR § 2520(r)], or equivalent [ICS-HM-222-5].

Inspection Team Agenda

- Upon arrival, the Inspection Team will conduct a short 5–10 minute "Pre-Inspection" meeting;
- Inspection begins (The inspection process takes about 1 ½ to 3 hours);
- Photographs by the Inspection Team may be taken for educational purposes;
- Upon conclusion of the inspection, the Inspection Team will conduct a 30 minute "Post-Inspection" debriefing;
- Tentative "Pass – Fail" results will be discussed;
- Review of missing items will be presented;
- Explain the procedure to "catch up" (acquisition of missing equipment); and
- Explanation of the Cal OES Fire & Rescue, HazMat Team activation process will be provided.

After Inspection Process

Copies of all inspection reports will be made and mailed to the requesting agency including:

- Copy of the actual Equipment Inspection Record.
- Copy of the actual Training Inspection Record.

Other reports and documents will be drafted, and copies mailed to the requesting agency as appropriate. These could include any of the following:

- **HMRT Company "Equipment – Fail"**
  A letter indicating a "Fail", and itemizing all individual items (in SEL chronological order), including individual items missing from kits. This letter will explain the process needed in follow-up in order to correct the equipment "Fail" to a "Pass".

- **HMRT Company "Training – Fail"**
  This letter will document any discrepancies found when inspecting the Training Records. This letter will explain the process needed in follow-up in order to correct the training "Fail" to a "Pass".

- **HMRT Company "Pass – Acknowledgement"**
  A letter indicating a "Pass" acknowledging this accomplishment. It will document and specify the official Team Typing status achieved, and that the team is in compliance.

- **HMRT Company "Pass – Congratulations"**
  A separate letter of congratulations is sent to the Chief of the Department or Agency requesting the inspection. It is issued and signed by the Chief of the Fire & Rescue Branch, Cal OES.

The Cal OES, Fire & Rescue Branch, Master Mutual Aid lists will be amended to include the agency's HazMat Team as being certified as a Type I, Type II, or a Type III Hazardous Materials Response Team.

Activation

If (and when), through local mutual aid support, all local HazMat resources are exhausted and additional HazMat resources are needed, the State Mutual Aid System will be activated by the Incident Command System through the Incident Commander (or Unified Command). The Incident Commander (or Unified Command) will be able to issue a request for additional HazMat Team resources (individual company, task forces, and/or strike teams) from outside the Operational Area through normal dispatch procedures. Following these guidelines within the California Mutual Aid Plan procedures, the HazMat resource can be requested.

It should be noted that the specific "Type" of HazMat Team(s) (i.e. Type I, Type II, or Type III) and "number" of HazMat Teams and/or the mobilization of HazMat strike teams or task forces needs to be included in the resource ordering process.

Finally, when a HazMat Team responds to an official request they need to ensure they have the appropriate number of certified personnel and all equipment for the typed resource requested.

ATTACHMENT 11

REFERENCES

Federal Law

- Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288 as amended
- Superfund Amendments and Reauthorization Act of 1986 (SARA), 40 CFR
- Resource Conservation and Recovery Act of 1976 (RCRA), 42 USC
- Hazardous Materials Transportation Law (HMTL), 49 USC 5101 *et seq.*
- Occupational Safety and Health Act (OSHA), 29 CFR
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)
- Federal Food, Drug, and Cosmetic Act (FFDCA)
- Clean Air Act (CAA), 42 USC
- Clean Water Act (CWA), 33 USC
- Federal Water Pollution Control Act (FWPCA), as amended by Clean Water Act (CWA) and Oil Pollution Act of 1990 (OPA 90)
- Safe Drinking Water Act (SDWA)
- Coastal Zone Management Act (CZMA) of 1972
- Comprehensive Environmental Response Compensation and Liability Act (CERCLA), Title 42 USC, § 9601 of 1980
- Emergency Planning and Community Right-to-Know Act, 1986 (also known as SARA Title III), 42 USC § 11001.
- Federal Water Pollution Control Act (FWPCA), 33 USC § 1251
- National Historic Preservation Act (NHPA), 1966
- Federal Endangered Species Act (ESA), 1973, 16 USC § 1531 et seq.
- Endangered Species Regulations Concerning Terrestrial Plants, 7 CFR § 355
- National Environmental Policy Act (NEPA)
- Oil Prevention Act of 1990 (OPA 90)
- Pollution Prevention Act of 1990
- Atomic Energy Act
- Solid Waste Disposal Act

Federal Regulations

- CFR Farmers Home Administration (FmHA) recovery, land use policy, soil conservation service, disaster losses
- 10 CFR Department of Defense (DOD) relates to Defense Production Act, priority supply of crude oil and petroleum products
- 24 CFR Housing and Urban Development, Disaster Assistance Act of 1974

- 29 CFR Hazardous Waste Operation and Emergency Response (HAZWOPER), § 1910.120
- 32 CFR, Department of Defense (DOD), national defense, military resources in support of civil authorities
- 40 CFR, Environmental Protection Agency (US EPA), hazardous waste treatment, storage, and disposal facilities
- 49 CFR, Parts 171-180, Hazardous Materials Regulations
- 44 CFR, Federal Emergency Management Agency (FEMA), federal disaster assistance programs, emergency and major disaster declarations, disaster field offices, State and Federal coordinating officers
- 45 CFR, Public Welfare, Health and Human Services, emergency energy conservation program.

State Law

- Civil Code
  - Environmental Responsibility Acceptance Act, Division 2
- Fish and Game Code
- Food and Agricultural Code
- California Government Code
  - Emergency Services Act, § 8550, *et seq.*
  - Oil Refinery and Chemical Plant Safety Preparedness Act § 51020 *et seq.*
  - Oil Spill Prevention and Response Act, § 86740.1, *et seq.*
  - Planning and Zoning Law, § 65000, *et seq.*
- Harbors and Navigation Code
- Health and Safety Code
  - Aboveground Storage of Petroleum, Chapter 6.67
  - Air Pollution, § 42320, *et seq.*
  - Air Toxics Hot Spots, § 44300, *et seq.*
  - Business & Area Plans, § 25500, *et seq.*
  - Department of Toxic Substances Control, Division 38
  - FIRESCOPE Act, § 13070, *et seq.*
  - Hazardous Substances Account, Chapter 6.8
  - Hazardous Materials Release Response Plans & Inventory, Chapter 6.95
  - Hazardous Waste Control, Chapter 6.5
  - Local Agency Acutely Hazardous Materials Regulation, Chapter 6.12
  - Petroleum Underground Storage Tank Cleanup, Chapter 6.75
  - Radiation Protection Act, § 114650, *et seq.*
  - Redevelopment: hazardous Substance Release Cleanup, Division 24
  - Safe Drinking Water and Toxic Enforcement Act of 1986, Chapter 6.6
  - Underground Storage of Petroleum, Chapter 6.7
  - Unified Hazardous Waste & Hazardous materials Management Regulatory Program, Chapter 6.11
- Labor Code
  - Employees Safety Act, § 2801, *et seq.*
- Penal Code

- Public Resources Code
    - California Environmental Policy Act (CEQA), § 2100 to § 2178.1
    - Integrated Waste Management Act, § 40050, *et seq.*
- Public Utilities Code
- Vehicle Code
    - Hazardous Substances Highway Spill Containment and Abatement Act, § 2450, *et seq.*
- Water Code

California Code of Regulations

- Title 8, Industrial Relations
- Title 14, California Code of Regulations, Natural Resources
    - Division 1, Department of Fish and Wildlife
        - Subdivision 4, Oil Spill Prevention and Response
    - Division 2, Department of Forestry
    - Division 3, Department of Conservation
    - Division 4, Department of Parks and Recreation
    - Division 5, Department of Boating and Waterways
    - Division 5.5, California Coastal Commission, San Francisco Bay Conservation and Development Commission, State Coastal Conservancy, Santa Monica Mountains Conservancy
    - Division 6, California Waste Management Board
    - Division 7, Environmental Affairs Agency
- Title 19, Public Safety, Division 1, State Fire Marshal
- Title 19, Public Safety, Division 2, Office of Emergency Services
    - Chapter 1, Standardized Emergency Management System
    - Chapter 2, Hazardous Substances Emergency Response Training
    - Chapter 4, Hazardous Material Release Reporting, Inventory, and Response Plans,
    - Chapter 4.5, California Accidental Release Prevention (CalARP)
- Title 22, Social Security
    - Division 4, Environmental Health
    - Division 4.5, Environmental Health Standards for the Management of Hazardous Waste
- Title 26, Toxics (ties together all other regulations pertaining to toxics under one Title).

Mutual Aid Plans

- Emergency Managers Mutual Aid Plan, Cal OES 1997
- Law Enforcement Mutual Aid Plan, Cal OES 2006
- Law Enforcement Mutual Aid Plan (SAR) Annex, Cal OES 2006
- California Fire Service and Rescue Emergency Mutual Aid Plan, Rev 3/2002
- California Medical Mutual Aid Plan, EMSA 2007
- City and County Emergency Plans
- Local Marine Oil Spill Contingency Plans (see OSPR for details)

State Agency Emergency Plans and Procedures

- Air Pollution Emergency Plan, State Implementation Plan (Chapter 21), ARB, Revised 1990
- California Disaster Medical Response Plan and Medical Mutual Aid Annex, EMSA 2007
- California Disaster Medical Operations Manual, EMSA 2008
- California State Toxic Disaster Contingency Plan/Hazardous Materials Incident Contingency Plan, Cal OES, January 1991
- California Terrorism Response Plan, Cal OES 2001
- Electrical Power Disruption Toolkit, Cal OES 2001
- Marine Oil Spill Contingency Plan, OSPR
- Nuclear Power Plant Emergency Response Plan, Cal OES 2008
- Oil Spill Contingency Plan, OSPR 2010
- SEMS Resource Ordering and Tracking, Cal OES 2000
- State of California Emergency Plan, Cal OES 2009

Federal Agency Emergency Plans and Procedures

- National Response Framework (Framework)
- National Incident Management System (NIMS)
- Federal Response Plan (FRP)
- U. S. Government Interagency Domestic Terrorism Concept of Operations Plan (CONPLAN)
- Nuclear/Radiological Incident Annex (NRI), December 2004
- National Oil and Hazardous Substance Pollution Contingency Plan (NCP, 40 CFR Part § 300)

Technical Documents

- To obtain a list of Federal technical publications, call US EPA at **(513) 569-7562**
- "*Title III On Indian Lands: A Guide to the Emergency Planning and Community Right-to-Know Act*" (USEPA, Technical Assistance Bulletin Volume 10, Number 2)
- *Tribal Environmental & Natural Resource Assistance Handbook* (US EPA, March 1999) *America Indians and Alaska Native Policy* (FEMA)
- Title III List of Lists
- SEMS Documents:
    - SEMS Guidelines
    - SEMS Approved Course of Instruction (ACI)
- Cal EOC Manual
- Emergency Planning Guidance for Local Government, Cal OES January 1999
- Sub grantee Disaster Assistance Resource Manual, Disaster Assistance Division/Cal OES
- Disaster Recovery Public Assistance Applicant Packet - For State Agencies, Local Government, Special Districts and Private Nonprofit Organizations
- Guidelines for Documenting Disaster-Related Response and Recovery
- Costs for Federal (FEMA) and State (CDAA) Public Assistance Programs, California State Controller's Office, 1995
- NFPA 471: Recommended Practice for Responding to Hazardous Materials Incidents, 1997 Edition.

List of "Toxic Substances" as defined by Laws & Regulations

The Tool Kit does not individually list the toxic substances that are under the purview of this plan; however, this a list of the major state and federal laws and regulations that further define, identify, and/or list the different types of hazardous materials (including oil, toxic substances, hazardous substances, and hazardous waste, pollutants and contaminants) that are regulated and could cause harm to human health and/or the environment, regardless of how those materials are used, handled, stored, transported, or disposed. Those hazardous materials that could be the subject of a toxic disaster are listed, characterized, or broadly defined in the following list of laws and regulations.

LEGAL DEFINITIONS

FEDERAL LAWS & REGULATIONS:

Laws

- Hazardous Materials Transportation Law (HTML), 49 USC § 5101 *et seq*
- Resource Conservation and Recovery Act (RCRA), Section § 3001, or 42 USC § 6901 *et seq*
- Superfund, or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section § 101(14) of the Act
- Superfund Amendment and Reauthorization Act Title III, or the Emergency Planning and Community-Right to Know Act (SARA Title III / EPCRA), Section § 304
- Clean Water Act (CWA) [*a.k.a.* Federal Water Pollution Control Act (FWPCA)], Sections § 307 (a), § 311 (b)(2)(A)
- Oil Pollution Act of 1990 (OPA) - amended the CWA
- Clean Air Act (CAA), Section § 112
- Toxic Substances Control Act (TSCA), Section 7
- Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA), Section § 12751

Regulations -- Code of Federal Regulation (CFR)

- 29 CFR § 1910.101 thru § 19190.126 – *Hazardous materials under OSHA*
- 29 CFR § 1910.1200 – *Hazardous chemicals under OSHA*
- 29 CFR § 1910.1450 – *Hazardous chemicals in laboratories under OSHA*
- 40 CFR § 116.4 – *Hazardous substances under CWA*
- 40 CFR § 155 – *Hazardous substances under SARA III*
- 40 CFR § 261 – *Hazardous wastes under RCRA*
- 40 CFR § 300 – *National Contingency Plan (NCP)*
- 40 CFR § 302.4 – *CERCLA hazardous substances*
- 40 CFR § 355, Appendix A – *EPCRA extremely hazardous substances*
- 40 CFR § 370 – *Chemical-reporting regulations under SARA III*

- 49 CFR § 171.8, § 172, § 173, § 177– *Hazardous materials transportation under DOT*

STATE LAWS & REGULATIONS:

Laws

- Health & Safety Code (HSC)
  - HSC § 25115, § 25117, § 25316
  - HSC § 25140 – *List of hazardous wastes*
  - HSC § 25280, *et seq – Prop 65 Chemicals*
  - HSC § 25281 (f) & HSC § 25281(g)
  - HSC § 25316 – *hazardous substances defined*
  - HSC § 25501(m), HSC § 25501(n), & HSC § 25501(o)
  - HSC § 59019 – OEHHA-*listed commodity*
  - HSC § 108100 & HSC § 108145

- CA Government Code (CGC)
  - CGC § 8574.18(b)
- State Water Code (SWC)
  - SWC § 13050 (p)(1)
  - SWC § 13390 (f)
- CA Vehicle Code (CVC)
  - CVC § 353
- CA Labor Code (CLC),
  - CLC § 6382 – *Cal OSHA list of hazardous substances*
- Public Utilities Code (PUC)
  - PUC § 7672

Regulations -- California Code of Regulations (CCR)

- 8 CCR
- 14 CCR
- 19 CCR § 2750
- 22 CCR § 66261 – *CalEPA/DTSC Identification & listing of hazardous wastes*
- 26 CCR § 25501
- Prop 65 – List of carcinogens

LEGAL DEFINITIONS MATRIX

	Toxic Pollutant	Toxic Substance	Hazardous Substance	Hazardous Material	Hazardous Waste
STATE		HSC § 25281(g)	HSC § 25501 (n) HSC § 108145 HSC § 25281 (f) HSC § 25281(g) HSC § 108100 HSC § 25316	HSC § 25501(m) HSC § 59019	HSC § 25140 HSC § 25501(o) HSC § 25115 HSC § 25117 HSC § 25316
		CGC 8574.18 (b)	CGC § 8574.18 (b)		
			SWC § 13050 (p)(1) SWC § 13390 (f)		
				PUC § 7672	
			Labor Code § 6382		
				CVC § 353	
FEDERAL	33 USC §1317(a)		49 CFR § 172 49 CFR § 173 49 CFR § 177	49 CFR § 171.8	40 CFR § 261
			42 USC § 9602		42 CFR § 6921
			15 USC § 2606		
			33 USC § 1321(b)(2)(A)		
			CERCLA § 101(14)		

REFERENCES

Database

- ASTDR Toxicological Profiles (CRC Press – US Public Health Service)
- CHRIS Manual (3 volumes), U.S.C.G.
- Comprehensive Guide to Hazardous Properties of Chemical Substances (Patnaik)
- Condensed Chemical Dictionary (Hawleys)
- Condensed Chemical Dictionary (LEWIS)
- Crop Protection Handbook [previously called Farm Chemicals Handbook (MEISTER)] (also listed as a Specialty Reference)
- Dangerous Properties of Industrial Materials (SAX)
- Dictionary of Chemical Names & Synonyms (SYNAPSE - also listed as a Specialty Reference)
- Fire Fighters' Handbook of Hazardous Materials (Baker)
- Fire Hazard Properties of Flammable Liquids, Gases and Solids (NFPA 325)
- Handbook of Toxic and Hazardous Chemicals & Carcinogens (Sittig)
- Hazardous Chemicals Desk Reference (Lewis)
- Hazardous Materials Field Guide (Bevelacqua)
- Hazardous Materials Handbook (Pohanish)
- Merck Index (CHAPMAN – HALL)
- Pocket Guide to Chemical Hazards (NIOSH)
- Toxic and Hazardous Chemicals Safety Manual (ITI)
- Toxic Exposure Desk Reference (Cooper)

Guidebook

- Emergency Action Guides (AAR)
- Emergency Care for Hazardous Materials Exposure
- Emergency Handling of Hazardous Materials (AAR)
- Emergency Response Guidebook (DOT, latest edition)
- Fire Protection Guide to Hazardous Materials (NFPA)
- First Responder's Pocket Guide to Hazardous Materials Emergency Response
- Hazardous Materials Data Section, Fire Protection Guide (NFPA 49)
- Hazardous Materials Injuries (Stutz)
- HazMat Quick Guide (NFPA)
- Material Safety Data Sheets library (GENIUM)
- Material Safety Data Sheets (Other)

Regulatory

- California Health and Safety Code
- Hazardous Materials Emergency Response Plan (Local Authority)
- Hazardous Materials Incident Contingency Plan (Cal OES)
- NFPA Standard # 471, Recommended Practice for Responding to Hazardous Materials Incidents
- NFPA Standard # 472, Competence of Responders to Haz-Mat Incidents

- NFPA Standard # 704, Standard System for the Identification of the Hazards of Materials for Emergency Response
- NFPA Standard # 1975, Station/Work Uniforms for Fire and Emergency Services
- NFPA Standard # 1977, Protective Clothing and Equipment for Wildland Fire Fighting
- NFPA Standard # 1991, Vapor-Protective Ensembles for Hazardous Materials Emergencies
- NFPA Standard # 1992, Liquid Splash-Protective Clothing for Hazardous Materials Emergencies
- NFPA Standard # 1994, Protective Ensembles for First Responders to CBRN Terrorism Incidents
- NFPA Standard # 2112, Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire
- Title 8, CCR (California Code of Regulations), OSHA
- Title 29, CFR (Code of Federal Regulations), OSHA
- Title 49, CFR (Code of Federal Regulations), Transportation

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Specialty

- Chemical Manufacturer's Directory of Trade Name Products (ASH)
- Clinical Handbook on Economic Poisons (USDHHS)
- Crop Protection Handbook [previously called Farm Chemicals Handbook (MEISTER)] (also listed as a Database Reference)
- Fire Protection Guide to Hazardous Materials Reactions, Section 491M (NFPA)
- Gardner's Chemical Synonyms and Trade Names (ASH)
- Guide to Occupational Exposure Values (ACGIH)
- Guide to Threshold Limit Values and Biological Indices (ACGIH)
- Handbook of Reactive Chemical Hazards (Bretherick)
- Hazardous Chemical Spill Cleanup (Robinson)
- Medical Management of Biological Casualties (USAMRIID)
- Quick Selection Guide to Chemical Protective Clothing (Forsberg)
- Rapid Guide to Chemical Incompatibilities (Pohanish)
- Specialty Chemicals Source Book (SYNAPSE - also listed as a Database Reference)
- Tank Car Manual (GATX)

WMD Resources

- Bacteriological Warfare (Harris)
- Chem-Bio Handbook (JANE'S)
- Chemical and Biological Warfare Agents (Ellison)
- Chemical Warfare Agents: Toxicity at Low Levels (CRC)
- Emergency Action for Chemical and Biological Warfare Agents (Ellison)
- Guide to Germ Warfare
- Infectious Disease Handbook (West)
- Management of Chemical Warfare Agent Casualties (Sidell)
- Medical Management of Biological Casualties (USAMRIID)
- Medical Management of Chemical Casualties (Aberdeen Proving Ground)

WEBSITES

State

BCDC:
http://www.bcdc.ca.gov/
(The McAteer-Petris Act, the Suisun Marsh Preservation Act, the San Francisco Bay Plan and the Suisun Marsh Protection Plan are available at this website)

California Air Response Planning Alliance (CARPA):
http://www.arb.ca.gov/carpa/carpa.htm

California Code of Regulations:
http://www.calregs.com

California Homepage (locate state & county agencies):
http://www.ca.gov

California Law:
http://www.leginfo.ca.gov/calaw.html

California Legislation:
http://www.leginfo.ca.gov

CalEPA:
http://www.calepa.ca.gov/

Cal Fire/SFM:
http://www.fire.ca.gov

Caltrans:
http://www.dot.ca.gov

Cal OES Homepage:
http://www.caloes.ca.gov

CSTI:
http://www.caloes.ca.gov/CSTI/Pages/CSTI.aspx

DFW/OSPR:
http://www.DFW.ca.gov/ospr/

DTSC:
http://www.dtsc.ca.gov/

EMSA:
http://www.emsa.ca.gov/

California Disaster Healthcare Volunteers:
https://www.healthcarevolunteers.ca.gov/

Federal

29 CFR OSHA Regulations:
http://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toc_level=0

CDC:
http://www.cdc.gov

Code of Federal Regulations:
http://www.gpo.gov/

DOT:
www.dot.gov
http://hazardous materials.dot.gov

DOT North American Emergency Response Guidebook:
http://www.phmsa.dot.gov/hazmat/library/erg

ERMA: Environmental Response Management Application
http://response.restoration.noaa.gov/maps-and-spatial-data/environmental-response-management-application-erma

Federal Emergency Management Agency
http://www.fema.gov/

Federal Regulations
http://www.regulations.gov/#!home;tab=search

National Contingency Plan (NCP):
http://www.epa.gov/OEM/content/lawsregs/ncpover.htm

National Pipeline Mapping System
http://www.npms.phmsa.dot.gov/

National Response Framework (Framework)
http://www.fema.gov/national-response-framework

National Response Center:
http://www.nrc.uscg.mil/

NOAA:
http://www.noaa.gov

Nuclear/Radiological Incident Annex
http://hps.org/documents/NRPNuclearAnnex.pdf

Regional Response Team IX, Area Contingency Plans for coastal California, Regional Contingency Plan, MEXUS Plan, MEXUSPAC Annex
www.rrt9.org

U.S. Coast Guard Homepage:
http://www.uscg.mil/

US EPA:
www.epa.gov

US EPA's American Indian Environmental Office:
http://www.epa.gov/indian

U.S. Department of Homeland Security:
http://www.dhs.gov/

Miscellaneous

CAMEO:
http://www.epa.gov/emergencies/content/cameo/index.htm

Chemical Reactivity Worksheet:
http://response.restoration.noaa.gov/chemaids/react.html

Continuing Challenge: Hazardous Materials Emergency Response Workshop:
http://www.hazmat.org

Emergency Management Institute (Training):
http://training.fema.gov/EMICourses/

FIRESCOPE:
http://www.firescope.org/

Health Law Info:
http://www.law.cornell.edu/topics/health.html

MSDS Search:
http://www.hazard.com
http://www.ilpi.com/msds/ref/nfpa.html

National Institute of Environmental Health Sciences:
http://www.niehs.nih.gov

National Toxicity Program:
http://ntp-server.niehs.nih.gov/

NIOSH Pocket Guide:
http://www.cdc.gov/niosh/npg/

NFPA:
http://www.nfpa.org

Oiled Wildlife Care Network:
http://www.vetmed.ucdavis.edu/owcn/