EL DORADO COUNTY
Hazardous Materials Area Plan

Prepared by the El Dorado County
Environmental Management Department

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Executive Summary

This Hazardous Materials Area Plan (Area Plan) fulfills the Certified Unified Program Agency (CUPA) regulatory program requirements per State law. Copies of the Area Plan are on file in the Emergency Operations Center (EOC). The Area Plan can be used as a resource document in conjunction with the El Dorado County Emergency Operations Plan, and other state agency plans.

The Area Plan describes the County's pre-incident planning and preparedness for hazardous materials releases. It clarifies the roles and responsibilities of federal, state and local agencies during a hazardous materials incident. It describes the County's hazardous materials incident response program, training, communications and post-incident recovery procedures.

Plan Organization

The El Dorado County Area Plan is organized into three basic sections: Part I - Basic Plan, Part II – Roles and Responsibilities and Part III – Appendices.

Part I - Basic Plan

The Basic Plan is organized chronologically into the three stages of emergency management to assist personnel involved in hazardous materials emergencies: Preparedness, Response and Recovery.

Part II - Roles and Responsibilities

This section describes the roles and responsibilities of local, state and federal agencies in a hazardous materials emergency.

Part III - Appendices

The Appendices provide supporting documentation and more detailed information on topics covered in the Area Plan. They are organized in the three categories of emergency management: Preparedness, Response and Recovery. A ***Glossary of Terms*** for both hazardous materials and terrorism is provided as the first appendix in this section.

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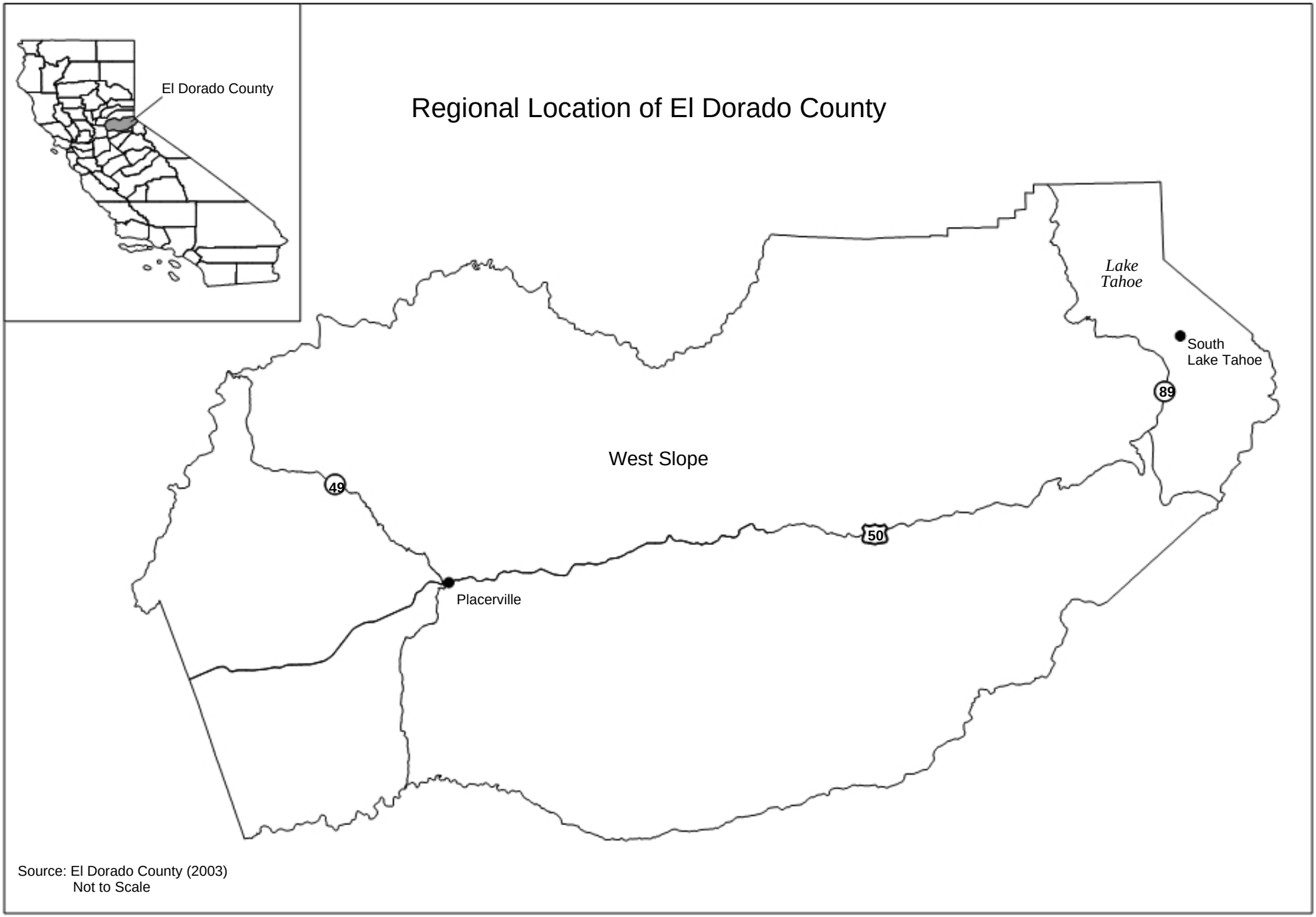
First Edition: 1991
Revised 1995, 2001, 2003, 2005 and 2009


El Dorado County
Regional Location of El Dorado County
Lake Tahoe
South Lake Tahoe
89
West Slope
49
50
Placerville
Source: El Dorado County (2003)
Not to Scale

HAZARDOUS MATERIALS AREA PLAN

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INTRODUCTION – PURPOSE, OBJECTIVES, AUTHORITIES AND REFERENCES

Purpose

The El Dorado County Hazardous Materials Emergency Response Plan, hereinafter referred to as "the Area Plan" establishes the policies, responsibilities, and procedures required to protect the health and safety of El Dorado County's citizens, the environment, and public and private property from the effects of hazardous materials emergency incidents.

The Area Plan establishes the emergency response organization for hazardous materials incidents occurring within El Dorado County. This Plan documents the operational and general response procedures for the El Dorado County Hazardous Material Response Team (hereafter referred to as the HMRT).

The Area Plan is the principal guide for agencies of El Dorado County, its incorporated cities, and other local entities in mitigating hazardous materials emergencies. This Area Plan is consistent with the National Incident Management System (NIMS), a unified framework for incident management within which government and private entities at all levels can work together effectively. The NIMS provides a set of standardized organizational structures such as the Incident Command System (ICS) and standardized processes, procedures and systems. These processes and procedures are designed to improve interoperability among jurisdictions and disciplines in various areas -- command and management, resource management, training, and communications. The California version, known as SEMS (Standardized Emergency Management System) was updated in 2004 by the federal system.

This Area Plan is an operational plan as well as a reference document; it may be used for pre-emergency planning as well as emergency response. Agencies having roles and responsibilities established by this Area Plan are encouraged to develop standard operating procedures (SOPs) and emergency response checklists based on the provisions of this Area Plan. This Area Plan should be used in conjunction with the El Dorado County Emergency Operations Plan (EOP) and the California Hazardous Materials Incident Contingency Plan.

Objectives

The objectives of this Area Plan are to meet State requirements as detailed in the California Health and Safety Code (H&SC), Article 1 and California Code of Regulations (CCR), Title 19, Division 2, Chapter 4, Article 3 and to make this plan a usable document in a hazardous materials emergency.

Specific objectives of the plan are to:

1. Describe pre-emergency preparations, emergency operations, organizations and supporting systems required to implement the Area Plan;
2. Provide for a coordinated and integrated response to hazardous materials accidents, releases, or threatened releases;
3. Define roles, responsibilities and authority of participating agencies including local, state and federal agencies during a hazardous materials incident in El Dorado County;
4. Establish lines of authority, communication, and coordination when this plan is in effect;
5. Provide specific information about facilities within El Dorado County which handle large quantities of toxic and flammable gases or other hazardous materials which may pose the greatest risk to the community;
6. Provide the news media and the general public accurate and timely information and instructions concerning the release or threatened release of a hazardous material;
7. Establish provisions for training of emergency response personnel (HMRT members and agency first responders);
8. Provide evacuation planning guidance;
9. Provide a list and description of available emergency response supplies and equipment; and
10. Provide a mechanism for incident critiques and follow-up.

Authorities

The following provide authority to implement the Area Plan:

1. Cal. Government Code, Title 2, Division 1, Chapter 7, (California Emergency Services Act)
2. State of California Vehicle Code, Division 2, Chapter 2, Section 1, Article 4
3. State of California Street and Highway Code
4. California Health and Safety Code, Division 20, Chapter 6.95, § 25500 et seq., and Chapter 6.11, § 25404 et seq.
5. California Code of Regulations, Title 19, Division 2, Chapter 4, Article 3
6. California Code of Regulations, Title 8, Subchapter 7, Section 5192
7. Code of Federal Regulations: 29 CFR, Part 1910.120 Occupational Safety and Health Standards
8. Code of Federal Regulations (CFR), Title 40, Part 68, Section 112, Clean Water Act
9. Porter Cologne Water Quality Control Action, Section 13376
10. Food and Agricultural Code, Section 12997.7 (Pesticide Drift)
11. El Dorado County Code, Title 8, Chapter 8.38

References

The following are references to the Area Plan:

1. El Dorado County Emergency Operations Plan
2. California Hazardous Materials Incident Contingency Plan (2005)
3. California Oil Spill Contingency Plan
4. California Radiological Emergency Assistance Plan
5. Tahoe Basin Supplement to the Region IX Mainland Oil and Hazardous Substance Pollution Contingency Plan
6. Firescope Field Operations Guide
7. Sacramento County Hazardous Materials Area Plan
8. Amador County Hazardous Materials Area Plan
9. Placer County Hazardous Materials Area Plan

A. ADMINISTRATION

1. Administering Agency

The El Dorado County Environmental Management Department (EMD) is the Administering Agency under the California H&SC Title 20, Chapter 6.95, Article 1, § 25500. This statute mandates that the Administering Agency develop and maintain an Area Plan which describes the agency's plan for preparing for and responding to a hazardous materials emergency. The EMD will request input from participating agencies on the Area Plan Distribution List (***Appendix P-1***). County departments involved in hazardous materials incident planning or response are responsible for notifying the Supervising Hazardous Materials Specialist of any changes in emergency response procedures or equipment that would substantially affect the Area Plan.

This Area Plan was developed using the following references as guidelines: California H&SC, Article 1, and CCR, Title 19, Division 2, Chapter 4, Article 3; the Final Area Plan Guidance Language; and the Governor's Office of Emergency Services (OES) Area Plan checklist as guidelines. Each requirement in these four references has been addressed in this Area Plan. ***Appendix P-2*** contains the OES Area Plan checklist.

2. Certified Unified Program Agency (CUPA)

In 1995, legislation went into effect that required CalEPA to consolidate hazardous material and hazardous waste permitting, inspection and enforcement activities under one local agency. In February 1997, the EMD was approved by CalEPA as the Certified Unified Program Agency (CUPA) for the El Dorado County. As a CUPA, the EMD has responsibility for implementing all the unified programs within its jurisdiction. Unified programs include: hazardous materials business plan, hazardous waste generator, hazardous waste on-site treatment, underground storage tanks and aboveground storage tanks.

3. *Activation of the Area Plan*

The original Area Plan was prepared in 1991. This updated version will be put into effect by a memo by the Director of Environmental Management (***Appendix P-1***). ***Appendix P-1*** also contains the list of all county departments and agencies to which it will be distributed. The updated Area Plan will also be submitted to the State Office of Emergency Services.

The Area Plan is in effect at all times. Portions of the Area Plan relating to response are activated on an as-needed basis as incidents occur. The Area Plan may be activated by any "first response" agency arriving at the scene at a potential hazardous materials incident.

4. Deactivation of the Area Plan

This Plan can be deactivated by the Incident Commander (IC) when it is determined that a hazardous materials incident does not exist or if the situation has been stabilized and all necessary response procedures are completed. Clean up operations may continue after the Area Plan has been deactivated.

5. Plan Review and Maintenance

The EMD Supervising Hazardous Materials Specialist will be responsible for updating the Area Plan. The Area Plan is a working document. As information affecting emergency operations changes (such as response procedures, available equipment, etc.), the Area Plan will be updated. By statute, the Area Plan is required to be reviewed and updated every three years. The process for updating is as follows:

- ✓ At a minimum, every three years the Area Plan will be reviewed and updated if necessary.
- ✓ Each time the Area Plan is updated, a Record of Revisions page will be updated which will indicate the changes, the date of the changes and who posted the changes. This is included in ***Appendix P-3***.
- ✓ The State OES will be sent a revised copy of the Area Plan if substantial changes are made to the document.
- ✓ Review the Area Plan annually for changes in contact and pesticide information.

The Area Plan may be modified as a result of hazardous materials post-incident analyses and/or post-exercise critiques. Proposed changes shall be submitted in writing to the EMD. These changes shall be published and distributed to agencies holding the Area Plan.

B. AGENCY COORDINATION AND PLANNING

Many agencies could potentially be involved in a hazardous materials emergency depending on the nature and size of a particular incident. These agencies have different capabilities, responsibilities and functions. Part II of this document provides a detailed description of the roles, resources and responsibilities of government and non-government agencies that respond to hazardous materials incidents and provides contact phone numbers. This section will describe the pre-planning functions and relationship to other plans and agencies.

1. Relationship to Other Plans

a. State Plans

Hazardous Materials Incident Contingency Plan

The California State Toxic Disaster Plan developed and known as the Hazardous Materials Incident Contingency Plan (HMICP) is a supporting document to the State of California Emergency Plan which defines the emergency management system used for all emergencies in California. Recently a decision was made to split the document into two – the California State Toxic Disaster Contingency Plan and the Hazardous Materials Incident Tool Kit. The latter document is separated into four sections; Introduction, Concept of Operations, Roles and responsibilities and Attachments. It describes the State's hazardous materials emergency response organization; the roles and responsibilities of State agencies; the relationship of the State with the local, federal, volunteer, and private organizations.

The Area Plan is consistent with the HMICP in that both plans discuss roles and responsibilities and general protocols for implementing NIMS and SEMS. The County uses NIMS and SEMS and coordinates with state agencies via the State OES Warning Center, mutual aid programs, and direct calls to various agencies.

b. Regional Plans

Hazardous Materials Response Plan

The Region IV LEPC Hazardous Material Response Plan, as mandated by Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), describes hazardous material emergency response for the eleven Region IV counties: Alpine, Amador, Calaveras, El Dorado, Nevada, Placer, Sacramento, San Joaquin, Stanislaus, Tuolumne, and Yolo. The Regional Plan addresses mutual aid, hazardous materials transportation issues, hazard analysis and coordination of incidents that cross jurisdictional boundaries. The Area Plan supports this Regional Plan.

c. Local Plans

(1) Emergency Operations Plan

The El Dorado County Office of Emergency Services maintains the Emergency Operations Plan (EOP). The EOP is the primary emergency planning and management document within the County. This plan is activated in a hazardous materials incident when additional resources or extended response activities are needed. The latest version was revised

in September 2005 and is in the process of being updated in 2009.

The El Dorado County Emergency Operations Center (EOC) can be activated in the event of an emergency, including a hazardous materials incident. The EOC is the location from which centralized management of an emergency response is performed.

(2) Terrorism Plan (Annex to the Emergency Operations Plan) and Bioterrorism Response Plans

Terrorist activities may involve chemical, biological or radiological agents of mass destruction. A Terrorism Plan has been developed by the El Dorado County Sheriff's Office of Emergency Services to address the preparedness, prevention response and recovery to terrorism events, including weapons of mass destruction. A Terrorism Notification Response Guide, an attachment to the Terrorism Plan, provides general and specific instructions to local agencies for a Weapons of Mass Destruction (WMD) incident.

In addition, the EMD and the Public Health Department have developed an All-Hazards Response Plan and Epidemiology Response Plan with Incident Specific Annexes for Chemical, Biological, Radiological responses. EMD has also developed a Crisis and Risk Emergency Communications (CERC) Plan applicable to all hazards. These documents are annexes to the EOP.

2. Mutual Aid Agreements

El Dorado County Interagency Hazardous Materials Response Team (HMRT) Agreement

The EMD has had initial discussions with local fire districts, the Sheriff's Department and El Dorado County Office of Emergency Services about creating a cooperative interagency approach to hazardous materials incidents in El Dorado County. A draft Mutual Aid Agreement has been developed but has not been finalized at the time of publication of this document.

A Memorandum of Understanding for specific portions of emergency response, targeted toward Fire Department participation in decontamination operations, may be developed in the future.

3. Between County Agreements

No written Mutual Aid agreements between El Dorado County and other counties currently exist. At this time, a request for out-of-county resources would be made through the State of California EMA.

4. Coordinating Activities

a. Disaster Council

The El Dorado Disaster Council meets on a bi-monthly basis to discuss state and local emergency planning, including hazardous materials issues. Members are appointed by the Board of Supervisors for a four year term to provide advice and recommendations to the Board of Supervisors and Director of Emergency Services on emergency planning issues.

b. Local Emergency

The Region IV Local Emergency Planning Committee (LEPC) was designated by the Chemical Emergency Planning and Response

Planning Committee (LEPC)

Commission (CEPRC) pursuant to the Superfund and Reauthorization Act of 1985 (SARA), Title III. The eleven-county Region IV includes Alpine, Amador, Calaveras, El Dorado, Nevada, Placer, Sacramento, San Joaquin, Stanislaus, Tuolumne and Yolo counties. The LEPC includes public agency, nonprofit and private industry representatives from throughout the region, that meet on a monthly basis to discuss hazardous materials issues. The LEPC's primary responsibilities include:

- ✓ Develop and maintain a comprehensive regional hazmat emergency plan,
- ✓ Review regional chemical release information, and
- ✓ Conduct hazardous materials release public education activities.

c. Environmental Crimes Task Force

This Regional multi-agency group, composed of federal, state and local law, fire, environmental health, water board and legal representatives meet on a quarterly basis to strategize how to better support the enforcement of environmental crime and to deter these crimes before they occur.

d. Pesticide Drift Coordination

At the beginning of each year, the Agricultural Commissioner will review the list of the most frequently used pesticides/herbicides and identify those which are known to drift or volatize and are applied at high rates per acre. Any changes will be forwarded to the local CUPA for distribution. The list is attached as **Appendix P-5**. Copies of MSDS sheets for the listed chemicals will also be listed in this Appendix along with information regarding medical expense reimbursement.

C. CUPA REGULATORY PROGRAM

The EMD's CUPA regulatory program includes identifying businesses within El Dorado County that store or use hazardous materials and/or generate hazardous wastes. EMD, as the CUPA, inspects these facilities for proper management and initiates enforcement actions for non-compliance. EMD also collects facility information and provides it to the Fire Departments for use during an emergency.

1. Hazardous Materials Business Plan (HMBP) and Inspection Program

The HMBP program is required by Chapter 6.95 Division 20 of the California H&SC. This program provides information essential to fire fighters, health officials, planners, elected officials and workers in meeting their responsibilities for the health and welfare of the community. The HMBP program also incorporates the community's right to know about the hazardous materials in their community. This law requires businesses which handle hazardous materials over threshold amounts (55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases) to submit a HMBP to EMD. A HMBP consists of: general business contact information, an inventory of hazardous materials, a map showing the location of the materials and evacuation routes, an emergency response plan and a training plan for employees. Each year all facilities with a HMBP are required to submit a revised HMBP or a statement certifying the accuracy of the HMBP.

The HMBPs are on file in the EMD offices in Placerville and South Lake Tahoe. Copies of HMBPs are sent to the fire agency having jurisdictional authority for the areas where the businesses are located. The HMBP information is also stored electronically in an Envisions database. In a hazardous materials emergency at a business or facility, the applicable HMBP can be accessed by the EMD HMRT member and by the appropriate fire department or district.

The public can review the files by making an appointment with the EMD. File review procedures are detailed in the EMD's Records Management: Facility Files Policy.

Facilities are inspected to verify HMPB information is accurate. Underground storage tank facilities are inspected annually. All other facilities are inspected once every three years at a minimum. New businesses are located by the CUPA through the plan check process, business license process or field surveys.

2. Integrating information from California Accidental Release Program (CalARP) facilities

Facilities that exceed threshold amounts of extremely hazardous substances (e.g. ammonia, chlorine, highly toxic gases) in a process on site are required to prepare a Risk Management Plan (RMP). The Federal program has higher threshold quantities than the California program, known as the California Accidental Release (CalARP) Program. CalARP facilities are required under state and federal law to prepare RMPs which describe the accidental release prevention and emergency response policies and procedures at their facility. The RMP contains an analysis of the off-site consequence of an accidental release at the facility. These off-

site analyses consider sensitive populations including schools, hospitals, long term health care and child care facilities, park and recreation areas and major commercial, office and industrial businesses.

The RMPs also contain an emergency response plan with procedures for notifying and interfacing with the public and emergency response agencies. Facilities are categorized into "responding facilities" and "non-responding" facilities based on the capability to respond to an accidental release at their facility. If "non-responding," they must have a mechanism in place to notify local responders and the facility must make other arrangements for appropriate response (for example, by establishing a mutual aid agreement with an industry or private response team).

All CalARP facilities are included in the Hazardous Materials Area Plan. ***Appendix P-4*** contains a list of facilities subject to the CalARP program and includes whether they are a responding or non-responding facility.

3. Total Number of Regulated Businesses	As of October 2009, there are 730 facilities regulated in the CUPA program and 90% of those facilities submitted HMBPs. There are six facilities covered under the CalARP and Federal Risk Management Plan Program.
4. Code Enforcement and Education	The EMD, as the CUPA, works to reduce the number of hazardous materials incidents and to minimize impacts when incidents do occur. This is done through education, inspection and code enforcement.
5. Pre-Incident Surveys	EMD provides the Fire Department's communication center with information within their jurisdictions including hazardous materials inventories, emergency phone numbers and site maps. Each fire jurisdiction is responsible to determine the necessity of pre-incident surveys in their jurisdictions.
6. Pesticide Drift Protocols	The Area Plan provides pre-emergency planning, communication, training, cost recovery and fiscal reimbursement procedures as required by SB 391. See Response section for response protocols and Appendix P-5 for information on the most commonly used pesticides handled in El Dorado County along with medical reimbursement information.
7. Data Management System	EMD is using Envision©, a data management system for tracking the following information about El Dorado County business facilities: ✓ Location and contacts ✓ Hazardous materials inventories ✓ Inspection and enforcement actions ✓ Underground storage tanks (USTs) status ✓ Permit issuance, status and expiration dates ✓ Financial, accounts-receivable billings and payments Contamination cases are tracked through the State Water Quality Control Board's Geotracker program

D. HAZARD ANALYSIS

1. General Situation

The County of El Dorado is located in the Sierra Nevada mountain range east of Sacramento. The terrain varies from rolling foothills in the west to 10,000 feet mountain peaks in the east. There are numerous waterways, lakes, rivers and streams. The two incorporated cities are Placerville, the County seat on the west slope, and South Lake Tahoe, located adjacent to Stateline Nevada. El Dorado County is home to approximately 162,000 residents. The primary transportation route is Highway 50 that runs from Sacramento in the west to Carson City in the east.

The County is subject to several major hazards. The most common of which is the threat of wildfire, due to the extensive wildland/urban interface. The El Dorado County EOP contains a detailed hazard vulnerability assessment section. Historically, transportation accidents, illegal disposal, fixed facility releases and clandestine drug labs have accounted for the majority of hazardous materials incidents occurring in the County. On average, County staff respond to 35 hazardous materials incidents each year.

2. Hazards Overview

a. Transportation	Highways, railways, and commercial and military aviation routes constitute a major threat because of the multitude of chemicals and hazardous substances transported along them. US Highway 50 and State Routes 49, 88, 89 and 193 are areas of concern, as are the county airports. Natural gas pipelines are located in both the east and west ends of the county. A natural gas pipeline terminates in El Dorado Hills in the west and another terminates in South Lake Tahoe in the east.
b. Business and Industry	Many manufacturing and light industrial firms are located near Missouri Flat Road in the Diamond Springs/Placerville area, Durock Road in the Barnett Business Park and Latrobe Road in El Dorado Hills Business Park. Businesses in the incorporated cities (Placerville and South Lake Tahoe) also offer the potential for hazardous materials incidents. Businesses adjacent to Lake Tahoe that handle hazardous materials pose a potential threat to this sensitive ecosystem.
c. Agriculture	Accidental releases of pesticides, fertilizers, and other agricultural chemicals may be harmful to human health and the environment. The majority of agricultural industry in El Dorado County consists primarily of vineyard and orchard operations located on the “West Slope”.
d. Illegitimate Business	Illegitimate businesses, such as drug laboratories and large scale marijuana cultivation on both public lands and houses, are a significant threat to human health, property, and the environment. The waste produced is often dumped in remote areas or along roads, posing a serious health threat to passersby.

e. Illegal Disposal

Hazardous waste (e.g., used motor oil, solvents, paint, or asbestos) is occasionally dumped in remote areas of the county or along roadways. Like drug lab waste, illegally dumped hazardous waste poses a threat to human health, property, and the environment.

f. Terrorist Activities	Individuals with ties to domestic or international organizations or acting as a "lone wolf" may attempt to disrupt a community through nuclear, radiological, biological or chemical terrorism.
g. Radioactive Materials	Small quantities of radioactive materials are routinely transported through the County to medical facilities and for use in construction activities.
h. Wildland Fires	Fires remain the single greatest threat to the County with the greatest potential for exhausting local resources.

3. Hazardous Materials Target Hazard Facilities	Certain facilities are considered "target hazards" because they have significant quantities of hazardous materials that pose substantial hazards to human health and the environment. In the event of a disaster or catastrophic release, these facilities would pose the greatest risk to human health and the environment. The list of Target Hazard Facilities has been provided to the El Dorado County Sheriff's Office of Emergency Services.

E. TRAINING

1. Training Overview

Personnel involved in response participate in an ongoing program to continually meet the training requirements as established by State and Federal regulations. Training standards are defined in California Administrative Code Title 19, Section 2725; Federal OSHA, 29CFR 1910.120; and Cal OSHA Title 8, CCR Subchapter 7, Section 5192.

The following topics are covered in training courses:

- ✓ Health and safety procedures for response personnel
- ✓ Use of emergency response equipment and supplies
- ✓ Procedures for access to mutual-aid resources
- ✓ Identification of medical facilities
- ✓ Evacuation plans and procedures
- ✓ Monitoring and decontamination procedures for personnel and equipment
- ✓ First-aid procedures
- ✓ Procedures for informing the public
- ✓ Psychological stress

Training methods include classroom lecture, online courses, field exercises, and incident critiques. EMD response team members are trained to the Hazardous Materials Technician Level (160 hrs). Several are trained at the Hazardous Material Specialist level (240 hrs). Refresher trainings are conducted annually. Team members also receive training on the following subjects: terrorism, drug labs, field identification (5-Step and HazCat), ICS, NIMS, radiation, toxicology, enforcement, investigation and other response related classes.

An annual physical and respirator fit testing are also conducted.

All fire agencies have completed the First Responder Operational Training and most have completed the Decontamination level training. Training records for fire agency personnel are maintained according to each agency's polices and procedures.

2. Training Documentation

A training log listing courses taken by EMD team members is maintained in the Placerville office.

3. Drills and Exercises

The El Dorado County Office of Emergency Services periodically conducts emergency exercises with hazardous materials components to test the Area Plan.

A. NOTIFICATION AND REPORTING

1. Notification and Dispatch

If there is a potential or actual hazardous materials release, the following information should be reported:

a. Nature of the incident;
b. Identification of the hazardous material(s) involved;
c. An estimate of the quantity released;
d. Location of the release and the routes of approach:
e. The number of people injured or contaminated;
f. Special problems and threats to emergency responders;
g. Potential environmental damage.

At a minimum, this information needs to be reported to:

- ✓ **911**
- ✓ **State of California OES Warning Center (800) 852-7550**

When the 911 report is received, Central Dispatch and/or CDF Dispatch notify the EMD on call duty officer of the incident. The public agency first on-scene should request needed resources through dispatch. The Incident Commander (IC) may notify other agencies as needed such as the Department of Fish and Game, Public Utility Districts, or the Federal National Response Center, depending on the nature of the incident.

A Responsibility Matrix, ***Appendix R-1*** has been developed to assist the IC to determine the functional responsibilities of various agencies during a large scale incident. A detailed description of the roles and responsibilities of local, state and federal response agencies is provided in Part II of this document.

A comprehensive list and telephone numbers of agencies, resources and emergency contractors are attached as ***Appendix R-2.***

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2. Informing Medical and Health Facilities of the Nature of the Incident and the Substances Involved, pesticides inclusive

The IC (or transportation group supervisor, if assigned) is responsible for notifying the medical facilities of any exposure or possible exposure to hazardous substance(s). The IC should attempt to provide the medical facility with exposure information prior to victim(s) arrival at the medical facility. The CDF Dispatch coordinates emergency transport of patients.

Marshall Hospital in Placerville is the primary medical care facility in western El Dorado County. Barton Hospital in South Lake Tahoe is the primary medical care facility in eastern El Dorado County. Hospital staff members are responsible for communicating with regional poison control centers to obtain toxicological information.

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3. Business Notification Requirements

a. Verbal Notification

Any handler, employee, authorized representative, agent or designee of a handler who has knowledge of an actual or potential release of hazardous materials must verbally notify the following agencies:

- ✓ **911 and El Dorado County Environmental Management Department (530) 621-5300.**

- ✓ **State of California OES Warning Center (800) 852-7550 or (916) 845-8911**

Additional Agencies

- ✓ **National Response Center at (800) 424-8802** if the spill equals or exceeds Federal Reportable Quantities, or *any amount* of oil reaching or having the potential of reaching navigable waters of California.

Section 2703 of Title 19, CCR details the criteria to determine if a release is reportable under State law. Verbal notification must be made if the release meets the following requirements:

- The release poses a hazard to human health and safety, property or the environment (notification should be made even if the impacts are potential or delayed).

- The release is equal to or exceeds the Federal Reporting Quantity (RQ) of an extremely hazardous material – listed in 40 CFR, Part 355, Appendix A. This list can be found at the following web site:

http://yosemite.epa.gov/oswer/ceppoehs.nsf/Alphabetical_Results?openview

- The release is equal to or exceeds the Federal Reporting Quantity (RQ) of a hazardous substance – listed in 40CFR, Chapter 1, Subchapter J, Section 302.4. This list can be found at the following website:

http://www.epa.gov/oerrpage/superfund/programs/er/triggers/haztrigs/302table01.pdf

b. Written Notification

A business is required to prepare a written follow-up notice (within 30 days of the release) if a release of an extremely hazardous substance (40 CFR, Part 355, Appendix A) or hazardous substance (40CFR, Chapter 1, Subchapter J, Section 302.4) exceeds the Federal Reporting Quantity. Section 2705 of Title 19, CCR details the format for the notice and where the notice should be sent. The blank follow-up notice can be obtained at the following website:

http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/Emergency%20Release%20Follow-up%20Notice%20Reporting%20Form%20(304)%20and%20Instructions%20/$file/304Form-Instr.doc

4. Response Agency Notification Requirements

Although the bulk of the responsibility for notification lies with the private sector, responding agencies must also make the appropriate notifications as follows:

- ✓ Any local or state agency responding to an oil spill must notify the State OES Warning Center (GC 8670.26). (800) 852-7550.
- ✓ Any emergency rescue personnel responding to a hazardous substances spill within one-half mile of a school must notify the superintendent of the affected school district (H&SC 25507.10).
- ✓ Any designated government employee (defined in GC82019) must report any hazardous waste discharge which is likely to cause substantial injury to the public health or safety that they become aware of within their jurisdictional boundary within seventy-two hours to the local health department or board of supervisors (H&SC 25180.7).

The IC is responsible for ensuring the required notifications are made. The IC will direct the Dispatch to contact the required agencies. ***Appendix R-2*** contains phone numbers for these agencies and other resources, such as clean-up contractors, technical resources and laboratories.

Fire and Law agencies are required to report incidents on electronic forms such as the National Fire Incident Response System (NFIRS).

5. Release Reporting Requirements Guidance Document

A draft Release Reporting Guidance document has been developed by the State Office of Emergency Services to assist both the private and public sector's understanding of release reporting requirements. It is an appendix to the California Hazardous Materials Incident Contingency Plan and is included as ***Appendix R-3 – OES Release Reporting Matrix*** in this Area Plan.

B. CONCEPT OF OPERATIONS

1. National Incident Management System (NIMS) and the Incident Command System (ICS)

Federal law requires the use of the National Incident Management System (NIMS) for managing response to multi-agency and multi-jurisdiction emergencies. NIMS establishes standardized incident management processes, protocols, and procedures that all responders -- Federal, State, and local --use to coordinate and conduct response actions. The California version, known as SEMS, the Standardized Emergency Management System, was updated in 2004 to be consistent with the National Homeland Security Program. SEMS standardized the principles and methods of emergency response in California. The Incident Command System (ICS) operates under SEMS and is an efficient tool for responding to all types of incidents. All local fire departments use the ICS when responding to incidents. Under the ICS structure, the IC has the primary responsibility and the authority to activate a response consistent with the Area Plan.

2. Incident Command System

The five functions of the ICS organization are management (command), operations, planning and intelligence (information), logistics and finance and administration. Part I of El Dorado County's EOP provides a detailed description of the NIMS, SEMS and the Incident Command System. Please refer to the EOP for an in-depth discussion of these topics. A brief description of the roles of the command staff positions of the standardized ICS system follows:

Incident Command – The IC or Unified IC has overall management, coordination and responsibility over a hazardous material incident, including a WMD event. The IC is responsible for evaluating needs, identifying resources and procuring resources to abate the incident, protect life, environment and property.

Incident Command Authority

For hazardous materials incidents, the IC authority shall be:

- ✓ California Highway Patrol (CHP): On State highways and county roads in unincorporated areas.
- ✓ Sheriff: Off highway in the unincorporated areas.
- ✓ Police Departments: All incidents within the incorporated cities of Placerville and South Lake Tahoe.

Liaison – The Liaison Officer is the point of contact for representatives from other agencies.

Public Information Officer - The Public Information Officer (PIO) is responsible for developing accurate and complete information regarding the incident cause, size, current situation, resources committed, and other matters of general interest.

The PIO will be the point of contact for the media and other government agencies desiring information about the incident. In both single and Unified Command structures, only one PIO is designated, although assistants from other agencies or departments may be appointed.

Safety Officer - The Safety Officer has the authority to alter, suspend, or terminate any activities, which involve an Immediately Dangerous to Life and Health (IDLH) condition or an imminent danger condition. The Safety Officer will immediately inform the IC of actions needed to lessen the hazards involved. In a multi-activity incident, the HazMat Safety Officer does not act as Safety Officer for the overall incident. The Safety Officer within the command staff serves that function. Preparing the Site Safety Plan is an important role of this position.

Planning - The Planning Section Chief is responsible for collecting, evaluating, and disseminating information about the development of the incident and the status of resources. This person prepares the Incident Action Plan outlining objectives, strategy, organization, and resources necessary to effectively mitigate an incident.

Logistics - The Logistics Section is responsible for providing all support needs to an incident, including ordering all resources from off-site locations. They also provide facilities, transportation, supplies, equipment maintenance and fueling, feeding, communications, and medical services.

> **Medical Unit Leader** This person comes under Logistics and is responsible for providing all medical care for incident personnel, providing on-site medical monitoring, and transportation if so needed.

Finance - The Finance Section is responsible for all financial and cost analysis aspects of an incident (usually only established on large and complex incidents).

Operations Chief – The Operations Chief is responsible for managing operations to control the incident. The Operations Chief will provide resources to assist in securing and maintaining immediate control of the incident until the situation has been stabilized. The Incident Action Plan is prepared by the Operations Chief.

The Operations Chief shall be responsible for directing rescue and first aid; fire suppression activities; containment; cleanup; personnel protection, safety; and coordinating incident efforts with the IC.

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3. Hazardous Materials Group Supervisor Positions

The Firescope Hazardous Materials Module to the Incident Command System provides an organizational structure for responding to a hazardous materials incident. The primary functions are directed by the Hazardous Materials Group Supervisor.

Hazardous Materials Group Supervisor - The Hazardous Materials Group Supervisor directs the overall operations of the Hazardous Materials Group and reports to the Operations Section Chief. The Hazardous Materials Group Supervisor is responsible for implementing Incident Action Plan sections related to Hazardous Materials Group operations. They assign resources and job functions within the Hazardous Materials Group, report operational progress and resource status.

Reporting to the Hazardous Materials Group Supervisor are five positions including Site Access Control Leader, Decontamination Team Leader, Safe Refuge Area Manager, Entry Team Leader and the Technical Support Team Leader. A brief description of the responsibilities of these positions follows:

Site Access Control Leader – This person is responsible for managing and tracking personnel movement and equipment used in the Control Zones. The Site Access Leader ensures that contaminants are controlled and records are maintained.

Entry Team Leader – This person is responsible for managing the entry team operations within the "Hot or Exclusion" zone. This includes rescue, materials identification, containment and control of the release.

Safe Refuge Manager – This person is responsible for designating the Safe Refuge area, needed if there are numerous contaminated persons in need of decontamination.

Decontamination Leader- This person is responsible for managing decontamination operations.

Technical Specialist - This person provides technical information and assistance to the Hazardous Materials Group Supervisor. Reference sources such as computer databases, technical journals, CHEMTREC, and phone contact with facility representatives are used.

The checklists for the Hazardous Materials Group Supervisor positions are included as ***Appendix R-4.***

C. EMEGENCY RESPONSE PROCEDURES

1. Approach, Recognition and Evaluation of Hazardous Materials Releases

The first emergency personnel arriving at an incident will act as the Incident Commander (IC) until relieved by a representative who has the appropriate IC authority. First responders are to respond defensively. Tasks undertaken are incident specific and based on protecting life, the environment and property. Tasks may include the following:

a. Isolating the scene and denying entry by establishing zones.
b. Identifying the product, if it can be done safely.
c. Establishing a Command Post in the support zone using the NIMS incident command system.
d. Notifying appropriate agencies and requesting needed resources.
e. Rescuing victims, if it can be done safely with available PPE.
f. Provide emergency medical care, including decontamination.
g. Determine need for and conduct protective actions (evacuation or sheltering in place).

(Reference California Hazardous Material Incident Contingency Plan 1995)

An Initial Response Checklist, included as ***Appendix R-5,*** can be used as a guideline for initial on-scene response actions.

2. Site Control and Perimeter Security

Responders must control entry and exit points at the incident site to limit the spread of and exposure to released materials. The law enforcement agency having traffic investigative authority has the responsibility for perimeter security and traffic control. Perimeter security should be initiated as soon as possible to minimize contamination of citizens and to eliminate interference to response operations.

Site Access Control is typically established by setting up control lines with barrier tape and establishing Control Zones. The EMD Standard Operating Procedure HMER-04 – Arrival, Assessment and Site Control provides greater detail of establishing Control Zones such as the Exclusion Zone (Hot Zone), the Contamination Reduction Zone (Warm Zone), the Support Zone (Cold Zone), Decon (Decontamination) Corridor and the Outer Perimeter.

3. Recognition

Recognizing the type and degree of hazard present is one of the first steps after arriving at an incident. Among the sources of hazardous material identification are:

- ✓ Placards
- ✓ Shipping manifests
- ✓ Visual observation
- ✓ Package labels
- ✓ Container shapes, sizes and/or color, pesticide application Equipment, postings for recent pesticide application.
- ✓ Information from drivers, shippers, operators, and/or witnesses

- ✓ CHEMTREC - Chemical Transportation Emergency Center provides two types of assistance during a hazardous material incident:
  - Relays information in regards to the specific chemical
  - Will contact manufacturer or other expert for additional information or on-site assistance.

The IC may use the above resources to identify the substance involved (if the identification can be done safely i.e. from a safe distance). EMD has the equipment and can provide sample retrieval, material identification and/or categorization. If the incident requires additional personnel or equipment beyond the capabilities of the HMRT, the IC may exercise any El Dorado County Mutual Aid agreements or the State Master Mutual Aid Agreement to which all counties are signatories.

Other resources for obtaining chemical, toxicological and health hazard information are found in ***Appendix R-2.***

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4. Levels of Response

Hazardous materials incidents are categorized as Level I, II, or III, based on the severity of the incident. The criteria used to determine the level of an incident includes:

a. Characteristics of the hazardous material.
b. Nature of its release.
c. Area affected by the hazardous materials incident (e.g., sensitive ecosystems, populations, waterways, transportation routes, etc.).
d. Extent of multi-agency and multi-jurisdictional involvement.
e. Evacuations, injuries, or fatalities.
f. Technical expertise and equipment needed to safely mitigate the incident.

The determination of incident levels shall be made by the IC within the Unified Command system.

In ascending order of severity, these levels are defined as:

LEVEL I

LEVEL I - A minor situation within the capabilities of first responders trained at the "operational" level. A Level I incident involves a release, or possible release, of a small amount of liquid or solid of a known (identified) hazardous material. The agencies on-scene must have the expertise and proper equipment to safely mitigate the incident.

a. As a minimum, a Command Post and exclusion zone should be established for a Level I incident, and movement of personnel into the exclusion zone should be limited to personnel entering for a specific reason wearing the proper level of protective equipment.

b. An incident should be immediately upgraded to Level II for a release or potential release of an unknown hazardous material or suspected hazardous material.

c. Typical Level I incidents include:
   (1) Minor leaks or spills from a 55-gallon drum.
   (2) Minor leaks or spills which can be handled with absorbent.
   (3) Minor leaks or spills within the capability of a driver or operator to correct and mitigate.
   (4) Leaking valves on upright cargo tanks that do not require the product to be immediately off-loaded.
   (5) Release of chemicals which do not produce an environment which is immediately dangerous to life and health (IDLH) or above 10% of the Lower Explosion Limit (LEL) of a product, other than possibly inside the transport vehicle.
   (6) Leaks or spills of paint or batteries.
   (7) Overturned, empty cargo tanks which the IC determines to present no other hazards.
   (8) Evacuations limited to a single intersection or building.
   (9) Minor injuries to a small number of people and no fatalities.
   (10) Pesticide drifts involving a few people.

LEVEL II

LEVEL II - Any incident beyond the capabilities of an agency with jurisdictional responsibility for the incident that requires response by the HMRT. This can range from a small incident involving any amount of an unknown substance to a large incident involving multiple agencies and jurisdictions.

a. A Level II incident will be declared by the IC if the incident involves a sufficient quantity of liquid or solid of a known hazardous substance or any quantity of an unknown material that has been released or offers the potential for release.

b. A Level II incident will be declared for the release of any quantity of a known solid or liquid toxic material in a critical public area or for the release or potential release of any quantity of an unknown solid, liquid, or gaseous toxic material or suspected toxic material.

c. In a Level II incident, a formal and properly identified Command Post with a removed staging area, an Incident Safety Officer and a Hazardous Materials Group must be established. Control Zones must be established and maintained as early as possible, evaluated and monitored throughout the incident. Localized evacuation may need to be implemented and outside agencies should be notified.

d. Typical Level II incidents include:

   (1) One or more 55-gallon drums leaking large quantities of a known substance.
   (2) A major liquified petroleum gas leak due to puncture, crack, or crease of a large tank where ignition sources are a real threat.
   (3) Overturned cargo tanks with a hazardous material on board.
   (4) Train derailments not involving railroad tank cars filled with hazardous materials.
   (5) A vehicle or train fire involving hazardous materials or hazardous wastes.

(6) Leaking cargo tanks with hazardous materials on board whose structural integrity is in question.
(7) Incidents involving a fatality or serious injury attributed to the hazardous substance.
(8) Evacuations consisting of an apartment complex, city block, or large facility with many employees.
(9) A large spill of flammable liquids where ignition sources pose a serious threat.
(10) A fire that poses a serious threat of a boiling liquid expanding vapor explosion (BLEVE).
(11) A pesticide drift incident in which multiple victims are exposed and/or an evacuation is required.

LEVEL III

LEVEL III - Any incident beyond the capabilities of the HMRT and local resources. The incident may be quite lengthy in duration and may necessitate large-scale evacuations.

a. Level III incidents will involve multiple agencies and jurisdictions, as well as resources from the private sector (including chemical manufacturers) and volunteer organizations.

b. Examples of Level III incidents include:
(1) Incidents involving large-scale evacuations that may extend beyond jurisdictional boundaries.
(2) Any, leak, or fire involving hazardous materials that has gone to greater alarms.
(3) Any incident beyond local capabilities and resources (including the HMRT) to safely identify, contain, and mitigate.
(4) Train derailments involving railroad tank cars containing hazardous materials.
(5) Flammable liquid or gas cargo tank or railroad tank cars involved in or threatened by fire.
(6) Major leaks of compressed or liquefied gas cargo tanks or railroad tank cars caused by puncture of major structural damage.
(7) A major pesticide drift affecting a large geographical area involving large – scale exposures and evacuations.

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5. Hazardous Materials Incident Control Zones

Control Zones are the geographical areas within the control lines set up at a hazardous material incident. The three most commonly used and recognized are:

- ✓ Exclusion Zone (Hot Zone);
- ✓ Contamination Reduction Zone (Warm Zone); and
- ✓ Support Zone (Cold Zone)

Control Zones are established to:

- ✓ Secure the scene;
- ✓ Control the spread of contamination from a hazardous materials release;
- ✓ Ensure the safety and requisite control of emergency services personnel and operations; and

- ✓ Prevent personnel, vehicles, and other resources from entering a potentially hazardous area.

The size and configuration of the Control Zones are not static and must be constantly re-evaluated based on variables such as:

- ✓ Physical and chemical properties of the involved hazardous material(s);
- ✓ Quantity of the hazardous material(s) involved;
- ✓ Size, shape and condition of the hazardous material(s) container;
- ✓ Movement or dispersion pattern of the hazardous material(s);
- ✓ Current and anticipated weather and wind conditions;
- ✓ Geographic features surrounding the incident; and
- ✓ The presence of other nearby hazardous materials.

Initial perimeters may be set up by the first responders, but should be re-evaluated by the IC and HMRT as soon as possible. Control Zones (Exclusion, Contamination Reduction, and Support Zones) are established by hazardous material technician/specialists.

Control Zones may initially be established based on information contained in the *DOT Emergency Response Guidebook (ERG)* but should ultimately be established based upon all available technical information (guides and reference) and advice from the HMRT.

Control Zones provide an organized system that aids the IC in properly managing and mitigating hazardous material incidents while maximizing protection of emergency response personnel and the public. Control Zones should be established as follows:

a. Exclusion Zone

Exclusion Zone (Hot Zone). The Exclusion Zone is the area immediately around the spill or release of hazardous materials, and is the area where contamination occurs or can occur. It is the innermost of the three zones at a site. Special protection is required for all personnel within this zone.

(1) The Exclusion Zone is the area of *maximum hazard* and must be restricted to essential personnel wearing proper protective clothing. Access to the Exclusion Zone should be controlled by the IC or designee (typically Site Access Control) with entry and exit restricted to specific locations. Only personnel or teams directed by the Hazardous Materials Group Supervisor shall enter the Exclusion Zone. Command of the Exclusion Zone shall stay with the Hazardous Materials Group Supervisor throughout the incident.

(2) Personnel entering the Exclusion Zone should be kept to the minimum required for the assigned task, but should never be less than two persons (as per 29 CFR 1910.120). Operation in the Exclusion Zone shall be accomplished using the "buddy system" of two or more operating as a team.

(3) Exiting the Exclusion Zone must take place through the Contamination Reduction Zone/Corridor. When a team member enters the Exclusion Zone to conduct stabilization operations, a Backup Team should be suited up and available to immediately

assist with rescue and decontamination activities.

(4) The Safe Refuge Area is set up in the Exclusion Zone on the upwind side of the hazard site adjacent to the Decontamination Reduction Corridor.

(5) Operations conducted in the Exclusion Zone include:
- ✓ Identifying the material(s) involved in the threatened release;
- ✓ Conducting rescue, if appropriate; and
- ✓ Containing and abating the release or threatened release.

b. Contamination Reduction Zone

Contamination Reduction Zone (Warm Zone). The Contamination Reduction Zone is the area between the Exclusion Zone and the Support Zone, separating the contaminated area from the Support Zone. This zone contains the personnel decontamination station and requires a lesser degree of personal protection than the Exclusion Zone.

(1) Within the Contamination Reduction Zone, decontamination personnel and equipment are assembled for the decontamination of those working in the Exclusion Zone. All unauthorized personnel should be withdrawn from this zone; only essential personnel should remain. As in the Exclusion Zone, entry into and exit from the Contamination Reduction Zone should be restricted to a specific location.

(2) A Decontamination Corridor should be established within the Contamination Reduction Zone. The extent of decontamination will be determined by the product(s) involved and the amount of exposure. All personnel exiting the Exclusion Zone must be properly decontaminated and, when necessary, leave their protective clothing and equipment in the Decontamination Corridor. All equipment removed from the Exclusion Zone should be decontaminated, packaged, and properly handled or disposed of. Whenever possible, a check will be done (such as checking pH, level of radiation, volatile organic compounds (VOCs), etc), to verify the effectiveness of the decontamination process. Disposal of equipment will require manifesting the material as hazardous waste and following all applicable standards. The three basic levels of decontamination procedures include:
- ✓ Decon Level 1 — Contamination likely, but not definitely known
- ✓ Decon Level 2 — Contamination known, but no skin contact
- ✓ Decon Level 3 — Contamination known *and* skin contact evident

(3) The outer perimeter of the Contamination Reduction Zone should be appropriately marked with ropes, barricade tape or traffic cones. This perimeter is called the Contamination Reduction Control Line and hazardous materials units will usually be located just outside this line.

(4) Operations conducted in the Contamination Reduction Zone include:
- ✓ Decontamination of victims and emergency response

personnel; and
- ✓ Decontamination of equipment.

An escape route from the Exclusion Zone to the Contamination Reduction Zone will be identified and kept open for emergency evacuation of personnel and equipment and the removal of injured citizens or personnel.

c. Support Zone

Support Zone (Cold Zone). The Support Zone is the safe or "clean" area beyond the outer perimeter of the Contamination Control Line where *personnel and equipment are not expected to become contaminated* and where special protective clothing is not required. Resources immediately supporting the hazardous material emergency operation are located here. The Command Post and media-briefing site are located within the Support Zone.

(1) Although the Support Zone is considered safe and the movement of personnel and equipment is unrestricted, with many incidents, it is prudent to keep this area restricted to emergency personnel and to keep the public outside of the Support Area. These precautions are taken in case circumstances change such as an escalation of releases or a change in environmental conditions, wind speed or wind direction.

(2) Operations conducted in the Support Zone include:

- ✓ Providing emergency medical care;
- ✓ Providing an area for resources and staging;
- ✓ Controlling access to all zones;
- ✓ Direction, control, and support of overall emergency operations (*i.e.,* Command Post and scene management); and
- ✓ Conducting media briefings and interviews.

d. Outer Perimeter

This is the boundary beyond which public access is limited and the public cannot cross into the Support Zone.

Please see a diagram of the three Hazardous Materials Incident Control Zones on the next page in Figure C-1.

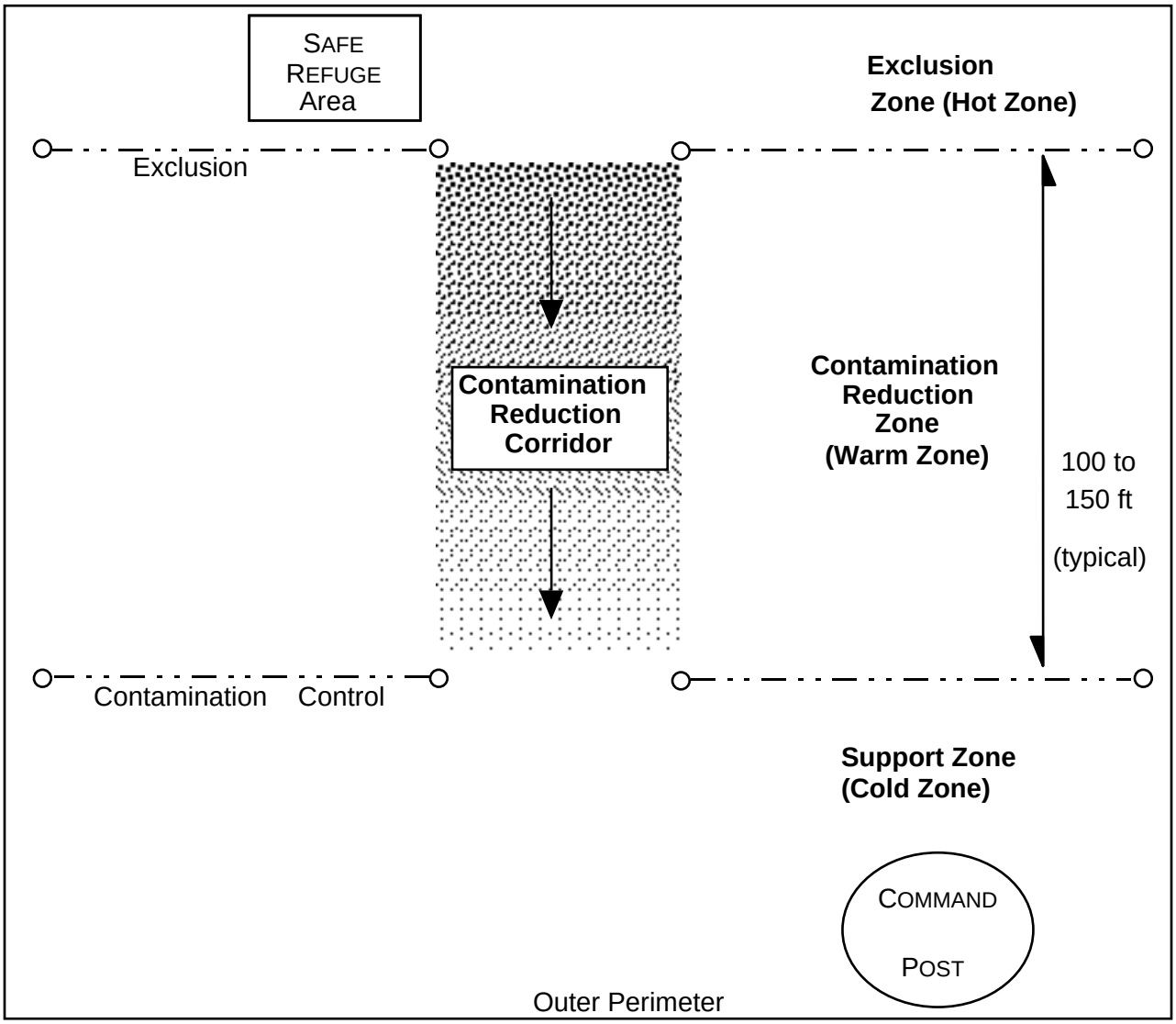

Figure C-1: Hazardous Material Incident Control Zones

6. Evacuation/ Shelter-in Place Planning

The decision to evacuate or shelter-in-place is the responsibility of IC or Unified Command. 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. The decision to evacuate may be based on the Department of Transportation (DOT) Emergency Response Guidebook, or other guidelines. The IC may also consult with the County Health Officer.

The IC will consult with the appropriate ICS positions (such as Safety Officer and Technical Specialist), technical references and any agency necessary (such as CHEMTREC, Poison Control and OEHHA) to obtain information about the health properties of the material. The IC must evaluate area topography, meteorology, hydrology, demography and facility characteristics, including the delineation of potentially impacted areas. The County's Telephone Notification System can be used to notify residents and business of actions to take to either shelter-in-place or evacuate.

The evacuation warning should include such information as:

- ✓ Reason for evacuation;
- ✓ Type of evacuation (voluntary or mandatory);
- ✓ Best available routes out of the area;
- ✓ Location of reception and care facilities, if established;
- ✓ Anticipated duration of the emergency; and
- ✓ Time remaining before the situation becomes critical

A hazardous materials Incident Action Plan (IAP) should be developed to assist in the decision to shelter-in-place or evacuate and may include the following elements:

a. Determination of the necessity for evacuation;
b. Consideration of sheltering in place;
c. Centralized coordination of information with local law, fire, Sheriff, health services, medical and other emergency response agencies;
d. Release of safety information to the public;
e. Notification of medical and health facilities of the nature of the incident and the substance(s) involved;
f. Description of hazardous materials involved such as quantity, concentration, vapor pressure, density and potential health effects;
g. Possible release scenarios;
h. Facility characteristics, topography, meteorology, and demography of potentially affected areas;
i. Ingress and egress routes and alternatives;
j. Location of medical resources trained and equipped for hazardous material response;
k. Mass-care facilities, reception areas and shelters; and
l. Procedures for post-emergency period population recovery.

Appendix R-6 contains a checklist to be used to assist in Evacuation/Shelter-in-Place decision making.

7. Shelters	The Care and Shelter Section of Part II of the Emergency Operations Plan provides detailed information about providing food, clothing, shelter and other basic necessities of life on a mass care basis.
8. Personnel Monitoring and Decontamination	EMD has established Standard Operating Procedures (SOPs) on Medical Monitoring and Surveillance (HMER-02) and on Decontamination procedures (HMER-10). The SOPs are based on California Specialized Training Institute's (CSTI) standardized training and guidelines.
9. Containment and Control	The El Dorado County EMD has primary responsibility to contain, control and mitigate releases and maintains control of the scene. If additional resources are required, the IC may call Dispatch to contact public or private agencies. Contact information for emergency response contractors, disposal sites and public and private agency resources is included in ***Appendix R-2.***
10. Drug Labs	For any incident involving a drug lab, the Sheriff's Department is initially contacted. The Sheriff's Department will contact the Western El Dorado County Narcotic Enforcement Team (WENET) or South Lake Tahoe El Dorado Douglas Narcotic Enforcement Team (SLEDNET), depending on the location of the incident. These groups will usually be the lead agency and the IC for the duration of the incident. The Department of Toxic Substances Control could also be notified through the Sheriff's Department and can provide sampling and Industrial Hygiene assistance and clean-up contractors.
11. Terrorism/ Bioterrorism/ WMD Events	If terrorism events occur, response agencies will follow protocols in the Terrorism Plan, All-Hazards Response Plan and Epidemiology Response Plan along with Incident Specific Annexes for Chemical, Biological, Radiological responses.
12. Pesticide Drift Protocols	If the first in agency suspects a pesticide is involved, the Agricultural Commissioner will be notified. The Agricultural Commissioner will make the determination if the incident can be attributed to pesticide drift. The following criteria will be utilized to determine if the incident is related to pesticide drift, for response purposes. ✓ It is a pesticide used in the production of an agricultural commodity (grapes, apples, pears etc) ✓ The exposure affects an individual(s) not performing work as an employee of the business The following protocol should be used if it determined to be a pesticide drift incident. ✓ After the incident has been mitigated, The Agricultural Commissioner will identify the pesticide related to the drift incident. The MSDS along with any other pertinent information will be relayed to the appropriate medical care providers to assist in the treatment of the affected. ✓ The Fire Department will provide information to the exposed individual of the medical aid required and where this aid is available. The Agricultural Commissioner will provide information to the affected of their eligibility for medical reimbursement and where in the Public Health Department to follow up on completed forms or questions regarding eligibility for medical reimbursement.

- ✓ Medical expenses, however may not be reimbursed if it is determined that the injury was not the result of a pesticide drift incident.
- ✓ If there is an evacuation, the Incident Commander (IC) in coordination with the Agricultural Commissioner and Environmental Management will identify the areas of safe refuge for the evacuees.

The Agricultural Commissioner will investigate the incident as soon as possible to determine if the criteria have been met to be able to apply for medical reimbursement. Examples include but are not limited to:

- ✓ The misuse of the pesticide caused an acute injury.
- ✓ The misuse occurred in the production of an agricultural commodity.
- ✓ The pesticide use was in the violation of the law
- ✓ The incident occurred in a non occupational setting resulting in immediate medical attention being sought.

13. Turning Over Responsibility for Site Control

The IC is responsible for stabilizing and securing the scene to ensure the protection of life-safety, property and the environment from hazardous materials releases and threatened releases. When a scene is under control, the IC can terminate on-scene involvement. The following guidelines can be used to determine when the IC can transfer responsibility for site control:

- ✓ The hazardous materials release is mitigated and contained. No immediate threat to public safety, property or the environment is present;
- ✓ All hazardous materials are secured and under the control of the responsible party, EMD, Department of Transportation, or another regulatory agency;
- ✓ Environmental issues (such as spills to creek, etc.) are under control. Input from El Dorado County Flood Control, Fish and Game or the Regional Water Quality Control Board may be needed to make this evaluation.

The IC should document the name, company/agency, phone number and title of the person that assumes responsibility of the incident.

14. Clean-Up and Disposal Procedures

Once the basic operational concerns (isolation, identification, and control) have been addressed, the IC can arrange for proper disposal. Alternatives for clean up and disposal are the following:

- ✓ The responsible party will be directed to clean-up and properly dispose of the spilled materials. El Dorado County EMD or their designee will oversee this action.

- ✓ If no responsible party can be identified, the IC may try to procure state or federal funding for clean up. The next section (Section D of the Response Section) provides information on state and federal clean-up funds.

- ✓ In the event of a petroleum spill on a county roadway, the County Department of Transportation will be called to spread sand. If there is more than a sheen, the responsible party would be required to spread adsorbent to control the spill and remove the contaminated sand for disposal. If there is no responsible party, EMD will coordinate the mitigation and removal of the county roadway spill. If immediate pick

up is needed due to health hazard, quantity, or characteristics of the materials, the IC will contact the DTSC Emergency Reserve Fund or a hazardous waste contractor.

- ✓ Drug lab clean ups will be the responsibility of the responsible party. If immediate mitigation and clean up is needed, it would be coordinated by EMD, WENET, SLEDNET or the Department of Justice.

- ✓ Public agencies in El Dorado County that handle abandoned hazardous waste may dispose of this waste in the County Household Hazardous Waste and Conditionally Exempt Small Quantity Generator (CESQG) Collection Program provided the waste meets CESQG waste characteristics. Agencies are allowed to bring up to 220 pounds per delivery and can make multiple trips when necessary. In order for an agency to use this service they must set up an account with the program.

15. Return to Occupancy Health Determination

If public health issues are a concern, the El Dorado County Health Officer may be requested to assist the IC with making a determination on when to allow individuals to return to the affected area. In most situations, EMD would also be consulted on public health issues and return to occupancy decisions. In drug lab situations, a Certified Industrial Hygienist (CIH) would be consulted to make this determination.

In some cases, hazardous materials spills may impact soil and/or groundwater and may need additional clean up beyond initial mitigation. The contaminated property must be cleaned up to meet environmental health standards. In the El Dorado County, the EMD, in coordination with RWQCB and/or DTSC will make these determinations.

D. COST RECOVERY AND FUNDING SOURCES

Significant costs are often incurred while responding to hazmat incidents. Funding options include:

- Cost recovery from responsible party
- State or Federal agency fund access
- El Dorado County resources
- Combination of the above

1. Cost Recovery

EMD coordinates the hazardous material incident cost recovery process. In accordance with Title 19, California Health and Safety Code, the 2001 California Fire Code and El Dorado County Ordinance Section 8.38.060, EMD is authorized to recover incident related costs from any person, corporation, partnership, individual, or entity whose negligent actions cause response expenses. Hazardous materials incident response and site cleanup costs incurred by the HMRT and other response agencies can be recovered. Eligible expenditures include staff time, contractor expenses, equipment rental, laboratory analysis, protective equipment, clean up, oversight, enforcement, disposal, and others. Charges levied on an individual are

also charges against an individual's employer if the incident occurs in the course of an individual's employment.

If a responsible party can be identified and is willing and able to conduct all or a portion of the response and cleanup activities, then they should be directed to do so. Capable responsible parties should contract directly with clean-up companies. If a responsible party cannot be identified, and/or is unwilling or unable to conduct response or cleanup activities, other funding options must be considered. All staff time, materials and third party expenditures must be documented.

The HMRT shall determine incident responsibility. Responsible parties shall be informed of their financial responsibility during the incident or subsequently by mail. The HMRT member drafting the incident report shall submit an expenditure memo to the Hazmat Division Senior Office Assistant. The memo shall include responsible party contact information, hours expended, replacement cost of utilized supplies, disposal costs and any other applicable third party charges. The Senior Office Assistant shall prepare and send an invoice to the responsible party. Invoices not paid within 30 days shall be submitted to County Collections.

2. State Resources	The State operates a number of funds earmarked for specific aspects of hazardous materials emergency response. State Funds include:
a. State Reserve Account – *Preferred Funding Source*	This account provides funds to take immediate corrective action in response to an emergency resulting from a fire, explosion, or chemical release to minimize human exposure to hazardous substances. This includes "midnight dumping", uncontrolled or threatened release of hazardous substance, or spill situations involving an unknown responsible party. Funds may be used for actions such as fencing, sampling, guard services, stabilization, mitigation, transport and disposal. To access the fund, the Department of Toxic Substances Control on-call Emergency Response Duty Officer must be notified. The phone number is (800) 260-3972. Information on the applicability and use of the Emergency Reserve Account is included in ***Appendix R-7.***
b. Clandestine Drug Lab Clean-up Account	This account provides funds for the removal and disposal of bulk chemical, precursors, waste residues and grossly contaminated materials from an illegal drug lab. The program also provides for limited soil removal where chemical/waste is an immediate human contact threat. To access the fund, the Department of Toxic Substances Control on-call Emergency Response Duty Officer must be notified. The phone number is (800) 260-3972. Information on the applicability and use of the Clandestine Drug Lab Clean-up Account is included in ***Appendix R-7.***
c. Water Pollution Clean-up and Abatement Account	This fund is administered by the State Water Resources Control Board. It can be used for expenses incurred by pubic agencies with the authority to clean up and abate waste. Only releases directly impacting or threatening to impact the surface and groundwater are eligible. The State Warning Center (CalEMA) should be contacted at (800) 852-7550 to request a SWRCB representative to go to the scene.
d. Oil Spill Response Trust Fund	This fund provides funds administered by the Office of Spill Prevention and Response (OSPR) for oil spills into tidal influenced marine waters. The fund covers the costs incurred by state and local governments and agencies for response, clean-up, wildlife rehabilitation and emergency

loans. The OSPR's Communication Center must be contacted at (916) 445-0045 (24 hour).

e. Fish and Wildlife Pollution Account

This account provides funds administered by the Department of Fish and Game (DFG) for pollution incidents, impacting State wildlife and habitat resources. A DFG representative must be on-site to determine eligibility for the fund. The OES Warning Center should be contacted at (800) 852-7550 to request a DFG Warden respond to the scene.

3. Federal Government

a. Superfund Emergency Response

This US Environmental Protection Agency program provides resources to local, state and other federal and tribal agencies. They have 24-hour emergency response capability. The Response Team removal actions typically eliminate sources of contamination and prevent direct exposure of hazardous substances to humans or the environment. Following is a summary of their capabilities:

- ✓ Chemical, radiological, biological and terrorism related emergency response actions;
- ✓ Site characterization;
- ✓ Emergency cleanups;
- ✓ Enforcement support (civil);
- ✓ Criminal investigation support;
- ✓ Training support;
- ✓ Potential responsible party oversight and
- ✓ Local and state agency technical support

They can be contacted through the National Response Center at (800) 424-8802 or the California OES Warning Center at (800) 852-7550.

b. Local Government Reimburse-ment (LGR) Program

The federal government administers the Local Governments Reimbursement (LGR) program that provides funds to eligible local governments. In the event of a release or threatened release of hazardous substances, EPA may provide up to $25000.00 to cover expenses related to the incident. In general to be covered by this program the following requirements must be met.

- ✓ Reimbursement cannot supplant local funds normally provided for a response.
- ✓ Cost recovery must be pursued prior to applying for reimbursement.
- ✓ Detailed cost documentation must be provided with the application.
- ✓ The application must be signed by the local government's highest ranking official.
- ✓ Applications must be submitted to EPA within one year of the "date of the response completion" of the response.

The application can be located at the following link. http://www.epa.gov/emergencies/content/lgr/grapp.htm or the LGR Helpline can be contacted at (800) 451-9209

4. El Dorado County Resources

Local resources are available if no responsible party can be identified, costs are minimal and response activities are imminently needed. HMRT expenditures will be absorbed by budget index code 424100. Waste

disposal by a contract Household Hazardous Waste hauler shall be covered by budget index code 424300.

The El Dorado County Emergency response EPA ID number is CAS 111 111 009. This number is needed when using the DTSC Emergency Reserve Account when no responsible party has been identified and the manifest needs to be completed prior to disposal.

E. EMERGENCY COMMUNICATIONS

1. Radio Systems The primary means of communications within the County is VHF radio systems. El Dorado County frequencies most likely to be used during multi-agency hazardous material response are included the table below:

Assigned to	Designation	Frequency in MHz
El Dorado County Sheriff's Office	EDSO F1 Dispatch	159.5550
	EDSO F2 Rpt. Tactical	159.6900
	EDSO F3 (Tahoe)	159.6000
	EDSO Tac 3	160.6950
	EDSO Tac 4	159.8250
Placerville Police Department	PPD Dispatch	154.9650
	PPD Tac 3	154.7550
South Lake Tahoe Police Department	SLTPD Dispatch	156.0300
	SLTPD Ch. 2	154.6500
El Dorado County Fire Agencies Including USFS, CDF and Local	CDF AEU Dispatch	151.1900
	EDC Fire Command	154.4300
	CDF Tac 2	151.1600
	CDF Tac 8	151.3700
	CDF Tac 9	151.3850
	ENF Forest Net	171.5250
	SLT Fire Dispatch	153.9500
	SLT Fire OP's	153.9950
	Lake Valley Fire	154.3400
El Dorado County DOT	County Wide	151.1000
Amateur Radio	ARES	147.825 - (PL 82.5)
	KA6GWY (West Slope)	146.805 - (PL 123.0)
	KA6GWY (East Slope)	145.605 + (PL 123.0)
State Channels	White Fire 1	154.2800
	White Fire 2	154.2650
	White Fire 3	154.2950
	CalCord	156.0750
	CLEMARS 1	154.9200
	CLEMARS 2	154.9350

2. VHF High Band Mobile and Portable Radios Within the county, mobile and portable radios are used which operate in the 150 - 175 megahertz (MHz) frequency range on the County's VHF High Band radio system. Mutual Aid incident responders for interagency communications will utilize the state white channel (154.280) during travel.

3. Pagers, Portable Radios and Cellular Phones Pagers, portable radios and cell phones may be used as a secondary means of communication for EMD, HMRT, Fire Agency officers, Sheriff deputies and OES staff. Phone and pager numbers can be obtained through Camino or Central Dispatch. Additional portable radios are available at County OES in Placerville.

4. *Public Information and Warning Systems*

There are several alert-warning systems available in El Dorado County. To activate one or more of these systems, the Sheriff's dispatch can be contacted at (530) 621-6600. The on-call Sheriff's OES coordinator will assist with these alert systems:

- ✓ Emergency Alert System (EAS) is an emergency broadcast sent over KFBK radio at 1530 AM for the west slope of the county, and KKOH radio at 780 AM for the South Lake Tahoe area.
- ✓ Emergency Digital Information System (EDIS) is a special e-mail based message system that connects a network of media organizations and public safety agencies. Activation of EDIS includes EAS activation, and sends email messages to a many radio, television stations and other media agencies. Television stations will display banner information on the progress of the emergency. Additional information on EDIS can be found on the following website: http://edis.oes.ca.gov.
- ✓ Telephone Notification System (TNS) is an automated telephone calling system. This system sends a recorded to phones in a specified geographical area. The system calls all of the residences/businesses in the identified area. The system records the number of homes contacted.
- ✓ Special roadside message signs can be strategically placed to inform the public of danger conditions, evacuation routes, shelter locations, medical centers and other information.

5. *Information Release Responsibility*

During a hazardous materials incident, the IC is responsible for disseminating information to the public and the media. The IC will designate a Public Information Officer (PIO) as part of the Command Staff, as identified in the Incident Command System. The IC/PIO will be responsible for notifying business personnel and the affected public of safety procedures to follow during a hazardous materials release. The IC should move the field PIO responsibility to the Public Information Branch of the EOC level if there is a need for:

- ✓ Additional public information resources and/or
- ✓ The centralized coordination of information from responding agencies

6. *Media*

Hazardous materials incidents typically gain the media's attention. It is the policy of the El Dorado County to cooperate with the media to the greatest extent possible. The Emergency Operations Plan outlines PIO responsibilities for a Countywide disaster. According to ICS protocol, all press releases **must** be cleared through the on-scene IC.

An Emergency Information Checklist, ***Appendix R-8*** provides actions to consider when releasing information to the public and media based on the type of incident (low hazard, high hazard, etc.) ***Appendix R-8*** also includes sample news releases and questions that might be asked by the media. (Reference: State HazMat Incident Contingency Plan)

F. SUPPLIES AND EQUIPMENT

1. Available Supplies and Equipment

Hazardous materials related supply and equipment lists are included as ***Appendix R-9***. This equipment is stored in the following locations in El Dorado County:

a. El Dorado County Environmental Management Department –Bldg C
- ✓ Downstairs
- ✓ Expedition
- ✓ Lab
- ✓ Office Upstairs
- ✓ Shed
- ✓ HazMat F250 4x4 Truck
- ✓ Small Trailer

b. Union Mine Landfill Upper Storage Building

c. South Lake Tahoe Vector Control
- ✓ Small Trailer
- ✓ Storage Shed
- ✓ HazMat Van

2. Testing and Maintenance of Equipment

Equipment owned by EMD is maintained according to manufacturer's recommendations. Maintenance logs are kept in the EMD office.

Fire protection agencies are responsible for maintaining and testing Self Contained Breathing Apparatus (SCBAs) and structural fire fighting equipment. This equipment is tested and maintained according to manufacturer's specifications.

All other agencies that maintain equipment and supplies that are available for response to a hazardous materials incident are responsible for the testing and maintenance of this equipment. Responding agencies must ensure that there are adequate emergency supplies on hand at all times.

A. POST INCIDENT ANALYSIS

Post Incident Analysis Procedures

The Lead IC Agency will host and facilitate post-incident analysis and critiques following all Level III hazardous material incidents. EMD shall coordinate interagency participation to evaluate incidents. For small incidents, a Safety Review will occur directly after the incident conclusion if possible.

Large, multi-agency events will require more coordination but will take place as soon as practical. Incidents involving deaths or injuries will always have a post incident analysis. Some incidents may trigger a criminal investigation and will require close coordination with law, fire and EMD and an after action report.

An after-action report may be prepared by EMD and will be distributed to other agencies as requested.

In some situations, changes to procedures or policy may occur due to a post-incident analysis. If any changes affecting the Area Plan occur, the changes must be provided to the Supervising Hazardous Materials Specialist who is responsible for modifying the Area Plan and distributing modifications. EMD shall determine the necessity for revisions in response procedures and this Area Plan.

B. INVESTIGATION AND ENFORCEMENT

Environmental Crimes Prosecution

The ability to successfully prosecute an environmental crime depends upon the prompt investigation of the incident. The IC will contact EMD and the Sheriffs Department for investigations. In cases where incidents involve a significant environmental crime, the District Attorney's (DA) office may be contacted to request assistance from the District Attorney Investigator.

Violations must be documented as soon as it is safe to do so. Investigations should take priority over clean-up. Investigation should include photographs, diagrams, interviews, samples and other appropriate information. All case preparation should be coordinated with the DA. When the DA prosecutes a case, enforcement actions will be performed in coordination with other agencies having enforcement responsibilities.

In situations where a State or Federal response team directs on-scene operations, the team will be responsible for enforcement of appropriate laws and regulations.

Hazardous Materials Inspection and Enforcement Plan

The EMD maintains an Inspection and Enforcement Plan which describes the County's inspection and enforcement policies including plan reviews, training, documentation, inspection procedures and enforcement options.

The Enforcement options listed in the Inspection and Enforcement Plan include:

- ✓ Notice of Violation
- ✓ Summary of Violations
- ✓ Notice to Comply
- ✓ Re-inspection
- ✓ Administrative Penalties
- ✓ Office Hearing
- ✓ Permit Revocation
- ✓ Administrative Enforcement Orders (pending approval from county council)
- ✓ Quarantine
- ✓ Civil Case
- ✓ Criminal Case

These options will be evaluated to determine the most appropriate course of action after an environmental crime has occurred as a result of a hazardous materials release or incident.

This entire Appendix is part of the State of California
DRAFT Hazardous Materials Incident Contingency Plan (February 2005)
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. **This document is not intended to be a legal or scientific reference.**

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.
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.
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.
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 post-incident analysis report generated by a responsible party or responding agency after termination of a hazardous material incident describing actions taken, materials involved, impacts, etc.
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 are carried/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)	Personal Protective Equipment; 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.
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, and services. Sponsors research projects, develops standard test methods, specifications, and recommended practices now in use.
Anhydrous	Free from water, dry.
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.
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. (Sacramento Fire Department HMRT)
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.
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)
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.
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.
Bioaccumulation	Absorption and storage of toxic chemicals from the environment in an organism, usually in body fat.
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 Agents	Biological materials those are capable of causing acute or long-term damage to living organisms. (NFPA 1990, 1-3)
Biological Half-Life	The time required for a living organism to eliminate half of a substance which it takes in.
Biological Treatment	A process by which waste is rendered less hazardous, or is reduced in volume, by relying on the action of microorganisms.
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.
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.
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.
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 25504.
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 HSC 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.
California Department of Fish and Game (DFG)	The State department which enforces provisions of the State Fish and Game 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 Forestry and Fire Protection (CDF)	A State resources department that protects unincorporated lands from wildfire and responds to public safety emergencies.
California Department of Health Services (DHS)	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 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.
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 Division of Occupational Safety and Health (Cal/OSHA)	The State division responsible for enforcement of worker safety laws.
California Environmental Protection Agency (Cal/EPA)	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, the Air Resources Board and the Integrated Waste Management Board. Cal/EPA sets the policy and direction that the member organizations pursue.

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 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))
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 Office of Emergency Services (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 Specialized Training Institute (CSTI)	The organization within the Governor's Office of Emergency Services 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.
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. (FEMA HMCP)
Cascade System	Several air cylinders attached in series to fill Self Contained Breathing Apparatus (SCBA) bottles.

Catastrophic Incident	An event that significantly exceeds the resources of a jurisdiction.
Cease and Desist Order	Legal direction to stop any and all activities.
Celsius (Centigrade) C	The internationally used scale for measuring temperature, in which 100^{o} is the boiling point of water at sea level (1 atmosphere), and 0^{o} is the freezing point.
Center for Disease Control (CDC)	The federally funded research organization tasked with disease control and research.
California Environmental Quality Act (CEQA)	The law that may require Environmental Impact Reports (EIRs) at sites where significant activities occur.
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.
CGA	See Compressed Gas Association.
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 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. (NFPA 1991,1-3)
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. (NFPA 1991, 1-3)
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	The Chemical Transportation Center, operated by the Chemical

Emergency Center (CHEMTREC)	Manufacturers Association (CMA), can provide information and technical assistance to emergency responders. [Phone number (800) 424-9300]
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.)
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.
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	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.
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. (Sacramento Fire Department HMRT)
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))
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.
Cold Zone	The area outside of the warm 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.

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^{o} 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, and/or controlling resources by virtue of explicit legal, agency, or delegated authority. (NIIMS)
Command Post	The location from which the primary command functions are executed, usually co-located with the incident base.
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. (NIIMS)
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 Environmental Protection Agency (EPA), 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^{o} F or, regardless of the pressure at 70^{o} F, having an absolute pressure exceeding 104 p.s.i. at 130^{o} F; or any liquid flammable material having a vapor pressure exceeding 40 p.s.i. absolute at 100^{o} F as determined by testing. Also includes cryogenic or “refrigerated liquids” (DOT) with boiling points lower than -130^{o} 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. (Sacramento Fire Department HMRT)
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, flatrack, 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. (NFPA 472, sections 1-3)
Contamination Control Line	The established line around the contamination reduction zone that separates it from the support zone.
Contamination Reduction Zone	Term used by the Coast Guard to identify the area of moderate hazard where threat of contamination spread to the immediate surrounding area is low. It is the area immediately outside of the inner hot zone. (See Warm Zone.)
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.

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. (NFPA 472, sections 1-3) (See Support Zone, Warm Zone, Hot Zone, and Decontamination Corridor.)
Coordination	To bring together, in a uniform and controlled manner, the functions of all agencies on scene. (Sacramento Fire Department HMRT)
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. (Sacramento Fire Department HMRT)
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.
Cryogenic	Gases, usually liquefied, that induce freezing temperatures of -150^{o} F and below (liquid oxygen, liquid helium, liquid natural gas, liquid hydrogen, etc.).
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. (EPA, 600/2-77-277)
Dangerous When Wet	A label required for water reactive materials (solid) being shipped under U.S. 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. (Also referred to as “contamination reduction”.) (NFPA 472, 1-3)
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. (Sacramento Fire Department HMRT)
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	Substances not normally harmful to humans that may be harmful to the environment.
Department of Commerce (DOC)	A Federal agency whose primary mission is to encourage, serve and promote economic development and technological advancement.
Department of Defense (DOD)	The Federal entity that provides the military forces needed to deter war and protect the security of our country.
Department of Energy (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 (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 (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 (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 (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.
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.
DHS	See California Department of Health Services.
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.

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.
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. (Sacramento Fire Department HMRT)
Division	That organizational level within the ICS having responsibility for operations within a defined geographic area. The "Division" Officer directs approximately 5 Companies, and answers to the "Operations" Officer.
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	The swelling of body tissues resulting from fluid retention.
Emergency Medical Services (EMS)	Functions as required to provide emergency medical care for ill or injured persons by trained providers.
Emergency Medical Services Agency	Plans and coordinates local public and private emergency medical services systems. Sets the local standards for medical care and transport of victims. California Health and Safety Code Section 1058 vests authority for patient care management in the most qualified medical care provider.
Emergency Medical Services Authority (EMSA)	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; identifies and coordinates the procurement of

	medical assistance, supplies, and hospital beds when local and/or regional resources are depleted; and coordinates the evaluation of casualties to other areas of the State.
Emergency Operations Center (EOC)	The secured site where government officials exercise centralized coordination in an emergency. The EOC serves as a resource center and coordination point for additional field assistance. It also provides executive directives to and liaison for State and federal government representatives, and considers and mandates protective actions.
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. (Health and Safety Code 25354)
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 Organization	An organization that utilizes personnel trained in emergency response. (19 CCR 2402)
Emergency Response Personnel	Personnel assigned to organizations that have the responsibility for responding to different types of emergency situations. (NFPA 1991, 1-3)
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.
Endothermic Engine (fire usage)	A process or chemical reaction, which is accompanied by absorption of heat. 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 hot 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 (EPA)	The purpose of the Environmental Protection Agency (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. EPA's mandate is to mount an integrated, coordinated attack on environmental pollution in cooperation with State and local governments.
EPA	See Environmental Protection Agency.

Etiological Agent	A viable microorganism or its toxin, which causes or may cause human disease.
Evacuation	The removal of potentially endangered, but not yet exposed, persons from an area threatened by a hazardous materials incident. (FIRESCOPE ICS-HM)
Explosive Ordnance Disposal (EOD)	Military or civilian bomb squads.
Extremely Hazardous Substances (EHS)	Environmental Protection Agency (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 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.
Exclusion Zone	See Hot Zone.
Exothermic	A process or chemical reaction, which is accompanied by the evolution of heat.
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)
Exposure	The subjection of a person to a toxic substance or harmful physical agent through any route of entry.
Fahrenheit	The scale of temperature in which 212^{o} is the boiling point of water at 760 mm Hg and 32^{o} is the freezing point.
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 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.)
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^{o} 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.

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 Groups are established to divide the incident into functional areas of operation.

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

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

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

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 (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 (Hazardous materials) 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 Categorization (HAZCAT)

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

Hazardous Material Incident Contingency Plan (HMICP)

The State's hazardous materials emergency plan published by OES pursuant to Government Code §8574.17.

Hazardous Materials Emergency

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

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. A Hazardous materials Team may be a separate component of a fire brigade or a fire department or other appropriately trained and equipped units from public or private agencies.

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

<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 protective clothing:
    a. Entry Team - 2 b. Backup Team – 2

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

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 protection:

  a. Entry team - 2 b. Backup team – 2

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).

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) The Environmental Protection Agency 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). Environmental Protection Agency 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 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.

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	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 "exclusion zone", the "red zone", and the "restricted zone" in other documents. (NFPA 472, 1-3)
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."
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^{o} 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)
Information Officer (IO)	The individual assigned to act as the liaison between the Incident Commander and the news media, as well as other groups.
Incident	An event involving a hazardous material or a release or potential release of a hazardous material.
Incident Action Plan (IAP)	A plan developed at the field response level that contains objectives reflecting the overall incident strategy and specific tactical actions and supporting information for the next operational period. The plan may be oral or written.
Incident Command	A disciplined method of management established for the specific purpose of control and direction of resources and personnel.
Incident Commander (IC)	The individual responsible for overall management of the incident at the field level.
Incident Command Post	See Command Post.

Incident Command System (ICS)	The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, with responsibility for the management of resources to effectively accomplish stated objectives pertinent to an incident.
Incompatible Waste	Waste unsuitable for commingling with another waste or material.
Industrial Wastes	Unwanted materials produced in or eliminated from an industrial operation.
Infectious Waste	Waste containing pathogens; may consist of tissues, organs, body parts, blood, and body fluids.
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.)
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.
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.
Jurisdiction Specific Plan	A plan that details emergency activities, capabilities, responsibilities and resources within an area, agency, facility or political subdivision.
Labpack	Putting multiple small containers of chemicals with compatible chemical characteristics in a disposal drum with absorbent material.
Lacrimation	Tearing produced by eye irritation.
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.
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.
Level One Incident	Hazardous materials incidents which can be correctly contained, extinguished, and/or abated utilizing equipment, supplies, and resources immediately available to first responders having jurisdiction, and whose qualifications are limited to and do not exceed the scope of training as explained in 8 CCR 5192, or California Government Code (CGC), Chapter 1503, with reference to “First Responder, Operational Level”.
Level Two Incident	Hazardous materials incidents which can only be identified, tested, sampled, contained, extinguished, and/or abated utilizing the resources of a Hazardous Materials Response Team, which requires the use of specialized chemical protective clothing, and whose qualifications are explained in 8 CCR 5192, or California Government Code (CGC), Chapter 1503, with reference to “Hazardous Materials Technician Level”.
Level Three Incident	A hazardous materials incident which is beyond the controlling capabilities of a Hazardous Materials Response Team (Technician or Specialist Level) whose qualifications are explained in 8 CCR 5192, or California Government Code, Chapter 1503; and/or requires the use of two or more Hazardous Materials Response Teams; and/or must be additionally assisted by qualified specialty teams or individuals.
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 Office of Emergency Services mutual aid region.
Local Government	Local agencies as defined in Government Code § 8680.2 and special districts as defined in California Code of Regulations, Title 19 Division 2, Chapter 5, NDAA, § 2900 (y).

Localized Exposure	Contact with a limited area, usually an external body surface.
Logistics Chief	That organizational position within the ICS having responsibility for summoning and managing support, apparatus, equipment and personnel.
Lower Explosive Limit (LEL)	The lowest concentration of the material in air that can be detonated by spark, shock, or fire, etc.
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).
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 Hazardous Waste Manifest, Uniform)
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)	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.
Melting Point	The temperature at which a material changes from a solid to a liquid.
Microorganism	A living organism not discretely visible to the unaided eye.
Midnight Dumping	Illegal disposal of hazardous materials.
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	Any action employed to contain, reduce, or eliminate the harmful effects of a spill or release of a hazardous material.
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.
Mutagen	A substance capable of causing genetic damage.
Mutual Aid	An agreement to supply, if available, specifically agreed upon aid or support in an emergency situation between two or more agencies, jurisdictions, or

	political sub-divisions without the expectation of reimbursement.
Narcosis	Stupor or unconsciousness produced by chemical substances.
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 Interagency Incident Management System (NIIMS)	A standardized systems approach to incident management that consists of five major sub-divisions collectively providing a total systems approach to all-risk incident management.
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 United States Coast Guard 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.
Necrosis	Death in a particular part of a living tissue.
Nephrotoxic	A substance that negatively affects the kidneys.
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).
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^{o} F, or having an absolute pressure exceeding 104 p.s.i at 130^{o} F. (49 CFR)
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.
Occupational Safety and Health Administration (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 (OHMS)	A Federal agency tasked with the research and recommended revisions to 49 CFR.
Oil	Any of numerous 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.
Operations	The coordinated tactical response of all field operations in accordance with the Incident Action Plan.
Oral Toxicity	Adverse effects resulting from taking a substance into the body through the mouth.
Organic Peroxide	Strong oxidizers, often chemically unstable, containing the -o-o- structure. They react readily with solvents or fuels resulting in an explosion or fire.
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 an 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 United States Coast Guard.
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 organism, including viruses.
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.
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 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. (NFPA 472, 1-3)
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.

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.
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.
Prevention Plan	See California Accidental Release Prevention Program (CalARP).
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	California Safe Drinking Water Act of 1986.
Protective Clothing	See Personal Protective Equipment (PPE).
Pulmonary	Pertaining to the lungs.

Pyrophoric	A substance that ignites spontaneously in dry or moist air at or below 130^{o} 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, that 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 Drum	See Disposal Drum.
Reference Library	A selection of chemical textbooks, reference books, microfiche, and computer data programs typically carried by a hazardous materials response team.
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 Federal 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.
Release, Threatened Release	The actual or potential 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.
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 EPA and may be delegated to the States.
Respiratory Protective Equipment	See SCBA and Air Purifying Respirators.
Response	That portion of incident management where personnel are involved in controlling a hazardous material incident. (NFPA 472, 1-3)
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.
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. (Sacramento Fire Department HMRT)
Safety Officer	Selected by the Incident Commander, a person at an emergency incident responsible for assuring that all overall operations performed at the incident by all agencies present are done so with respect to the highest levels of safety and health. The Safety Officer shall report directly to the Incident Commander.
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.
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.
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/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). (NFPA 1991, 1-3)
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.
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).
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.
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.
Stabilization	The period of an incident where the adverse behavior of the hazardous material is controlled. (NFPA 472, 1-3)
Staging Area	The area established for temporary location of available resources closer to the incident site to reduce response time.
State Warning Center (OES Warning Center)	The Governor's Office of Emergency Services Warning Center facilitates emergency communications with government agencies at all levels. The 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 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.
Strict Liability	The responsible party is liable even though they have exercised reasonable care.
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	See Cold Zone.
Surface Impoundment	A natural depression, human made excavation or diked area designed to hold an accumulation of liquid wastes or waste containing free liquids.
Synergistic Effect	The combined effect of two chemicals that is greater than the sum of the effect of each agent alone.
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.
Team Leader	See Entry Team Leader.
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. (NFPA 472, 1-3) (See Post-Incident Analysis.)
Thieving Rod	A glass rod used like a COLIWASSA, except the liquid is contained in the tube by a vacuum pressure.
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 - 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 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 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.
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	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	A relative property of a chemical agent that refers to its harmful effect on some biological mechanism and the conditions under which this effect occurs.
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.
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.
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.
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 Suit	See Levels of Protection.
Vulnerability	The susceptibility of life, the environment, and/or property, to damage by a hazard.
Warm Zone	The area where personnel and equipment decontamination and hot 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”, “contamination reduction”, “yellow zone”, or “limited access zone” in other documents. (NFPA 472, 1-3)
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.

Glossary of Terms: Terrorism

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 acetylchloline, thereby stopping its activity, but can be inhibited by organophosphates, carbamates and certain other "nerve agents".
Aerobic	Capable of living and growing only in the presence of free oxygen.
Anthrax	A rod shaped aerobic bacteria Bacillus Anthracis 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.
Aseptic	Free from infection.
Atropine	Therapeutic drug used as an antidote for nerve agents, is very effective in blocking the effects of excess acetylcholine.
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.
Biological Agent	Usually refers to all agents that may cause disease or death including bacteria, virus, and toxins.
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 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.
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.
Botulism	Poisoning by botulinum toxin that is produced by the bacillus Clostridium Botulinim is anaerobic, and is usually 65% lethal.
British Anti-Lewisite	Therapeutic drug used as an antidote for Lewisite, is a heavy metal chelator, not often used, results are not guaranteed.
Cardiac	Pertaining to the heart.
Carrier	An individual who harbors specific disease organisms without showing symptoms, thus serving as a means of conveying infection.
Cell	A small mass of protoplasm, generally including a nucleus, surrounded by a semi-permeable membrane.
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 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).
Chemotherapy	The treatment of disease by chemicals that affect the causative organism unfavorably without seriously reacting on the patient.
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%.
Communicable	Capable of being transmitted from one individual to another.
Contagious	Transmissible from one individual to another.
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.

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.
Disease	Illness or sickness.
Disinfectant	An agent, usually chemical, that destroys infective agents.
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.
Encephalitis	Inflammation of the brain.
Edema	Excessive accumulation of fluid in body tissue or body cavities.
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.
Endotoxin	A toxin that is produced within a micro-organism and retained within the cell until it disintegrates.
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.*
Exotoxin	A toxin excreted by a living organism.
H	Refers to a Levinstein mustard, a series of persistent blister agents that include distilled mustard (HD), and the nitrogen mustards (HN-1, HN-2, and HN-3).
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.
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.
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.
Invasiveness	The ability of a micro-organism to enter the body and spread throughout the tissues.

Intoxication Poisoning.

Intravenous Within the vein.

Lacrimator A compound that causes a large flow of tears and irritates the skin; A Tearing Agent.

Lethal Agents Biological or chemical agents that could cause significant human mortality.

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.

Malaise A feeling of bodily discomfort.

MARK I Military kit containing antidotes Atropine and Prolidoxime Chloride.

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.

Malaise A vague feeling of bodily discomfort.

Micro-organism Any organism, such as bacteria, viruses, and some fungi, that can be seen only with a microscope.

Miosis Excessive contraction of the pupil.

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.

Mycotoxin A toxin produced by fungi.

Nausea Tendency to vomit; sickness of the stomach.

Necrosis Death of a cell or group of cells in contact with living tissue.

Neural Relating or pertaining to the nerves.

Neurotoxin A substance that is poisonous or destructive to nerve tissue.

Nerve Agent Substances that interfere with the central nervous system primarily through liquid contact (skin) and lesser so through aerosol (lungs).

Neurotoxins Toxins that interfere with nerve impulses and may affect the central nervous system; Tend to act rapidly.

Nitrogen Mustard (HN) A *vesicant* chemical warfare agent synthesized during WWI, there are three derivatives, HN1, HN2, and HN3.

Nonpersistent Agent An agent that upon release loses its ability to cause casualties after 10 to 15 minutes, typical of most incapacitating agents.

Nucleus A body within a cell that is the center of reproductive activities of the cell.

Organo-phosphate A phosphate containing organic compound that inhibit cholinesterase enzymes.

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

Pathogenic Causing disease.

Pathogen Any disease producing micro-organism or material, which includes virus, bacteria, rickettsia, fungi and mycoplasma.

Percutaneous Agent Able to be absorbed by the body through the skin.

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.

Phosgene A *respiratory agent* chemical warfare agent used in WWI as a gas, causes severe upper respiratory distress and edema as it hydrolysises to hydrochloric acid.

Phosgene Oxime A *vesicant* chemical warfare agent, not popular, little used, was a minor military threat, is highly corrosive and a irritant.

Phytotoxin A toxin derived from a plant, such as ricin.

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.

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.

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.

Sarin (GB) A nerve agent developed by the Germans during WWII that has an LC_{50}

skin dose of 100-200 mg.

Septic Produced by or due to putrefaction or morbid germs.

Soman (GD) A nerve agent developed by the Germans during WWII that has an LC_{50} skin dose of 50-70 mg.

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.

Sulfur Mustard (H) A *vesicant* chemical warfare agent synthesized during WWI, there are two derivatives H, and HD. See also "Mustard".

Symptoms Functional evidence of disease or of conditions, or a change in conditions that indicate a mental or bodily state.

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.

Terrorism The unlawful use of force against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in the furtherance of political or social objectives.

Toxic Poisonous and perhaps deadly depending on the dose and resistance of the individual.

Toxicity The quality of being poisonous depending on the potency of the toxin.

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.

Transmissible Agent Pathogens that can spread disease from person to person.

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.

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.
Vomiting Agent	An incapacitating agent that encourages uncontrolled vomiting, nausea, coughing, sneezing, tearing, and pain to the affected areas, but rarely causes death.

TO: Distribution List (Attached)

FROM: Gerri Silva, Director
Environmental Management Department

SUBJECT: Hazardous Materials Area Plan

DATE: November 2009

Attached for your reference is an electronic and/or hard copy of the recently revised El Dorado County Hazardous Materials Area Plan (Area Plan). This Area Plan contains guidelines for the prevention of, preparation for and response to hazardous materials incidents.

As the hazardous materials Administering Agency/Certified Unified Program Agency (CUPA), El Dorado County Environmental Management Department is required to prepare and periodically update a Hazardous Materials Area Plan. This latest revision of the Area Plan will serve as a companion document to the all hazard El Dorado County Emergency Operations Plan.

The Area Plan is a valuable resource for both emergency responders and County personnel in the event of a hazardous materials emergency. It addresses the full range of hazardous materials activities including training, communication, response and identification of target hazard facilities.

This Area Plan, like the County's Emergency Operations Plan, is a dynamic document and will be subject to change as new procedures are developed and new facilities locate in El Dorado County. Your input and recommendations are vital in making this a useful and workable document. Please contact Dave Johnston, Supervising Hazardous Materials Specialist, if you have questions or any suggestions for improving the Area Plan.

AREA PLAN DISTRIBUTION LIST

	Hard Copy	Compact Disc
Board of Supervisors	5	
City of Placerville (Police Dispatch)	1	
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El Dorado County Fire Departments		
California Department of Forestry and Fire Protection		1
Cameron Park/CDF Fire Protection District		1
City of South Lake Tahoe Fire Department		1
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El Dorado County Fire Protection District		1
El Dorado Hills Fire Protection District		1
Fallen Leaf Lake Fire Protection District		1
Garden Valley Fire Protection District		1
Georgetown Fire Protection District		1
Lake Valley Fire Protection District		1
Latrobe Fire Protection District.		1
Meeks Bay Fire Protection District		1
Mosquito Fire Protection District		1
Pioneer/CDF Fire Protection District		1
Rescue Fire Protection District		1
CDF-Emergency Communications Center Dispatch (Camino)	1	1
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County Counsel		1
County Library		1
District Attorney		1
Public Health		1
Risk Management		1
General Services		1
Department of Transportation		1
Sheriff		
Central Dispatch	1	
Law Enforcement Division	1	
Office of Emergency Services	1	1
State Office of Emergency Services	1	1

Area Plan Element	Element Attached (Page #)	Element Not Provided, Justification Attached	Proposed Date for Completion
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Personnel Monitoring & Decontamination	34		
Equipment Monitoring & Decontamination	34,41		
§2723-PRE-EMERGENCY PLANNING			
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Hazardous Materials Area Plan
Record of Revisions

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9/09	5	
9/09	7	
9/09	10	
10/09	11,13,15,16,20,26	
	28,29,35,36,39,43,45	
10/09	P-4, Add P-5, R-2, R-9	

FUNCTIONAL RESPONSIBILITIES OF LOCAL AGENCIES AND PRIVATE ORGANIZATIONS DURING LARGE EMERGENCIES (EL DORADO COUNTY EMERGENCY OPERATIONS PLAN, PART I)

SPECIFIC HAZARD: **HAZMAT (CHART 5)**

FIELD INITIAL RESPONSE	AGENCY DISPATCHING	RADIO COMMUNICATIONS	EVACUATION ALERTING	SITUATION ANALYSIS	SCENE MANAGEMENT	PUBLIC INFORMATION	FIRE SUPPRESSION	USAR	SEARCH AND RESCUE	LAW ENFORCEMENT	ACCESS CONTROL	TRAFFIC CONTROL	EMS	PUBLIC HEALTH	CORONER	HAZMAT	CARE & SHELTER	STAGING - REHAB	FEEDING	TRANSPORTATION	PERSONNEL UNIT	SUPPLY/PROCUREMENT	UTILITIES	DAMAGE INSPECTIONS
EMERGENCY MANAGEMENT		S	P	P	S	R								S			P		S	S	S	R		P
FIRE DISTRICT	R	R	S	R	R	R	P	P	S		S		P	S	S	S	S	P	S	S	P	P		R
CDF FIRE	R	R	S	S	S	S	P	P	S		S		P	S	S	S	S	P	S	S	P	P		S
USFS FIRE	R	R	S	S	S	S	P	P	S		S		P	S	S	S	S	P	R	S	P	P		S
SHERIFF'S OFFICE	R	R	P	R	P	R			P	P	P	S			P		S							S
PLACERVILLE POLICE	R	R	P	R	P	R				P	P	P					S							S
SOUTH LAKE TAHOE POLICE	R	R	P	R	P	R				P	P	P					S							S
CALIF. HIGHWAY PATROL	R	R	S	S	P	R				R	R	P												S
FIRE - EMS	R	R	S	S	S				S				P	S	S		S	S		S				
COMMUNICATIONS	R	R		S																				
ENVIRONMENTAL Mngt - HAZ				R	S	R								S		P	S							R
PUBLIC INFORMATION			R	S		P																		
PUBLIC HEALTH				S	S	R							S	P	S	S	S		S			S		
COUNTY DOT				S	S	S					S	S								S				R
CALTRANS				S	S	S					S	S								S				R
ANIMAL CONTROL			S	S	S	S								S			S		S	S				S
SCHOOL DISTRICTS			S	S	S	S							S	S			S	S	S	S				S
RED CROSS			S	S	S	S								S			R	S	S	S		S		S
SEARCH&RESCUE-CERT			S						R			S	S	S			S		S	S				S
STAR - SHIELD									S			S	S				S		S	S				S
ARES - RACES		S	S	S					S								S							S
UTILITIES			S			S																	P	
CCC			S				S		S			S					S		S	S				S
PUBLIC WORKS				S	S	S					S	S				S	S			S				R
WATER - SEWAGE DISTRICTS				S		S								S									P	S
AGRICULTURE				S	S	S								S										S

P - Denotes the Principal Agency
R - Denotes Shared Role
S – Denotes Supporting Role

Verified March 13, 2008

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

STATE CalEMA WARNING CENTER ..... (800) 852-7550 OR (916) 845-8911
NOTE: GET A CONTROL NUMBER

ON HIGHWAY SPILLS – CHP 911

FEDERAL GOVERNMENT (NATIONAL RESPONSE CENTER) ..... (800) 424-8802

State OES also calls other agencies but we should always call any agency we feel should be notified ourselves so we know the notification was made in a timely manner.

LOCAL/REGIONAL – SOUTH LAKE TAHOE AREA

City of South Lake Tahoe

Airport ..... (530) 541-0480
Fire Dispatch - Emergency - 911 Non-Emergency - (530) 542-6160
Parks District ..... (530) 542-6056
Police Dispatch - Emergency – 911 Non-Emergency - (530) 542-6100
Snow Removal/Street Maintenance Department ..... (530) 542-6030

El Dorado County – South Lake Tahoe Offices

Building Maintenance ..... (530) 573-3135
District Attorney ..... (530) 573-3100
Department of Transportation ..... (530) 573-3180
El Dorado County Environmental Management ..... (530) 573-3450
Sheriff - Emergency 911
Sheriff – Non-Emergency ..... (530) 573-3000

Other South Lake Tahoe Area Agencies

Electricity - Sierra Pacific Power Company ..... (800) 782-2506
Fire - Emergency 911
Fire – Non-Emergency -
- Fallen Leaf Lake Volunteer Fire Department ..... (530) 542-1343
- Lake Valley Fire Protection District ..... (530) 577-3737
- Meeks Bay Fire Protection District ..... (530) 525-7548

Other South Lake Tahoe Area Agencies (continued)

Gas – Southwest - Emergency (800) 772-4555
Sewer - South Tahoe Public Utility District - Emergency (530) 544-4964
Schools - Lake Tahoe Unified School District (530) 541-2850

LOCAL/REGIONAL – WEST SLOPE AREA

City of Placerville

Recreation and Parks District (530) 642-5232
Police Dispatch - Emergency - 911 Non-Emergency - (530) 642-5210
Public Works Department (530) 642-5250

El Dorado County – West Slope Offices

Airports, Parks and Grounds (530) 621-5864
Airport – Placerville/Georgetown (530) 622-0459
Agricultural Commissioner (530) 621-5521
Building Maintenance (530) 621-5890
District Attorney (530) 621-6472
Department of Transportation (530) 621-5900
El Dorado County Air Quality Management District (530) 621-6662
Environmental Management (530) 621-5300
Fleet Services (530) 642-4906/2443
Public Health Department (530) 621-6100
    Emergency Medical Service Agency (530) 621-6500
Sheriff's Department
    Dispatch (530) 621-6600
    Office of Emergency Services (530) 621-5895
Water Agency (510) 621-5392

Other West Slope Agencies

El Dorado Transit (530) 642-5383
El Dorado County Office of Education (530) 622-7130
El Dorado Irrigation District (530) 622-4513
Fire Department - Emergency 911

Other West Slope Agencies (continued)

Fire Department - Non-Emergency

- Cameron Park Fire Protection District (530) 677-6190
- Diamond Springs - El Dorado Fire Protection District (530) 626-3190
- El Dorado County Fire Protection District (530) 644-9630
- El Dorado Hills Fire Protection District (916) 933-6623
- Garden Valley Fire Protection District (530) 333-1240
- Georgetown Fire Protection District (530) 333-4111
- Latrobe Fire Protection District (530) 677-6366
- Mosquito Fire Protection District (530) 626-9017
- Pioneer Fire Protection District (530) 620-4444
- Rescue Fire Protection District (530) 677-1868

Georgetown Divide Public Utility District (530) 333-4356

Pacific Gas & Electric - Emergency (530) 889-5028

Sacramento Municipal Utility District (916) 732-5964

STATE AGENCIES

Air Resources Board (ARB) (800) 242-4450

CAL FIRE - Camino (530) 644-2345

CHP – Placerville Office (530) 622-1110

Cal/OSHA (916) 263-2800

Caltrans Dispatch (916) 859-7900

Dept. of Fish and Game (Region II Dispatch) (916) 445-0045 (2-1)

Dept. of Public Health (Infectious Disease Branch, Richmond Office) (510) 620-3434

Dept. of Public Health (Radiological Health) (Sacramento Office) (916) 327-5106

Dept. of Toxic Substances Control pager (916) 855-1539

CalEMA formerely known as Office of Emergency Services (800) 852-7550

Dept. of Pesticide Regulation Enforcement Branch (916) 324-4100

Environmental Monitoring Branch (916) 324-4039

Office of Environmental Health Hazard Assessment (916) 324-7572

Office of Spill Prevention and Response (916) 445-9338

Central Valley Regional Water Quality Control Board (916) 464-3291

State Fire Marshal (916) 445-8200

STATE AGENCIES FOR EMERGENCY FUNDING

Dept. of Toxic Substances Control – Emergency Reserve Account	(916) 255-6504
Ask for the DTSC Emergency Response Duty Officer	or (800) 852-7550
Dept. of Toxic Substances Control – Clandestine Lab Account	(916) 255-6504
Ask for the DTSC Emergency Response Duty Officer	or (800) 852-7550
Dept. of Fish and Game – Fish & Wildlife Pollution Account	(800) 852-7550
Office of Spill Prevention & Response – Oil Spill Response Trust Fund	(800) 852-7550
State Water Resources Control Board via State OES	(800) 852-7550
Water Pollution Cleanup & Abatement Account	(800) 852-7550
EPA Superfund Emergency Response	(415) 947-4400

FEDERAL AGENCIES

95th Civil Support Team (Weapons of Mass Destruction)	(510) 264-5656
Center for Communicable Diseases	(404) 639-3311
FBI Emergency Operations – Sacramento	(916) 481-9110
National Response Center (U.S. Coast Guard)	(800) 424-8802
OSHA (Federal - complaints/accidents/fatalities)	(800) 475-4020
U.S Coast Guard – Lake Tahoe (Marine Safety Office – waterway release)	(530) 583-4433

NON GOVERNMENTAL RESOURCES

21st Century Environmental	(707) 748-3040
California Poison Control System	(800) 523-2222
ChemTrec	(800) 424-9300
Lab Sampling and Analysis	
California Lab Services	(800) 638-7301
Sierra Foothill Lab (Jackson)	(209) 223-2800
Sparger (Sacramento)	(916) 369-7688
TestAmerica (West Sacramento)	(916) 373-5600
Pesticide Safety Team Network	Call ChemTrec
PG&E	(530) 889-5028

24 HOUR HAZMAT CLEAN-UP CONTRACTORS

Clean Harbors	(800) 645-8265
Cylinder Bottle Liquidators	(916) 996-9188
Decon (Hayward)	(510) 475-2901
Ecology Control Industries (Richmond)	(800) 236-7324
NRC (Alameda)	(800)-337-7455
Phillips Services (Benecia)	(800) 800-7472

DISPOSAL SITES (INCLUDES RECYCLING)

AERC (Recycler)	CAD982411993	Hayward	batteries,merc.	(510) 429-1129
Ash Grove Cement	ARD98151227	Arkansas	**Class I** Incin.	(800) 545-1882
B & J Landfill		Dixon	asbestos	(707) 451-3276
Chem Waste Mgmt	CAT000646117	Kettleman Hills	**Class I** landfill	(559) 386-9711
ECS Refining	CAD044429835	Santa Clara	lead/silver	(408) 988-4386
Evergreen Oil	CAD980887418	Newark	used oil	(510) 795-4400
J&B Enterprises	CAD069138899	Santa Clara	cyanide waste	(408) 988-7900
			photographic sludge w/metals	
Ramos Env	CAD044003556	W. Sacramento		(916) 371-5747
Romic Technology	CAD009452657	Palo Alto	**Class I** metals	(650) 321-7294
			acids, solvents, degreasers	
			alkaline waste	
			metal bearing waste	
Safety Kleen Corp	CA0000084517	Sacramento	solvents	(916) 386-4999
TXI Cement Plant		Midlothian, TX	**Class I** incinerator	(972) 647-4985
Refuse Inc. Lockwood Landfill		Sparks, NV	hydrocarbon/ gas soils	(775) 329-8822

VACUUM TRUCKS

Evergreen Environmental Services (Newark) oil only	(510) 795-4400
Abe Arens Brothers Environmental (Placerville)	(866) 220-2412
Dillard Environmental Services(Byron)	(925) 634-6850

Hazardous Materials Area Plan
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9/09	5	
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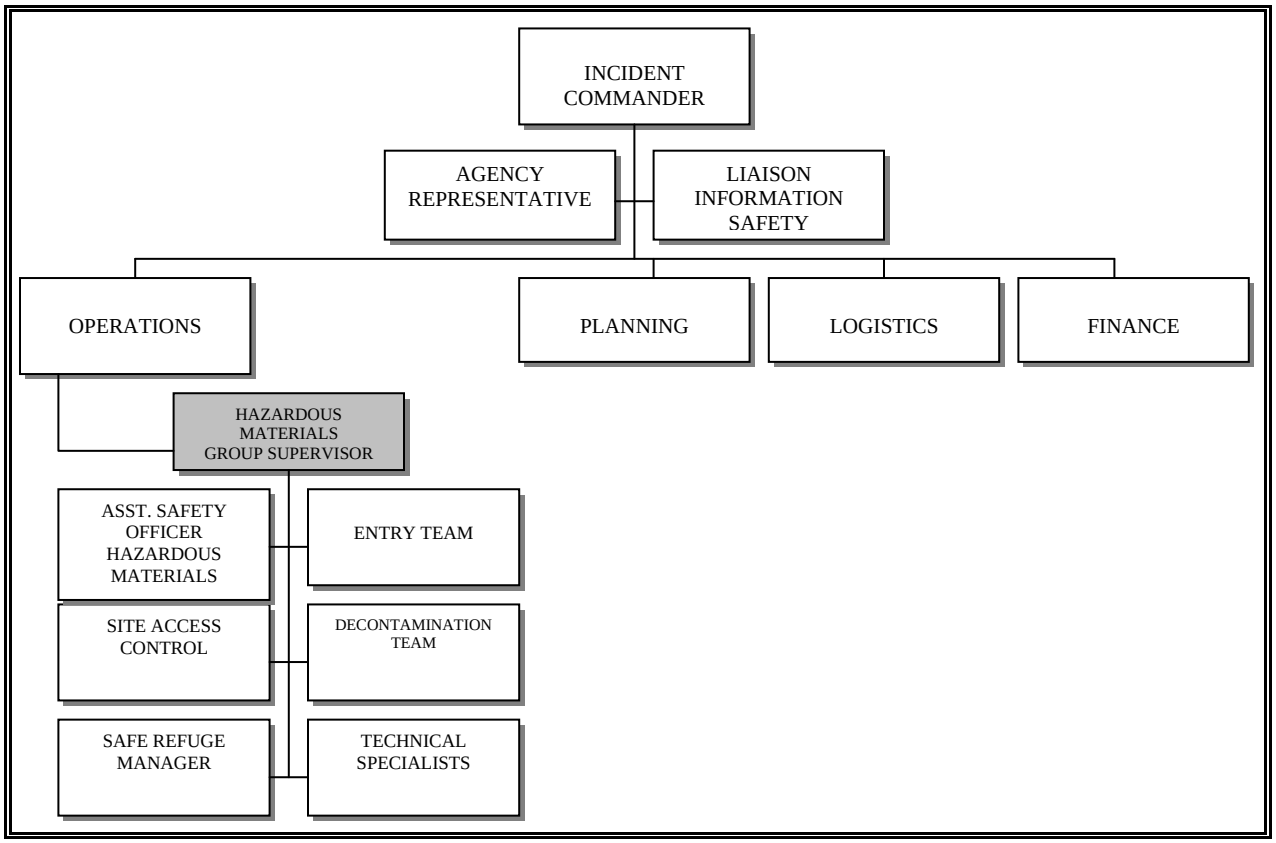
	28,29,35,36,39,43,45	
10/09	P-4, Add P-5, R-2, R-9	

HAZARDOUS MATERIALS GROUP SUPERVISOR



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

The Group Supervisor is part of an organizational structure designed to provide the Operations Section Chief with personnel, equipment, and expertise to safely mitigate a hazardous materials incident. Personnel in this position must be able to assess, measure, and determine the most effective and safe means to abate the hazardous substance(s). The Group Supervisor must have a thorough knowledge of operational procedures, risk analysis and safety considerations relating to hazardous materials incident management. These responsibilities require that personnel assigned to this position have the minimum equivalent training and expertise as mandated by federal, state, and local laws to perform the responsibilities and procedures of this position.

____ Check in and obtain briefing from the Operations Section Chief or Hazardous Materials Branch Director (if activated).

____ 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 Section Chief or Branch Director (if activated).

____ Ensure that current weather data and future weather predictions are obtained.

____ Establish environmental monitoring of the hazard site for contaminates.

____ Ensure that a Site Safety and Control Plan is developed and implemented.

____ Conduct safety meetings with the Group.

____ Participate, when requested, in the development of the Incident Action Plan (develop the Hazardous Materials attachment of the Incident Action Plan).

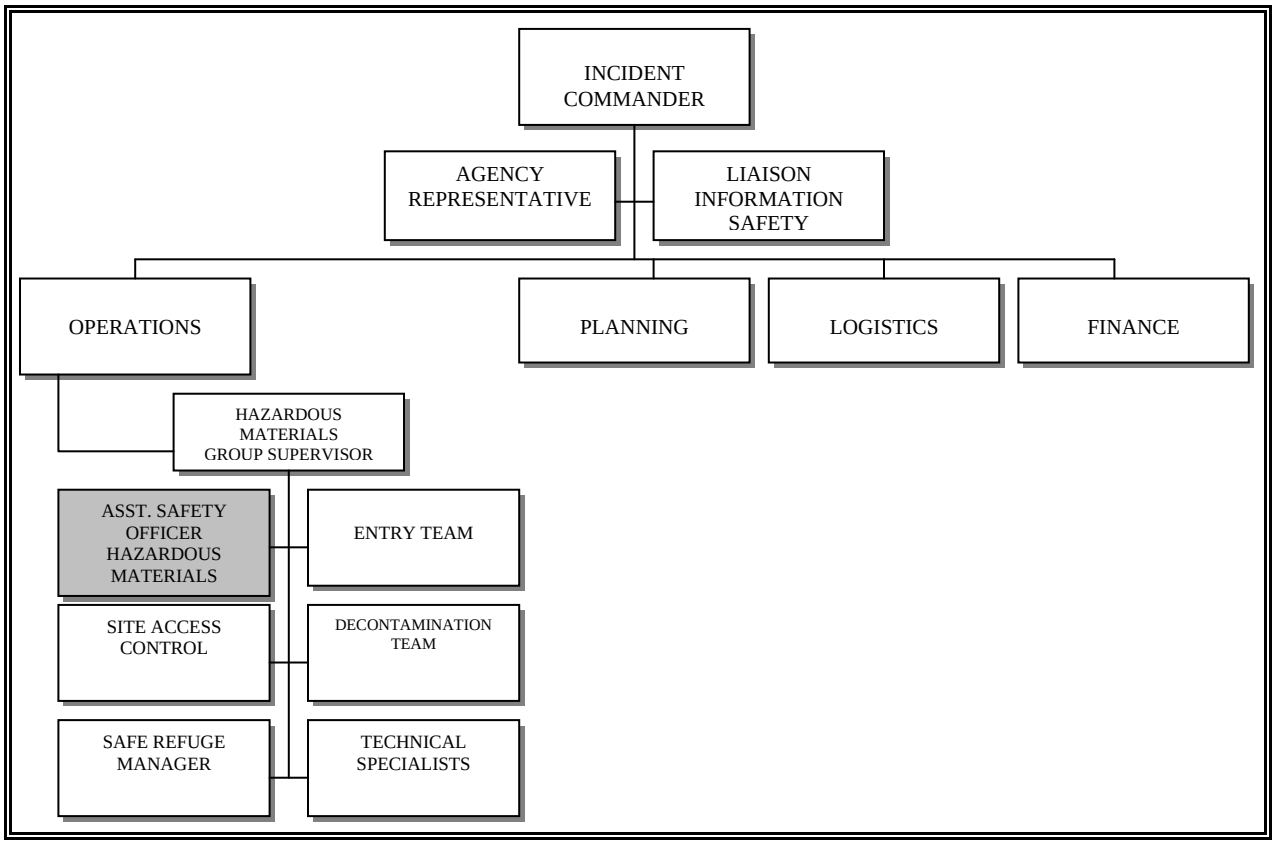
____ Ensure that nationally recommended safe operational procedures are followed.

____ Ensure that the proper Personal Protective Equipment (PPE) is selected and used.

____ Ensure that appropriate allied agencies are notified through the Incident Commander.

____ Maintain Unit/Activity log.

ASSISTANT SAFETY OFFICER - HAZARDOUS MATERIALS



The Assistant Safety Officer - Hazardous Materials reports directly to the Safety Officer, if activated, and is assigned to the Hazardous Materials Group (or Hazardous Materials Branch, if activated). This position is responsible for the overall safety of personnel assigned to the Hazardous Materials Group. The Assistant Safety Officer - Hazardous Materials coordinates group activities with the Group Supervisor.

In a multi-hazard incident, the Assistant Safety Officer - Hazardous Materials does not act as Safety Officer for the overall incident. Therefore, it is necessary to appoint an Assistant Safety Officer - Hazardous Materials for all hazardous materials incidents.

The Assistant Safety Officer - Hazardous Materials coordinates activities directly relating to the Hazardous Materials Group operations as mandated by 29 CFR 1910.120. This position advises the Group Supervisor on all aspects of health and safety and has the authority to stop or prevent unsafe acts. Due to the responsibilities of this position, it is imperative that the individual be both Safety Officer qualified and possess a high degree of knowledge in hazardous substance mitigation operations and procedures. These abilities require that the personnel assigned to this position have minimum equivalent training and expertise as mandated by federal, state, and local laws to perform the responsibilities and procedures of this position.

____ Check in and obtain briefing from the Incident Safety Officer.

____ Obtain briefing from the Group Supervisor.

____ Participate in the preparation of, and implement the Site Safety Plan.

____ Advise the Group Supervisor (or Hazardous Materials Branch Director, if activated) of deviations from the Site Safety Plan or any dangerous situations.

____ Has full authority to alter, suspend, or terminate any activity that may be judged to be unsafe.

____ Ensure protection of the Hazardous Materials Group personnel from physical, environmental, and chemical hazards/exposures.

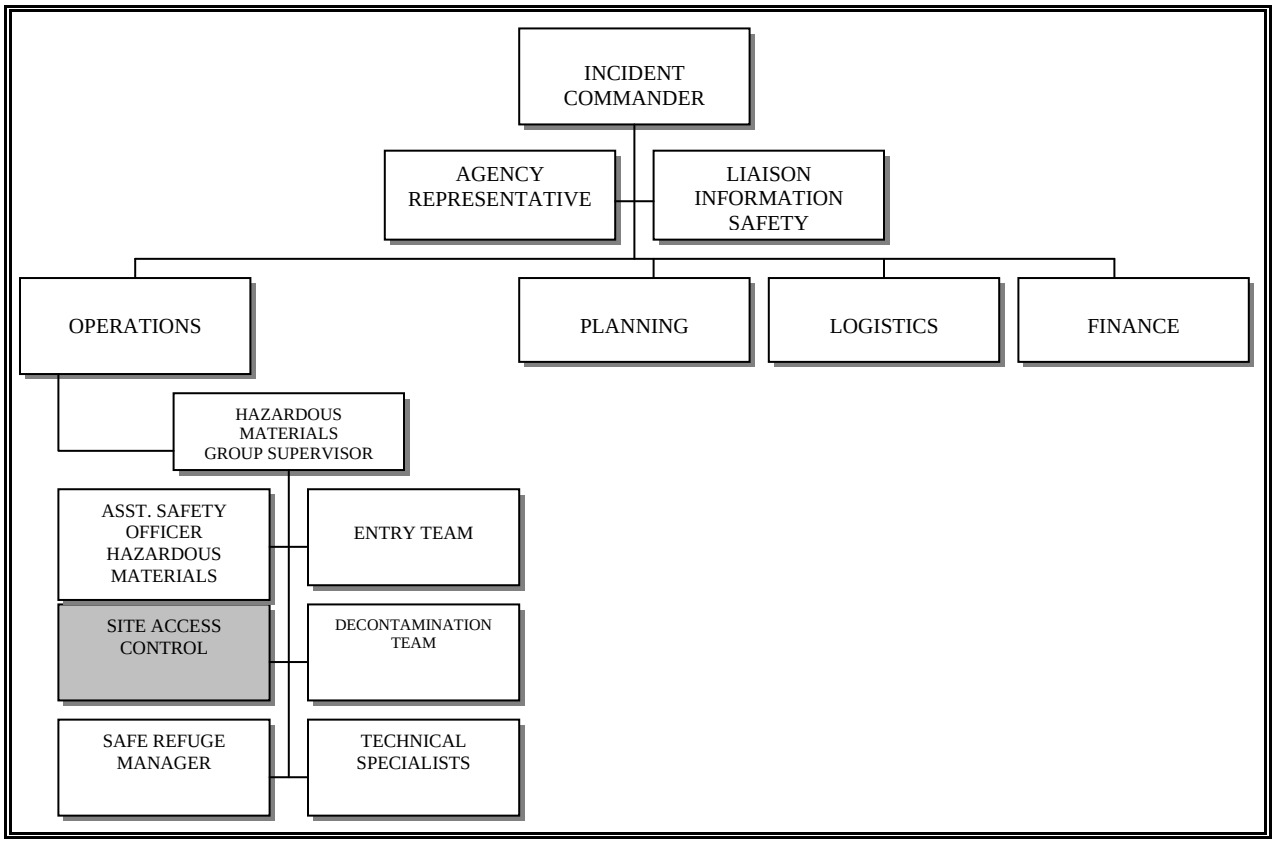
____ Ensure provision of required emergency medical services for assigned personnel and coordinate with the Medical Unit Leader.

____ Ensure that medical related records for the personnel are maintained.

____ Maintain unit log.

A portable radio and a handheld air-horn will be used by the Assistant Safety Officer - Hazardous Materials to notify personnel in the Exclusion Zone to withdraw, and alert all support personnel to prepare to receive those personnel.

SITE ACCESS CONTROL LEADER



The Site Access Control Leader is assigned to the Hazardous Materials Group (or Hazardous Materials Branch, if activated). The Site Access Control Leader reports to the Hazardous Materials Group Supervisor, and is responsible for the control of the movement of all people and equipment through appropriate access routes at the hazard site. This position assures that the spread of contaminants is controlled and that records are maintained. One Site Access Control Leader should be established for the whole site even if the site covers a large area containing multiple groups or divisions.

The Site Access Control Leader is responsible for providing the Group Supervisor with control of the movement of all personnel and equipment between control zones. Because of the need to isolate the Exclusion Zone and Contamination Reduction Zone, the Site Access Control Leader is identified early in the incident to insure that citizens and personnel use proper access and egress routes. These abilities require that personnel assigned to this position have the minimum equivalent training and expertise as mandated by federal, state, and local laws to perform the responsibilities and procedures of this position.

___ Check in and obtain briefing from the Group Supervisor.

____ Organize and supervise assigned personnel to control access to the hazard site.

____ Oversee the placement of the Exclusion 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 Exclusion Zone. Appoint Safe Refuge Manager (as needed).

____ Ensure that injured or exposed individuals are decontaminated prior to departure from the hazard site.

____ Track persons passing through the Contamination Reduction Zone 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.

____ Maintain communications and coordinate operations with the Entry Team.

____ Maintain communications and coordinate operations with the Decontamination Leader.

____ Maintain unit log.

- The Site Access Control Leader should enlist the assistance of law enforcement officers for large incidents, but at small incidents (if assistants are required) it is expedient to have firefighters perform security functions.

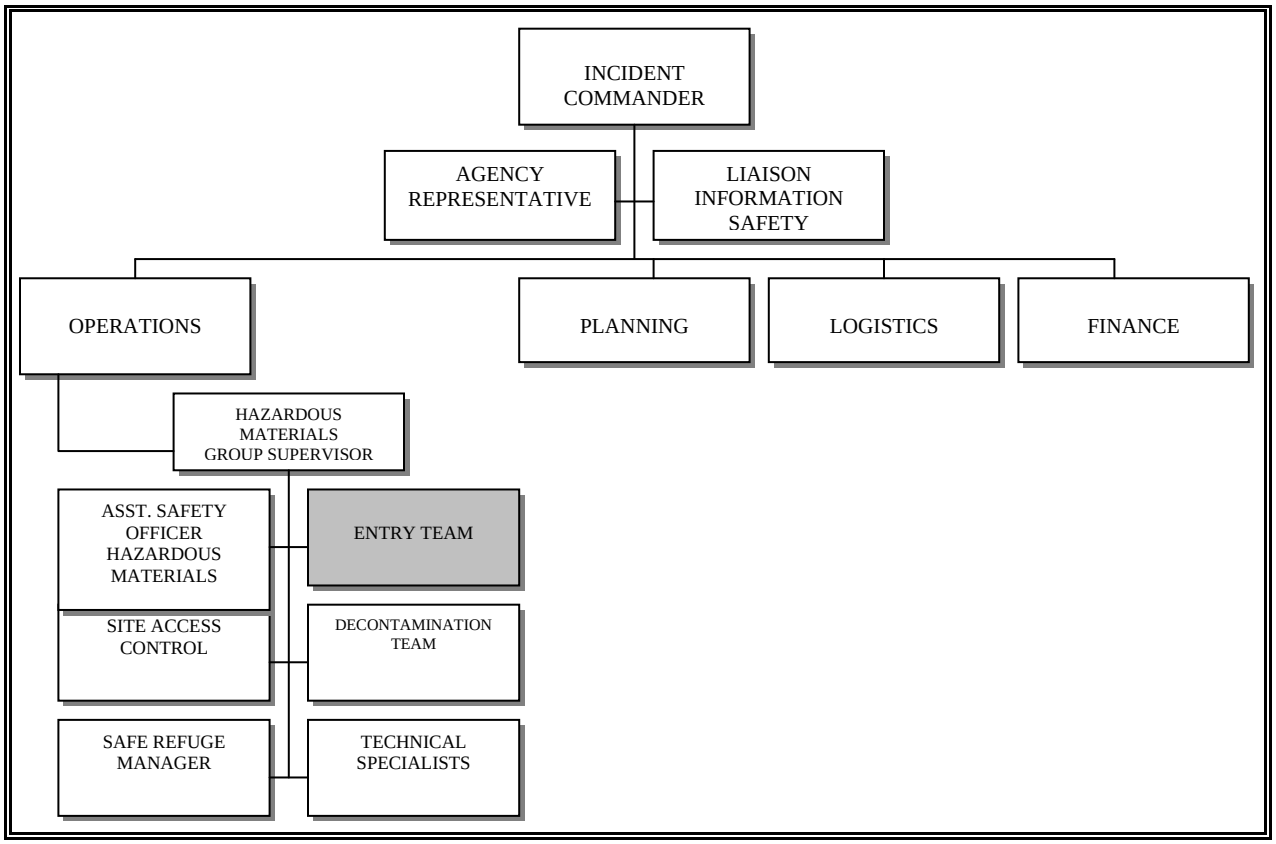
- The Site Access Control Leader and security personnel must remain out of the Exclusion Zone and be provided with the proper level of protective clothing when working in the Contamination Reduction Zone. All personnel entering the Exclusion and Contamination Reduction Zones should clear through the Site Access Control Leader.

- The Site Access Control Leader will control personnel entering the Exclusion Zone to insure that they are properly protected. The Site Access Control Leader should also establish the Contamination Reduction Zone and be familiar with the various levels of protective clothing available and medical implications of the incidents.

- The Site Access Control Leader must be alert to any signs or symptoms of exposure and should provide advanced life support personnel with as much accurate information as practical that can be sent to the hospital with exposed persons. If acute exposure of personnel is known or suspected, medical examinations must be ordered.

- The log should include, but not limited to, times of significant occurrences within the Exclusion Zone; products involved; names of personnel entering the Exclusion Zone; clocking time in and time out; protective equipment of personnel entering the Exclusion Zone; and functions of personnel entering the Exclusion Zone. The log will contain essential information should any exposed persons develop health problems in the future.

ENTRY TEAM LEADER



The Entry Team Leader is assigned to the Hazardous Materials Group (or Hazardous Materials Branch, if activated). The Entry Team Leader reports to the Hazardous Materials Group Supervisor, and is responsible for all activities taking place in the Exclusion Zone, including multiple team entries, repeated entries, and multi-jurisdictional entries.

The Entry Team Leader is part of an organizational structure designed to provide the Group Supervisor with the expertise to initiate rescue, provide material identification, and contain and control releases or threatened releases of hazardous materials. The Entry Team Leader must be able to provide both technical assistance and tactical and strategic information to safely mitigate the incident. These abilities require that the personnel assigned to this position have a minimum equivalent training and expertise as mandated by federal, state, and local laws to perform the responsibilities and procedures of this position.

____ Check in and obtain briefing from the Group Supervisor.

____ Supervise entry operations.

____ Recommend actions to mitigate the situation in the Exclusion Zone.

____ Initiate actions, as directed by the 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 Site Access Control Leader.

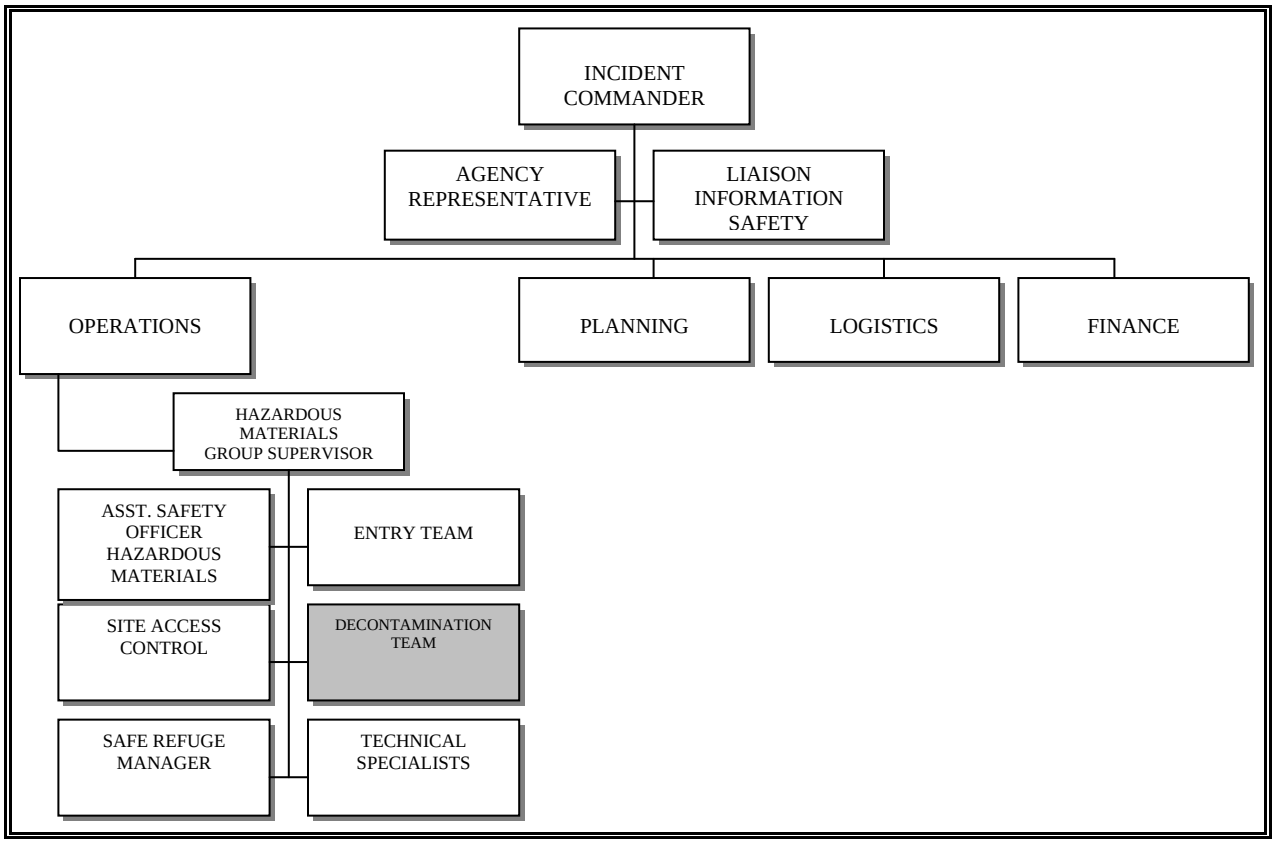
____ Maintain communications and coordinate operations with the Technical Specialist - Hazardous Materials Reference.

____ 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 log.

DECONTAMINATION LEADER



The Decontamination Leader is assigned to the Hazardous Materials Group (or Hazardous Materials Branch, if activated). The Decontamination Leader reports to the Hazardous Materials Group Supervisor, and is responsible for all activities taking place in the area designated as the Decontamination Corridor. The Decontamination Leader is responsible for the decontamination of persons and equipment that leave the Exclusion Zone and the maintenance of records for the unit.

The Decontamination Leader is responsible for providing the Group Supervisor with the expertise to insure the area of contamination does not spread beyond the Contamination Reduction Zone either from contaminated equipment or people. These responsibilities require that personnel assigned to this position have the minimum equivalent training and expertise as mandated by federal, state, and local laws to perform the responsibilities and procedures of this position.

____ Check in and obtain briefing from the Group Supervisor.

____ Establish decontamination 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 decontamination corridor.

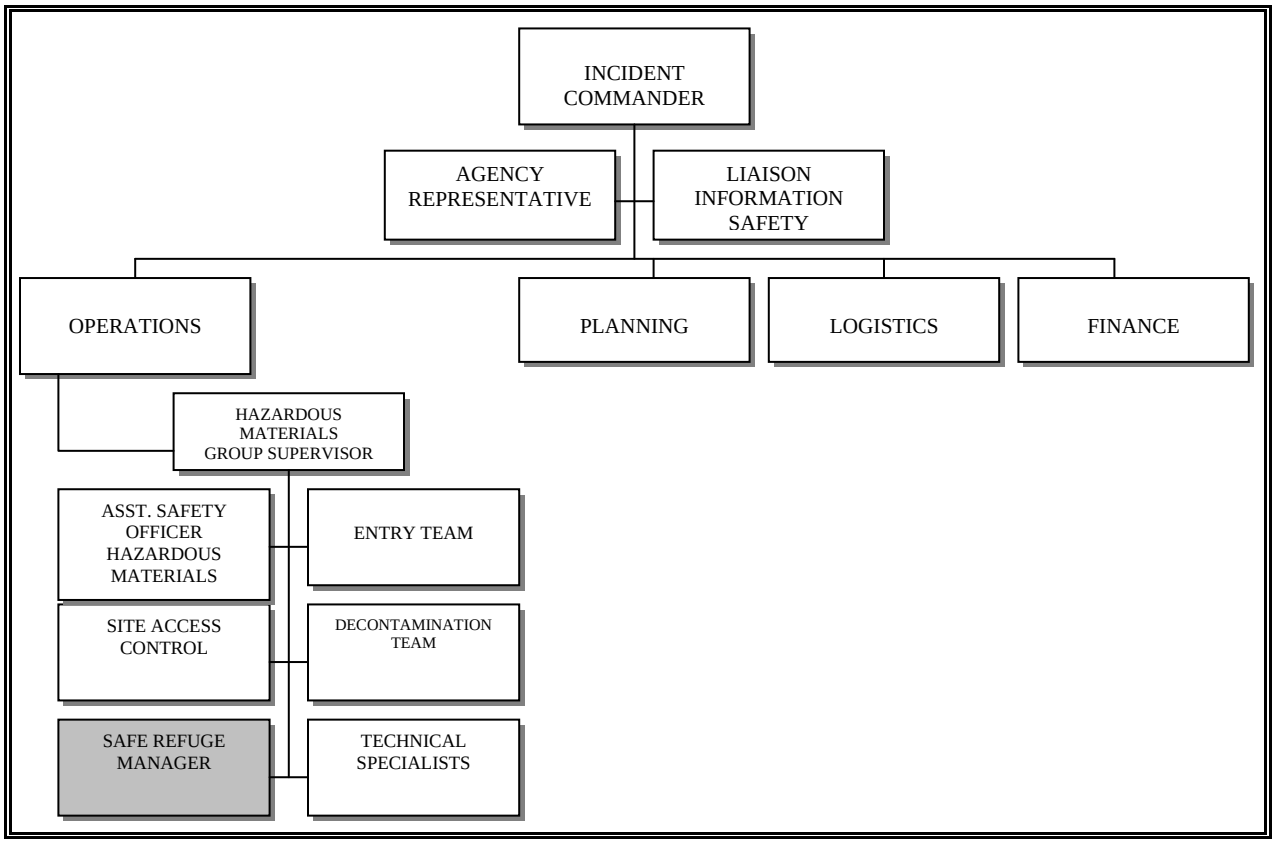
____ Maintain communications and coordinate operations with the Entry Team Leader.

____ Maintain communications and coordinate operations with the Site Access Control Leader.

____ Coordinate the transfer of contaminated patients requiring medical attention (after decontamination) to the Medical Group

____ Coordinate handling, storage, and transfer of contaminants within the decontamination corridor.

SAFE REFUGE MANAGER



The Safe Refuge Manager is assigned to the Hazardous Materials Group (or Hazardous Materials Branch, if activated). The Safe Refuge Manager reports to the Hazardous Materials Group Supervisor, and is responsible for all activities taking place in the Safe Refuge Area. The Safe Refuge Area will be located near the Contamination Reduction Zone where citizens, victims, and emergency response personnel await to be decontaminated before entering the Decontamination Corridor.

The Safe Refuge Manager is responsible for providing the Group Supervisor with expertise to insure that the area of contamination does not spread beyond the Exclusion and Contamination Reduction Zones. These responsibilities require that personnel assigned to this position have the minimum equivalent training and expertise as mandated by federal, state, and local laws to perform the responsibilities and procedures of this position.

____ Check in and obtain briefing from the Group Supervisor.

____ Determine the need for a Safe Refuge Area. Numerous contaminated persons will require the establishment of the Safe Refuge Area.

____ Designate area near or next to the Contamination Reduction Zone for the Safe Refuge Area. Check with the Decontamination Leader for agreement.

____ Don appropriate personal protective equipment. Level of equipment should be the same as

those in the Contamination Reduction Zone.

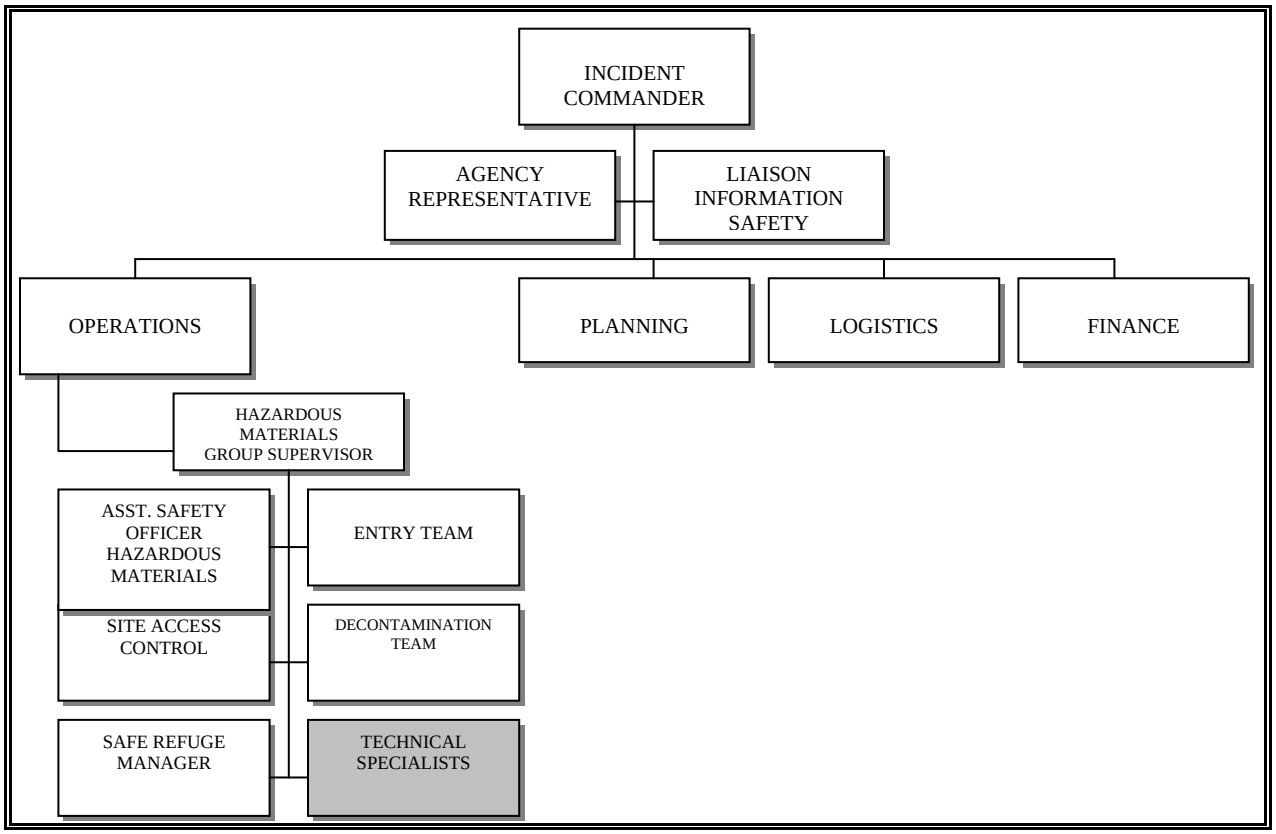
____ If possible, demarcate the boundaries of the Safe Refuge Area using cones, barrier tape or other articles.

____ Perform triage of injured individuals. Designate the order of persons to be decontaminated.

____ If possible and if qualified, perform emergency medical treatment on injured individuals.

____ Maintain communications and coordinate with the Decontamination Leader and the Group Supervisor.

TECHNICAL SPECIALIST - HAZARDOUS MATERIALS REFERENCE



The Technical Specialist - Hazardous Materials Reference is assigned to the Hazardous Materials Group (or Hazardous Materials Branch, if activated). The Technical Specialist - Hazardous Materials Reference reports to the Hazardous Materials Group Supervisor, and is responsible for providing technical information and assistance to the Hazardous Materials Group and the Planning Section using various sources such as computer data bases, technical journals, public and private technical information agencies, facility representatives and product specialists. The Technical Specialist - Hazardous Materials Reference may provide product identification, verification, physical properties and hazardous characteristics using various references sources, hazard categorization tests and/or by any other available means.

The Technical Specialist - Hazardous Materials Reference function is part of an organizational structure designed to provide the Incident Commander with the expertise to identify and assess hazards, measure operational benefits, and determine environmental impacts of hazardous substance releases. Personnel in this position must be able to provide technical assistance and strategic and tactical information to safely mitigate the incident. These abilities require that personnel assigned to this position have the minimum equivalent training and expertise as mandated by federal, state, and local laws to perform the responsibilities and procedures of this position.

____ Check in and obtain briefing from the Group Supervisor or Hazardous Materials Branch Director, if activated.

____ Obtain briefing from the Planning Section Chief.

____ Provide technical support to the Group Supervisor.

____ Maintain communications and coordinate operations with the Entry Team Leader.

____ Provide and interpret environmental monitoring information.

____ Provide analysis of hazardous materials samples.

____ Determine personal protective equipment compatibility to hazardous material.

____ Provide technical information of the incident for documentation.

____ Provide technical information management with the public and private agencies (i.e. Poison Control Center, CHEMTREC, State Department of Agriculture, National Response Team).

____ Assist Planning Section with projecting the potential environmental effects of the release.

____ Maintain unit log.

INITIAL RESPONSE CHECKLISTS

ANIMAL CONTROL
HAZARDOUS MATERIALS INCIDENT CHECKLIST

- Upon dispatch, always approach UPWIND, UPHILL, and UPSTREAM!!! Toxic materials may not be visible or present an odor – minimize all exposures and do not allow yourself to become contaminated by driving to, through, or in the area of the active release.
- If you discover a hazardous material or an unlabeled container and suspect it contain a hazardous material:
  - Do not move the container or attempt to determine if full.
  - Retreat to an upwind, uphill, upstream position.
  - Isolate and deny entry.
  - Request the El Dorado County Hazardous Materials Response Team.

1. ____ Utilize the Incident Command System:
   - ____ Report to appropriate ICS position.
   - ____ Locate Command Post.
   - ____ Locate Staging Areas.
   - ____ Recommend additional resources.
   - ____ Don and distribute appropriate ICS vests as command structure grows.
   - ____ Attend **all** briefings.
2. ____ Receive briefing from the Incident Commander or Operations Section Chief.
3. ____ Determine the extent of Animal Control assistance needed:
   - ____ Request additional personnel and equipment.
4. ____ Provide periodic status reports to the OES Emergency Operations Center (EOC), when activated (Placerville: 530-621-7440). Record and provide information regarding:
   - ____ Requests.
   - ____ Activities.

____ Expenditures.

____ Damages to equipment.

____ Casualties.

DEPARTMENT OF PUBLIC WORKS
HAZARDOUS MATERIALS INCIDENT CHECKLIST

- Upon dispatch, always approach UPWIND, UPHILL, and UPSTREAM!!! Toxic materials may not be visible or present an odor – minimize all exposures and do not allow yourself to become contaminated by driving to, through, or in the area of the active release.
- If you discover a hazardous material or an unlabeled container and suspect it contain a hazardous material:
  - Do not move the container or attempt to determine if full.
  - Retreat to an upwind, uphill, upstream position.
  - Isolate and deny entry.
  - Request the El Dorado County Hazardous Materials Response Team.

1. ____ Utilize the Incident Command System:
   - ____ Report to appropriate ICS position.
   - ____ Locate Command Post.
   - ____ Locate Staging Areas.
   - ____ Recommend additional resources.
   - ____ Don and distribute appropriate ICS vests as command structure grows.
   - ____ Attend **all** briefings.
2. ____ Receive briefing from the Incident Commander or Operations Section Chief.
3. ____ Determine the extent of DPW assistance needed:
   - ____ Request additional personnel and equipment.
4. ____ Construct detours and alternate routes according to plans.
5. ____ Coordinate warning and Emergency Public Information with OES and county PIO.
6. ____ Provide periodic status reports to the OES Emergency Operations Center (EOC), when activated (Placerville: 530-621-7440; : 550-8517). Record and provide information regarding:

____ Requests.

____ Activities.

____ Expenditures.

____ Damages to equipment.

____ Casualties.

EMERGENCY MEDICAL SERVICES
HAZARDOUS MATERIALS INCIDENT CHECKLIST

- Upon dispatch, always approach UPWIND, UPHILL, and UPSTREAM!!! Toxic materials may not be visible or present an odor – minimize all exposures and do not allow yourself to become contaminated by driving to, through, or in the area of the active release.
- If you discover a hazardous material or an unlabeled container and suspect it contain a hazardous material:
  - Do not move the container or attempt to determine if full.
  - Retreat to an upwind, uphill, upstream position.
  - Isolate and deny entry.
  - Request the El Dorado County Hazardous Materials Response Team.

1. ____ Utilize the Incident Command System:
   - ____ Report to appropriate ICS position.
   - ____ Locate Command Post.
   - ____ Locate Staging Areas.
   - ____ Recommend additional resources.
   - ____ Don and distribute appropriate ICS vests as command structure grows.
   - ____ Attend **all** briefings.
2. ____ Assess the emergency and determine the extent of medical casualties:
   - ____ Assess decontamination issues prior to transport of patients.
3. ____ Establish communications and monitor radio traffic for possible coordination assistance.
4. ____ If an MCI:
   - ____ Notify the Operational Area MCI Coordinator (OES).
   - ____ Assess resources:

____ Determine the condition and capacity of local health care facilities:

____ Placerville Marshall Hospital (626-2678).

____ South Lake Tahoe Barton Hospital (541-3420).

____ Determine the number of properly staffed BLS and ALS ambulances available for dispatch in affected area.

____ Determine the availability of helicopter transportation.

____ Determine the availability and condition of medical supplies, such as backboards, blankets, and C-collars.

____ Request medical support from other jurisdictions.

____ Request emergency supplies.

5. ____ Provide field medical care coordination, including triage, in affected/secure areas, as assigned by the Incident Commander:

____ Determine the number and location of casualties that require hospitalization.

____ Notify the receiving hospital(s) of the number of casualties.

____ Request medical support.

____ Supervise patient care and the movement of casualties to help facilities:

____ Coordinate transportation resources required for transporting casualties and evacuating non-ambulatory patients.

____ Request the activation of a Casualty Collection Point (CCP).

6. ____ Coordinate all Emergency Public Information through the IC.

7. ____ Provide periodic status reports to the OES Emergency Operations Center (EOC) (Placerville: 530-621-7440). Record and provide information regarding:

____ Requests.

____ Activities.

____ Expenditures.

____ Damages to equipment.

____ Casualties.

FIRE AGENCIES
HAZARDOUS MATERIALS INCIDENT CHECKLIST

- Upon dispatch, always approach UPWIND, UPHILL, and UPSTREAM!!! Toxic materials may not be visible or present an odor – minimize all exposures and do not allow yourself to become contaminated by driving to, through, or in the area of the active release.
- If you discover a hazardous material or an unlabeled container and suspect it contain a hazardous material:
  - Do not move the container or attempt to determine if full.
  - Retreat to an upwind, uphill, upstream position.
  - Isolate and deny entry.
  - Request the El Dorado County Hazardous Materials Response Team.

1. ____ Fully implement the Incident Command System:

   ____ Activate the El Dorado *Operational Area Hazardous Materials Emergency Response Plan*.

   ____ Relay size up of incident to other responders.

   ____ Establish Command Post.

   ____ Determine agency with Incident Command authority and notify that agency.

   ____ Don and distribute ICS vests as command structure grows.

   ____ Establish Staging Areas.

   ____ Request the El Dorado County Hazardous Materials Response Team:

      ____ Hazmat "One"

      ____ Environmental Health.

      ____ OES (530-621-7440).

      ____ District Attorney Investigator.

____ Request additional resources.

____ Establish a regular briefing schedule with representatives of **all** responding agencies.

2. ____ Make the following notifications and place on stand-by or request to respond:

____ Law enforcement (CHP, Fish & Game, etc.).

____ Fire mutual aid.

____ OES (530-621-7440).

____ Public Health Officer (Environmental Health).

____ EMS.

____ Hospitals:

____ Placerville Marshall Hospital (626-2678).

____ South Lake Tahoe Barton Hospital (541-3420).

____ Helicopter transportation.

____ Public Works.

____ School Authorities.

____ District Attorney Investigator.

____ Agricultural Commissioner.

3. ____ If incident borders, or potentially affects other jurisdictions or agencies, advise those agencies:

____ Water Agencies.

____ Public Utility Districts.

____ Other counties.

4. ____ Isolate and deny entry:

____ Coordinate with law enforcement at-scene command to ensure that public is kept as far away from the scene.

5. ____ Ensure that operations are conducted from an upwind, uphill, upstream position.

6. ____ Conduct an initial identification of spilled or leading substance. (Locate shipping papers, placards and MSDS, etc.)

7. ____ Provide field medical care, including triage, in affected areas:

    ____ Assist medical personnel in isolating and removing contaminated or injured persons from the inner perimeter.

    ____ Determine the number and location of casualties that require hospitalization.

    ____ Notify the receiving hospital(s) of the number of casualties.

    ____ Request medical support.

    ____ Establish medical aid stations.

    ____ Take precautionary actions to protect medical and fire personnel when caring for contaminated victims.

8. ____ Coordinate warning and Emergency Public Information with OES and county PIO.

9. ____ With IC, consider the need for evacuation or shelter-in-place, and determine:

    ____ Area affected.

    ____ Special population.

    ____ Assist law enforcement with the evacuation of population in affected area:

        ____ Locate a rendezvous point for evacuees that is out of harm's way if a shelter is not immediately identified.

        ____ Notify OES (530-621-7440) if evacuation is being considered or becomes necessary.

        ____ Notify the American Red Cross (885-9392) of the evacuation.

    ____ Survey status of major evacuation routes and identify alternate routes.

    ____ Evacuate any facility or area reported or presumed to be unsafe due to damage, developing fires, or the spread of hazardous substance.

    ____ Assist with evacuating non-ambulatory residents.

10. ____ Reevaluate parameters as the hazardous substance is identified and/or environmental conditions change.

11. ____ Determine where additional hazardous chemicals, flammable substances, and explosives are stored or near the hazard area.

12. ____ Coordinate the activation of multi-purpose staging areas.

13. ____ Notify adjoining fire agencies of the local problem and current status.

14. ____ Provide periodic status reports to Dispatch/ECC or, when activated, the EOC (Placerville: 530-621-7440) Record and provide information regarding:

    ____ Requests.

    ____ Activities.

    ____ Expenditures.

    ____ Damages to equipment.

    ____ Casualties.

    ____ Damage assessment information.

15. ____ Document all information and prepare after-action reports.

16. ____ Schedule incident debrief.

LAW ENFORCEMENT
HAZARDOUS MATERIALS INCIDENT CHECKLIST

- Upon dispatch, always approach UPWIND, UPHILL, and UPSTREAM!!! Toxic materials may not be visible or present an odor – minimize all exposures and do not allow yourself to become contaminated by driving to, through, or in the area of the active release.
- If you discover a hazardous material or an unlabeled container and suspect it contain a hazardous material:
  - Do not move the container or attempt to determine if full.
  - Retreat to an upwind, uphill, upstream position.
  - Isolate and deny entry.
  - Request the El Dorado County Hazardous Materials Response Team.

1. ____ Fully implement the Incident Command System:

   ____ Assess the situation and report to Dispatch.

   ____ Activate the *El Dorado Operational Area Hazardous Materials Emergency Response Plan*.

   ____ Assume Incident Command:

      ____ Establish Command Post.

      ____ Request the El Dorado County Hazardous Materials Response Team:

         ____ Hazmat "One"

         ____ Environmental Health.

         ____ OES (530-621-7440)

         ____ District Attorney Investigator.

      ____ Establish Staging Areas.

   ____ Request additional resources.

2. ____ Make the following notifications for response or stand-by as appropriate:

    ____ Law Enforcement Mutual Aid.

    ____ Fish and Game.

    ____ CHP.

    ____ Coast Guard.

    ____ School Authorities.

    ____ Public Health Officer (Environmental Health).

    ____ Public Works.

    ____ EMS.

    ____ Public Information Team.

    ____ Regular and reserve personnel.

3. ____ Coordinate with fire at-scene command to isolate and deny entry.

4. ____ Begin investigation to ascertain cause and responsible party:

    ____ Conduct interviews and obtain statements.

    ____ Obtain and review manifests, bills of lading, and shipping papers:

    ____ Collect evidentiary materials when it is safe to do so.

    ____ Photograph or videotape scene.

All information gathered during the investigation must be shared with the Command Staff and Hazmat Team -- any delay could be critical to the mitigation of the incident.

5. ____ Coordinate warning and Emergency Public Information with OES and county PIO.

6. ____ Coordinate evacuation of population in affected area:

    ____ Notify OES (530-621-7440) if evacuation becomes necessary.

    ____ Notify the American Red Cross (582-4137) of the evacuation.

    ____ Locate a rendezvous point for evacuees that is out of harm's way if a shelter is not immediately identified.

____ Survey status of major evacuation routes and identify alternate routes:

____ Place tow trucks on evacuation routes to immediately remove disabled vehicles.

____ Ensure non-ambulatory residents are evacuated.

____ Ensure the condition and welfare of detention facilities:

____ Assist with the evacuation of institutionalized persons.

____ Ensure that searched areas are appropriately marked.

7. ____ Establish security patrols and perimeter access controls:

____ Provide for traffic control:

____ Facilitate the movement of emergency vehicles with CHP.

____ Coordinate with DPW and/or Caltrans for street and road barricades.

____ Establish security for vital facilities and essential supplies.

____ Provide crowd control at assembly locations.

8. ____ Assist with the coordination of search and rescue operations.

9. ____ Impose and enforce curfews as directed.

10. ____ Coordinate with Animal Control and the Humane Society in order to take required animal control measures.

11. ____ Assist with the removal and disposition of the dead if requested by the County Sheriff/Coroner.

12. ____ Determine where hazardous chemicals, flammable substances, and explosives are stored or near the hazard area.

13. ____ Notify adjoining law enforcement agencies of the local problem and current status.

14. ____ Document arrival and departure times for personnel at scene.

15. ____ Document any personnel exposures or complaints of exposures.

16. ____ Prepare after-action reports and schedule incident debrief.

17. ____ Provide periodic status reports to Dispatch or, when activated. Record and provide information regarding:

____ Requests.

____ Activities.

____ Expenditures.

____ Damages to equipment.

____ Casualties.

____ Damage assessment information.

OFFICE OF EMERGENCY SERVICES
HAZARDOUS MATERIALS INCIDENT CHECKLIST

1. ____ Upon notification, attempt to confirm the following:

____ Material involved:_____

____ Quantity released:_____

____ Location of incident:_____

_____

____ Best access route: _____

_____

____ Command Post location: _____

_____

____ Name and radio identifier of Incident Commander: _____

_____

____ Radio frequency at Command Post::_____

____ Command Post/IC cellular phone #: _____

____ Casualties (if required, ensure U.C. Davis Poison Control Center is called (800-876-4766):

____ Dead: _____

____ Injured:_____

____ Missing: _____

____ Stranded: _____

____ **Confirm activation of the MCI Plan.**

____ **Ensure area hospitals are alerted:**

____ **Placerville Marshall Hospital (626-2678).**

____ **South Lake Tahoe Barton Hospital (541-3420)**.

____ Populated areas threatened:_____

_____

If incident is large-scale, consider immediate warning and/or evacuation, see items 15 through 18.

____ Water contamination: (yes/no)

____ Other agencies notified or at-scene:_____

_____

_____

2. ____ Start incident log.

3. ____ Confirm Environmental Health is responding:

5. ____ Contact the District Attorney.

6. ____ Notify OES Warning Center (262-1621/800-852-7550) and obtain spill control number_____ per_____.

7. ____ If inland waterway or body of water is affected, notify the following:

____ Dept. of Fish & Game (M-F, 8-5: (916) 445-0045; after hours State OES: (916) 262-1621).

____ Central Valley Regional Water Quality Control Board (916) 255-3000.

____ PG&E:

____ Emergency (889-3282).

____ Hydro Department (889-3282).

____ PCWA (M-F, 9-5: 823-4850; 24-hr 885-7767).

____ NID (273-6185 or 273-3346 for emergency).

____ US Coast Guard (navigable waterway):

____ Emergency (583-0911).

____ Non-Emergency (583-4433).

____ Lahontan Regional Water Quality Control Board (544-3481).

9. ____ If incident involves a railroad, pipeline, or federal highway, contact the National Response Center (800-424-8802).

10. ____ If public recreation land affected:

    ____ Local parks and recreation:

    ____ Department of Fish and Game.

    ____ USFS:

        ____ In Tahoe Basin (530-647-5222 to Camino Dispatch).

11. ____ If pesticide related, contact the Agricultural Commission (530-621-5520).

12. ____ If the material is radioactive, contact:

    ____ DHS Radiological Health Services (800-852-7550 - 24 hrs.).

13. ____ Respond to incident:

    ____ Notify EDSO Dispatch and appropriate fire jurisdiction's dispatch of response and ETA.

    ____ Ensure the implementation of the Incident Command System:

        ____ Participate in a Unified Command when appropriate.

        ____ Locate and assess Command Post.

        ____ Locate and assess Staging Areas.

        ____ Check in with Incident Commander and offer assistance with incident and resource management.

        ____ Don and distribute ICS vests as command structure grows.

        ____ Establish a regular briefing schedule with representatives of **all** responding agencies.

    ____ Provide periodic updates to office or EOC.

14. ____ Ensure initial containment actions are accomplished.

15. ____ Ensure Safety Officer is appointed.

16. ____ Ensure hazardous material is identified and determine chemical properties and health hazards:

    ____ Call Chemtrec (800-424-9300) for assistance.

17. ____ With IC, assess risks and determine potential scope of incident. Impact considerations:

    ____ Material identification, toxicity, and quantity released.

    ____ Weather.

    ____ Facilities in area.

    ____ Nearby population.

    ____ Waterways/downstream contamination.

Ensure IC and/or Command Staff consider long-term health, safety, economic, environmental, and political issues and ramifications.

18. _____ Continue notifications:

    ____ CEO/Board of Supervisors.

    ____ Public.

    ____ Media.

    ____ Other jurisdictions/special districts.

    ____ Other city/county OES organizations.

    ____ Volunteer/charitable organizations (i.e., American Red Cross, The Salvation Army, etc.).

    ____ State agencies:

        ____ Office of Emergency Services:

            ____ Region IV (916-262-1772).

            ____ Warning Center (800-852-7550\262-1621)

        ____ Environmental Protection Agency:

    ____ Federal agencies (contact the National Response Center - 800-424-8802).

    ____ Other.

19. ____ Activate and staff EOC at appropriate level.

20. ____ Consider warning and/or evacuation of affected area(s) and discuss with EDSO:

____ Determine evacuation routes.

____ Contact the American Red Cross to determine shelter availability:

____ Sacramento Chapter (916-368-3131).

____ Coordinate evacuation of affected areas.

21. ____ If required, notify FAA and request airspace restriction.

22. ____ Determine resource needs and availability:

____ Food and water.

____ Heavy equipment.

____ Additional containment items (i.e., tools, booms, absorbent pads, etc.).

____ Additional manpower.

____ Communications equipment.

23. ____ Assist with the coordination of clean-up and cost recovery efforts:

____ Determine responsible party, if any.

____ Determine Superfund availability and/or use of state or federal agency funding:

____ See *California Hazardous Material Incident Contingency Plan*, pages 7-2 through 7-6 for telephone numbers.

____ See Attachment 1 for requesting Toxic Substances Control Program Emergency Reserve Account Funding (Superfund).

____ Ensure hazardous materials clean-up/disposal company is called:

24. ____ With IC, ensure agencies are released from scene.

25. ____ Clear from incident with EDSO Dispatch and/or appropriate fire jurisdiction's dispatch.

26. ____ Complete required reports:

____ Poll other agencies involved and collect information regarding:

____ Requests.

____ Activities.

____ Expenditures.

____ Damages to equipment.

____ Casualties.

____ Damage assessment information.

ENVIRONMENTAL MANAGEMENT DEPARTMENT
HAZARDOUS MATERIALS INCIDENT CHECKLIST

A L W A Y S

- **Upon dispatch, approach from UPWIND, UPHILL, and UPSTREAM!! Toxic materials may not be visible or present an odor - minimize all exposures and do not allow yourself to become contaminated by driving to, through or in the area of an active release.**
- **If you discover a hazardous material or an unlabeled container and suspect it contains a hazardous material:**
- **Do not move the container or attempt to determine if it is full.**
- **Retreat to an upwind, uphill, upstream position.**
- **Isolate and deny entry.**

1. ___ **Upon notification, attempt to confirm the following:**

   _____ Material involved: _____

   _____ Quantity Released: _____

   _____ Location of incident: _____

   _____ Type of accident or release: _____

   _ Fixed facility

   ___ Transportation

   _ Incorporated or Unincorporated jurisdiction

   _____ Best access route: _____

   _____ Command Post location: _____

   ___ Name and radio identifier of Incident Commander: _____

   ___ Radio frequencies at Command Post: _____

   ___ Command Post/Incident Commander cellular phone #: _____

_____ Casualties or injured:

_ Dead: _____

_ Injured: _____

_ Missing: _____

_ Stranded: _____

_____ Populated areas threatened: _____

___ Water contamination: Yes___ No___

_____ Other agencies notified or at-scene:

___ CHP

___ El Dorado County Sheriff

_ Local Fire - _____

___ CDF

___ Fish and Game

___ Office of Emergency Services

___ County Department of Transportation

___ CalTrans

___ Public Health

___ Others: _____

_____

2. ___ **Start Incident Log.**

***If incident is large-scale*, consider immediate notification of the State OES Warning Center at 1-800-852-7550, and activation of the State RAPID Plan.**

3. ___ **Respond to incident:**

_____ Notify Camino Dispatch of response and ETA.

_____ Activate the *El Dorado County Hazardous Materials Area Plan.*

____ Ensure the implementation of the Incident Command System:

___ Locate the Command Post.

___ Check-in with Incident Commander and participate in the Unified Command. Receive briefing of incident status.

___ Provide periodic updates to office or EOC.

4. __ **Within a Unified Command, assess risks and determine potential scope of incident. Consider the following:**

____ Material identification, toxicity, and quantity released

____ Weather

____ Affected populations

____ Facilities in the area

____ Waterways/downstream contamination

5. ___ **Within a Unified Command, assess the need for the Hazardous Material Response Team to respond, if not already requested. As Environmental Management representative, HazMat team activation may depend on you!**

6. ___ **Within a Unified Command, consider warning and/or evacuation of affected area(s).**

Refer to Evacuation/Shelter-in-Place Checklist in Appendix R-6.

____ Coordinate with Fire and Law Enforcement any protective actions taken.

7. ___ **Continue notifications as appropriate.**

____ State OES Warning Center (1-800-852-7550) and obtain a spill control number

___ Spill Control #:_____Duty Officer: _____

___ State OES Warning Center will automatically notify (confirm):

____ *Department of Fish and Game*

____ *US EPA*

_____ *Regional Water Quality Control Board*

_____ *Department of Toxic Substances Control*

_____ *State OES - Region 4*

_____ *National Response Center*

___ El Dorado County CAO and/or Board of Supervisors

Notify board member from appropriate supervisory district

_____ Cal OSHA

_____ US Coast Guard

_____ Media

_____ Other city/county OES jurisdictions

_____ Other jurisdictions/special districts

_____ ***If incident is pesticide related***, contact the El Dorado County Agriculture Commissioner.

8. ___ **Utilizing either the HazMat team or private resources, ensure that the hazardous material is properly identified and determine chemical properties and health hazards.**

___ Call CHEMTREC at 800-424-9300 as needed for additional assistance.

9. ___ **Within Unified Command, ensure initial containment actions are accomplished. Include utilization of the HazMat team if necessary.**

Ensure that Unified Command and/or Command Staff consider long-term health, safety, economic, environmental, and political issues and ramifications.

10. ___ **If necessary, contact FAA and request airspace restriction.**

11. ___ **Assist with the coordination of clean-up and cost-recovery efforts.**

___ Determine responsible party, if any.

___ Determine Emergency Reserve Account availability and/or use of state or federal agency funding.

___ Ensure that a hazardous materials clean-up/disposal company is contacted if necessary. Refer to Appendix R-2 for a list of available resources.

12. ___ **Within Unified Command, coordinate the release of agencies and resources from the scene.**

13. ___ **Notify Camino and/or Central Dispatch that you are leaving the scene.**

14. ___ **Prepare required reports:**

___ El Dorado County HazMat Incident Report

___ ERA funding requests, if accessed

___ Responsible party billing

STATE OF CALIFORNIA
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

EMERGENCY RESERVE ACCOUNT FUNDING

Before requesting assistance from the Toxic Substances Control Program Emergency Reserve Account, determine the following:

1. ____ Is the material is a hazardous substance? (Y/N)

2. ____ Quantity released or spilled:

3. ____ Hazard characterization (the substance should be identified to show toxicity, demonstrate a pH greater than 12.5 or less than 2, be reactive, or flammable):

4. ____ Location of the incident relative to waterways, the public, and population:

5. ____ Is the property publicly or privately owned (areas under the control of Indian reservations, federal, or state agencies will not usually be eligible for funding)?

6. ____ Is a potential responsible party or alternative funding source available?

EVACUATION/SHELTER-IN-PLACE SELECTION CRITERIA

This checklist is intended as a guide for incident commanders and government officials in determining the appropriateness of evacuation and/or sheltering-in-place during a hazardous materials emergency.

The information contained in this checklist is from the National Institute for Chemical Studies, Protecting the Public in a Hazardous Material Emergency (Final Project Report) (Charleston, WV: University of Charleston, 1988), pp. 10-12. This information is used with the permission of the National Institute for Chemical Studies. Refer to Part II, Section V of this plan - "Evacuation and Shelter-in-Place Actions" - for additional information on evacuation and sheltering-in-place.

INITIAL ASSESSMENT

1. ____ Is this incident an actual or potential threat to public health and safety? If "Yes" or "Uncertain," continue to evaluate the incident using this checklist.

    ____ Yes.

    ____ No.

    ____ Uncertain.

REQUIRED INFORMATION

2. ____ The following is necessary to properly evaluate the appropriateness of evacuation and/or shelter-in-place actions:

    ____ Material(s) involved.

    ____ Population threatened.

    ____ Time factors involved.

    ____ Current and forecast weather conditions.

    ____ Ability to disseminate warnings and emergency public information.

    ____ Capabilities of emergency response organizations to contain, stabilize, and mitigate the emergency.

TECHNICAL ASSISTANCE

3. ____ Have technical experts (i.e., hazardous materials technicians/specialists, Environmental Health personnel, CHEMTREC, the manufacturer, facility representatives, etc.) been consulted and/or recommended actions?

    ____ Yes.

____ No.

FACTORS IMPORTANT TO THE DECISION

4. ____ Evaluate factors related to the hazardous material(s) involved, its (their) characteristics, quantity, condition, configuration, and location:

____ Physical characteristics:

____ State: ____ Solid ____ Dust ____ Liquid ____ Gas

____ Density: ____ High ____ Low

____ Vapor pressure: ____ High ____ Low

____ Water soluble? ____ Yes ____ No

____ Explosive or flammable? ____ Yes ____ No

____ Characteristics unknown.

____ Health characteristics:

____ Toxicity: ____ High ____ Low ____ Irritant

____ Type of hazard: ____ Inhalation ____ Ingestion ____ Dermal

____ Hazard is: ____ Immediate (acute) ____ Long-term (chronic)

____ Hazardous residue? ____ Yes ____ No

____ Toxic combustion product? ____ Yes ____ No

____ Unknown hazard.

____ Quantity: _____

____ Release factors:

____ Contained, but offers potential for release.

____ Uncontained: ____ Controlled ____ Uncontrolled

____ Type of release: ____ Continuous ____ Cloud ____ Pool

____ Vapor ____ Dust ____ Elevated ____ Ground-hugging

____ Vapor is: ____ Heated ____ Cool ____ Caused by fire

____ Location:

____ Accessible? ____ Yes ____ No

____ Distance to public: ____ ft/mi

____ Material relative to public: ____ Above ____ Below

____ Same level

____ Vapor enhancements or obstructions: _____

____ Nearby hazards? ____ Yes (_____) ____ No

5. ____ Evaluate factors related to the population at risk, and its capability and resources to implement the recommended protective action:

____ Population characteristics:

____ Type: ____ Residential ____ Institutional ____ Commercial

____ Industrial ____ Transient

____ Density: ____ High ____ Low ____ Mixed

____ People are: ____ Indoors ____ Outdoors ____ Near structures

____ Population groups: ____ Families ____ Groups ____

____ Individuals

____ Different languages spoken? ____ Yes (_____) ____ No

6. ____ Evaluate factors related to time and their effect on the selected protective action:

____ Time of incident:

____ Day of week/time of day: _____/_____

____ Season: ____ Holiday ____ Tourist

____ Rate of escalation or de-escalation of emergency:

____ Release: ____ Over ____ Occurring ____ Predicted

____ Release is unknown or unlikely.

____ Rate of release: ____ Rapid ____ Slow

____ Likely duration of release: ____ min/hr

____ Rate of movement of hazardous material:

____ Rate is: ____ Known ____ Predicted ____ Uncertain

____ Movement of material is: ____ Enhanced ____ Obstructed

____ Time until contact with populated area: ____ min/hr

____ Estimated time needed for protective action:

____ Deploy emergency response personnel: ____ min

____ Provide warning and emergency public information: ____ min

____ **EVACUATION**:

____ Likely public mobilization and travel time: ____ min/hr

____ Mobilization and travel time for special populations (handicapped, institutional, commercial, industrial, recreational): ____ min/hr

____ **IN-PLACE SHELTERING**:

____ Public response: ____ min/hr

____ Response time for special populations: ____ min/hr

____ Likely duration: ____ min/hr

____ Time required for environmental monitoring, termination, and building egress: ____ min/hr

7. ____ Evaluate the effect of present and forecast meteorological conditions on the control and movement of hazardous materials and feasibility of protective actions:

____ Impact on hazardous material(s) movement:

____ Wind direction: ____ (from N, E, etc.)

____ Wind speed: ____ mph

____ Wind gusty? ____ Yes ____ No

____ Rain? ____ Yes ____ No

____ Weather expected to change? ____ Yes ____ No

____ Impact on emergency response capability:

____ Roads: ____ Open ____ Blocked ____ Traffic delayed

____ Travel: ____ Safe ____ Dangerous

____ Difference between outdoor and indoor temperatures: ____ ^{o}

8. ____ Evaluate the capability to communicate with both the population at risk and emergency response personnel during and after the emergency:

____ Communication with the public:

____ Able to warn public, handicapped, institutions, transients, etc.?

____ Yes ____ No

____ Able to instruct public? ____ Yes ____ No

____ Able to update public and terminate response?

____ Yes ____ No

____ Communication with emergency responders:

____ Able to notify and deploy emergency responders?

____ Yes ____ No

____ Able to activate Emergency Broadcast System and/or contact media?

____ Yes ____ No

____ Total coverage of area? ____ Yes ____ No

____ Able to contact mutual aid? ____ Yes ____ No

9. ____ Evaluate the capabilities and resources of the response organizations to implement, control, monitor, and terminate the protective action(s):

____ Mobilize available or required specialized personnel and resources:

____ Able to mobilize existing or additional resources and personnel?

____ Yes ____ No

____ Able to obtain specialized resources or control equipment?

____ Yes ____ No

____ Control the hazardous materials:

____ Able to prevent, limit, contain, direct, and/or neutralize the release?

____ Yes ____ No

____ Control an evacuation:

____ Evacuation plan available? ____ Yes ____ No

____ Road capacity adequate? ____ Yes ____ No

____ Enough personnel and vehicles? ____ Yes ____ No

____ Able to move handicapped, institutionalized, transients?

____ Yes ____ No

____ Are reception and care facilities available for evacuees?

____ Yes ____ No

____ Control in-place sheltering:

____ Structures available? ____ Yes ____ No

____ Is public knowledgeable? Will public accept instructions?

____ Yes ____ No

____ Able to initiate and terminate? ____ Yes ____ No

____ Are institutions, commercial buildings, and industries prepared?

____ Yes ____ No

SELECT AND IMPLEMENT THE MOST EFFECTIVE PROTECTIVE ACTION(S)

10. ____ Review the items marked on this checklist, noting the factors involved in this emergency (some factors are more important than others). Determine if evacuation, sheltering-in-place, or a combination of the two are appropriate.

____ Evacuation ____ Shelter-in-Place ____ Both

11. ____ Implement evacuation and/or in-place sheltering actions.

12. ____ Terminate evacuation and/or in-place sheltering actions, when appropriate.

DTSC Policy for Removal of Hazardous Materials from Off-Highway Emergency Response Incidents

EMERGENCY REMOVAL ACTIONS:

Health and Safety Code, Section 25354 provides funding for the purpose of taking immediate corrective action necessary to remedy or prevent an emergency resulting from a fire, explosion, or human exposure to a release or threatened release of hazardous substances. This includes responding to "midnight dumping," uncontrolled or threatened releases of hazardous substances, spill situations involving an unknown responsible party, or an incident requiring stabilization or mitigation to prevent potential emergencies. **Requests for assistance can be accessed by contacting the DTSC Emergency Response Duty Officer.**

Note: Pursuant to H&S Code Section 25353, DTSC will not perform emergency removal actions for incidents which a State or Federal governmental agency is the responsible party or otherwise has jurisdictional responsibility, unless special circumstances exist, such as an immediate danger of fire or explosion or significant threat to the environment.

TO REQUEST DTSC EMERGENCY REMOVAL ASSISTANCE:

DTSC assistance for off-highway removal and disposal of hazardous materials may be requested by local agencies such as local health, environmental health, fire, or law enforcement agencies. A business, or a private citizen concerned about hazardous materials, an emergency hazardous materials incident, or some abandoned hazardous materials, or if you have some similar concern about hazardous materials, should contact one of the above-mentioned local government agencies.

A local government agency wanting to request DTSC assistance during normal work hours (Monday-Friday, 8:00 AM-5:00 PM), should call the State Department of Toxic Substances Control (DTSC) at (800) 260-3972 or (916) 255-6504, and request to speak to the **DTSC Emergency Response Duty Officer**. Between 5:00 PM and 8:00 AM, weekends, or on holidays, call the Governor's Office of Emergency Services' (OES) Warning Control Center at (800) 852-7550. Notify OES of the incident and of the fact that you are requesting DTSC assistance for the emergency removal. They will contact the DTSC Emergency Response Duty Officer who will then contact you.

INFORMATION REQUIRED

Before requesting assistance, you should:

1) Determine if the material is a hazardous waste or hazardous substance.
2) Determine whether any containers are leaking, and the quantity released, if any.
3) Determine the quantity released, if any.
4) HAZCAT (perform hazard categorization tests) to identify or categorize the hazards presented by the substances. **To qualify for state funding, the substance must exhibit at least one of the following characteristics or criteria:**
   - **Toxicity**
   - **Corrosivity (A pH of 12.5 or higher, or a pH of 2.0 or less)**
   - **Reactivity to air or water**
   - **Flammability**
   - **Explosivity**
   - **Have some other characteristic that makes it a serious hazard to human health or**
   - **the environment.**

5) Prepare an inventory of materials requiring removal, including approximate quantity, chemical name or type (hazard class), number and size and condition of containers and the approximate quantity or surface area of contaminated soil, if any.

6) Determine the location of the incident relative to waterways, public access, and nearest population.

7) Determine whether the property is publicly or privately owned (areas under the control of Indian reservations or federal or state agencies may not be eligible for funding).

8) Gather any available information regarding the **responsible party (RP).**

9) Determine whether the RP (if known) is able or willing to pay.
   Note: An attempt must be made to contact the RP (if known) and inform them of their responsibility to pay.

10) Determine whether the incident would be more appropriately handled and/or funded by another agency (See the Section entitled “Alternative Funding” below). If you are unsure or have questions about alternative funding sources contact the Emergency Response Duty Officer.

THE EMERGENCY RESPONSE DUTY OFFICER

The DTSC Emergency Response Duty Officer (Emergency Response Duty Officer) will evaluate the above information to determine if the incident is eligible for an emergency removal action. If the incident qualifies for DTSC assistance:

1) The Emergency Response Duty Officer will contact and dispatch a contractor to perform the removal and disposal. **This is not a reimbursement program.** Do not contact a local contractor and dispatch them on your own. **If you do contact a contractor and request their services, your agency will be responsible for any costs incurred.**

2) The Emergency Response Duty Officer will establish the scope of work for the contractor. Any changes to the scope of work must be approved by the Emergency Response Duty Officer. **DTSC will not pay for work that was not authorized by the Emergency Response Duty Officer.**

3) The Emergency Response Duty Officer will provide you with an Emergency Response Expenditure Report (ERER) number, which must be on all documentation submitted to DTSC.

4) DTSC will not conduct removals in situations that are not emergencies. The Emergency Response Duty Officer will only provide removal and disposal of those hazardous materials which meet one or more of the above criteria specified in this policy document, and pose a serious threat to human health or the environment. If it is not an emergency, or does not pose serious threat to human health or the environment, the incident will not qualify for DTSC assistance. If you are unsure whether a situation warrants a removal action, contact the Emergency Response Duty Officer and provide the required information. The Emergency Response Duty Officer will determine whether an emergency removal action is warranted or not.

5) If the incident exceeds the resources available from DTSC, the Emergency Response Duty Officer will contact the U.S. Environmental Protection Agency (USEPA) and request assistance.

6) If technical assistance is needed from DTSC, the Emergency Response Duty Officer will contact the appropriate staff and coordinate their involvement into the response. The DTSC Emergency Response Program will not perform site mitigation or remediation activities. If your agency requires assistance in performing a remedial action at a hazardous waste site, the Emergency Response Duty Officer will assist in referring the request to the appropriate DTSC office.

The on-scene response personnel must attempt to identify the wastes involved by field testing (HAZCAT) or observation. If your agency cannot accomplish this task, the Emergency Response Duty Officer may send a contractor to perform that task, but will not be able to provide removal if the materials do not exhibit one or more of the HAZCAT characteristics specified in number 3 under "Information Required" above.

DOCUMENTATION

As a condition of receiving assistance from DTSC, the requesting agency is required to provide on-scene oversight, including documentation of removal actions. This includes filling out and signing the Off-Highway Emergency Removal Incident Report, and the Off-Highway Emergency Removal Work Log. The requesting agency must also sign the Hazardous Waste Manifest on the "Generator" line (Line 16).

The Off-Highway Emergency Removal Incident Report, Emergency Removal Work Log, and any other documentation should be mailed to DTSC <u>within 10 working days</u> of the initial request for DTSC assistance. All such information should be mailed to:

DTSC, Emergency Response Unit
8800 Cal Center Drive
Sacramento, CA 95812

For incidents not involving drug lab waste, the requesting agency is the Generator. In addition to signing on line 16 of the Manifest, the requesting agency's name and mailing address should be written or typed on line 3 of the Manifest. DTSC is <u>not</u> the Generator for these incidents, and so DTSC should <u>not</u> appear there. The requesting agency's main office [phone number should go on line 4 of the Manifest.

SPECIAL POLICIES

ALTERNATIVE ASSISTANCE

- If there has been a release to fish or wildlife habitat, call State OES at (800) 852-7550 and request assistance from the Department of Fish and Game, Fish and Wildlife Pollution Account.

- If the incident is an oil spill, request assistance from the Department of Fish and Game Office of Oil Spill Prevention and Response, Oil Spill Response Trust Fund by calling (916) 445-0045.

- If there has been a release to surface or ground water, request assistance from the State Water Resources Control Board (SWRCB), Water Pollution Cleanup and Abatement Account by calling OES at (800) 852-7550 and request that they contact someone at the SWRCB.

- If the incident is on a State highway or within a State highway right-of-way, call OES at (800) 852-7550 and request assistance from the California Department of Transportation (CALTRANS).

- If the incident involves radioactive materials, call OES at (800) 852-7550 and request that OES call the State Department of Health Services (DHS) Duty Officer who will then contact the DHS Radiologic Health Branch.

EPA IDENTIFICATION NUMBERS

The agency requesting DTSC assistance for an emergency removal of hazardous wastes must include an EPA Identification (EPA ID) number on the manifest. Normally, the requesting agency will use the County's EPA ID number, which has the format: CAS 111 111 0XX, where XX is the County Number, between 1 and 58. The Emergency Response Duty Officer can provide this number to on-scene personnel, if needed.

If the responsible party is conducting the removal but needs an EPA ID number to manifest Non-RCRA waste, they may obtain a California EPA ID number by calling DTSC at (800) 618-6942 or (916) 255-1136 Monday - Friday 8:00 AM to 5:00 PM. From 5:00 PM to 8:00 AM or on weekends or holidays etc., they can obtain a Temporary California EPA Number from the DTSC Emergency Response Duty Officer.

If the responsible party needs an EPA ID number for RCRA waste, or a combination of RCRA waste and Non-RCRA waste, they should call (800) 300-2193. Upon calling that number, the caller will hear a message which will direct them to press #1 to contact the National Response Center (NRC) if they have not yet reported the spill. If they have already made the spill notification, they should press #3 to contact the USEPA Region 9 Duty Officer who will provide the caller with an EPA ID Number for the RCRA waste.

INNOCENT LANDOWNERS

In instances where hazardous materials have been abandoned on property where the owner is clearly not the perpetrator and the materials do not have an identifiable owner, DTSC assistance may be requested from the Emergency Response Duty Officer.

GUARANTEE OF PAYMENT

If the responsible party (RP) wants or is willing to pay for the emergency removal, the RP may contact the HazMat contractor of their choice to make arrangements. However, many contractors are unwilling to perform cleanup/removal actions for private RPs without some proof of their ability to pay. In the middle of the night or on weekends, it is often not possible for RPs to provide that sort of proof. In such situations involving RPs that **are** willing to pay, the Duty Officer may guarantee payment so that the contractor will be paid if the RP fails to pay the invoice. **The Duty Officer will only do this if the RP agrees to use one of the DTSC contractors.**

EXCLUDED MATERIALS

The emergency removal of the following materials involved in incidents will not be funded unless special circumstances exist which are determined by the DTSC Emergency Duty Officer to represent a significant threat to human health or the environment (e.g., the presence of PCB's unless confirmed by laboratory analysis):

- Waste oil (the mere presence of chlorine is not enough to demonstrate the presence of PCBs)
- Petroleum fuels (diesel, gasoline, crude oil, or any fraction thereof)
- Fuel tank spills from vehicular accidents
- Radioactive waste
- Infectious waste
- Latex paint
- Household hazardous waste/materials

RADIOACTIVE WASTE

DTSC does not handle radioactive materials. Radioactive wastes are handled by the State Department of Health Services Radiologic Health Branch. They should be contacted for assistance on an incident involving radioactive materials. They can be contacted Monday - Friday from 8AM - 5PM at (916) 445-0931 and after hours through OES.

INFECTIOUS WASTE

DTSC will not provide removal of infectious waste.

CYLINDERS

In situations where it is necessary to move cylinders to a nearby safe location for emergency treatment (venting, sparging, neutralization, etc), the DTSC contractor will only do so when escorted by representatives of a law enforcement agency. The DTSC contractor must transport cylinder in a manner that will ensure that all workers involved with the transport are not exposed to health and/or safety hazards enroute.

GOVERNMENT LAND

Indian reservations and properties owned by the Federal Government or by the State of California may not be eligible for emergency removal actions (H&S Code Section 25353). . The specific agency in control of the property will bear responsibility for the removal unless a clear emergency exists which the responsible agency is unable to address in a proper and timely manner. In remote areas or other instances where ownership is uncertain, the Emergency Response Duty Officer may authorize a removal if a delay to verify ownership would create an endangerment.

ON-HIGHWAY SPILLS

Releases on State highways, or within State highway right-of-ways, will be handled by the CALTRANS. Reports of such releases should be addressed to OES, who will in turn notify CALTRANS.

Revised: 8-25-05

OFF-HIGHWAY EMERGENCY REMOVAL INCIDENT REPORT

DTSC Duty Officer: _____ ERER # _____

Date of Incident: _____ Time: _____

Address: _____ Zip: _____

Descriptive Location: _____

_____

HAZARDOUS MATERIALS (ATTACH ADDITIONAL SHEETS, IF NECESSARY)

SUBSTANCE	QUANTITY	HAZCAT RESULTS

RESPONSIBLE PARTY (NAME, DRIVER'S LICENSE NUMBER, DATE OF BIRTH, VEHICLE REGISTRATION NUMBER , ADDRESS, PHONE) :

_____

_____

_____

DESCRIPTION OF MITIGATION MEASURES (ISOLATION, EVACUATION, CROWD CONTROL): _____

_____

_____

_____

_____

_____

_____

REPORT BY : _____ TITLE: _____

OFFICE PHONE: _____ AGENCY: _____

I CERTIFY THAT THIS INCIDENT REQUIRED IMMEDIATE CORRECTIVE ACTION NECESSARY TO REMEDY OR PREVENT AN EMERGENCY RESULTING FROM EITHER A FIRE, AN EXPLOSION, OR HUMAN EXPOSURE TO HAZARDOUS SUBSTANCES:

OFF-HIGHWAY EMERGENCY REMOVAL WORK LOG

Date(s) of Removal: _____ ERER # _____

Location of Removal: _____

Contractor: _____ Phone: _____

Contractor's Representative: _____

Time of Contractor Arrival: _____ Time of Equipment Arrival: _____

Description of Extent of Contamination: _____

Soil: _____

Water: _____

Structure: _____

Description of Removal Activities: _____

_____

EQUIPMENT USED

DECRIPTION	TIME ARRIVE	TIME DEPART

LABOR USED

JOB CLASSIFICATION	TIME ARRIVE	TIME DEPART

MATERIALS USED

DESCRIPTION	NUMBER OF UNITS

MATERIALS USED

DESCRIPTION	NUMBER OF UNITS

(USE ADDITIONAL SHEETS FOR THE ABOVE INFORMATION IF NEEDED)

QUANTITY OF HAZARDOUS MATERIALS REMOVED (IDENTIFICATION PROCEDURES, LAB RESULTS IF AVAILABLE): _____

_____

_____

REGISTERED HAULER USED: _____ HAULER NUMBER: _____

MATERIAL TRANSPORTED TO: _ MANIFEST NUMBER:

_____

TIME AND DATE JOB WAS COMPLETED: _____

REPORT BY: ____ AGENCY: _____

DTSC Policy for Removal of Hazardous Materials from Illegal Drug Labs

ILLEGAL DRUG LABORATORY REMOVAL PROGRAM

In 1995 Senate Bill 47x amended California Health & Safety Code Section 25354 to require the California Department of Toxic Substances Control (DTSC) to remove and dispose of hazardous materials from illegal drug manufacturing sites. DTSC provides State or local law enforcement agencies with assistance in removal actions at sites where these operations occur. **This is accomplished by contacting the DTSC Emergency Response Duty Officer.**

TO REQUEST DTSC ASSISTANCE

DTSC assistance for removal of suspected hazardous substances from clandestine drug labs may be requested by state or local law enforcement agencies, or by other local government agencies working with law enforcement agencies on a drug lab, or abandoned drug lab wastes.

Such an agency wanting to request DTSC assistance during normal work hours (Monday-Friday, 8:00 AM to 5:00 PM), should call the State Department of Toxic Substances Control (DTSC) at (800) 260-3972 or (916) 255-6504, and request to speak to the DTSC Emergency Response Duty Officer. Between 5:00 PM and 8:00 AM, weekends, or on holidays, call the Governor's Office of Emergency Services' (OES) Warning Control Center at (800) 852-7550. Notify OES of the incident and of the fact that you are requesting DTSC assistance for the removal. OES will contact the DTSC Emergency Response Duty Officer who will then contact you.

INFORMATION REQUIRED

Before requesting assistance, you should:

Before requesting assistance, you should:

1) Identify the materials to be removed, and separate them from materials to be left behind. Materials eligible for removal include:
   - Precursors and chemical used in the manufacture of illegal drugs.
   - Associated hazardous materials and/or hazardous wastes that pose a threat to human health or the environment.

<u>Note</u>: The hazardous waste contractor sent by the DTSC Duty Officer will only perform those actions and remove those material authorized by the DTSC Duty Officer. Do not expect them to take any other actions or to remove

anything else unless you are willing to pay for it. Do not ask or expect the Duty Officer or the contractor to remove solid waste (trash, garbage, etc.)

.

2) Determine the approximate quantity released, if any.

3) If you have the necessary training and equipment, HAZCAT (perform hazard categorization tests) to identify or categorize the hazards presented by the substances, such as pH and flammability.

4) Prepare an inventory, which included the quantity of each type of material requiring removal, and the approximate quantity of contaminated soil, if any.

5) Gather all available information regarding the responsible party (RP), i.e., the drug lab operator.

THE DTSC EMERGENCY RESPONSE DUTY OFFICER

The DTSC Emergency Response Duty Officer (Emergency Response Duty Officer) will evaluate the above information to determine if the incident is eligible for a removal action.

1) The Emergency Response Duty Officer will contact and dispatch a contractor to perform the removal and disposal. **This is not a reimbursement program.** Do not contact a local contractor and dispatch them on your own. **If you do contact a contractor and request their services, your agency will be responsible for any costs incurred.**

2) The Emergency Response Duty Officer will establish the scope of work for the contractor. Any changes to the scope of work must be approved by the Emergency Response Duty Officer. **DTSC will not pay for work that was not authorized by the Emergency Response Duty Officer.**

3) The Emergency Response Duty Officer will provide you with a Clandestine Laboratory Unit Expenditure (CLUE) number, which must appear on all documentation submitted to DTSC.

DOCUMENTATION

As a condition of receiving DTSC assistance, the requesting agency is required to provide on-scene oversight, site security by law enforcement personnel and written documentation of removal actions. This includes filling out and signing the Clan Lab Removal Incident Report, and the Clan Lab Removal Work Log. The requesting agency must also sign the Hazardous Waste Manifest on the “Generator” line (line16).

The Clan Lab Removal Incident Report, Clan Lab Removal Work Log, and any other documentation should be mailed to DTSC <u>within 10 working days</u> of the initial funding request. All such information should be mailed to:

DTSC, Emergency Response Unit
8800 Cal Center Drive
Sacramento, CA 95812

For drug labs where the name of the drug lab operator is known, the primary suspect or drug lab operator (who has usually been arrested) will be designated as the generator, and that person's name should be written or typed on line 3 on the Manifest. The mailing address for the person should be entered on line 3 as: c/o DTSC Emergency Response Unit, 8800 Cal Center Derive, Sacramento, CA 95826. For abandoned drug lab wastes or when the operator is not known, the generator's name will be Unknown drug lab operator, and the mailing address will also be: c/o DTSC Emergency Response Unit, 8800 Ca Center Derive, Sacramento, CA 95826.The phone number for line 4 of the Manifest should be: (800) 260-3972.

SPECIAL POLICIES

EPA IDENTIFICATION NUMBERS

The agency requesting assistance for removal of drug wastes must include an EPA Identification (EPA ID) number on the manifest. Normally, the requesting agency will use the county Clandestine Drug Lab EPA ID number, which has the format: CAS 111 111 0XX, where XX is the County Number, between 1 and 58. The Emergency Response Duty Officer can provide this number to on-scene personnel, if needed. . If the responsible party is conducting a removal and needs an EPA ID number to manifest the waste, they may obtain a one-time EPA ID number by calling DTSC at (800) 618-6942 or (916) 255-1136 Monday – Friday, 8AM - 5PM, or by calling US-EPA after hours at (415) 744-2000.

If the responsible party is conducting a removal but needs an EPA ID number to manifest Non-RCRA waste, they may obtain a California EPA ID number by calling DTSC at (800) 618-6942 or (916) 255-1136 Monday - Friday 8:00 AM to 5:00 PM. From 5:00 PM to 8:00 AM or on weekends or holidays etc., they can obtain a Temporary California EPA Number from the DTSC Emergency Response Duty Officer.

If the responsible party needs an EPA ID number for RCRA waste, or a combination of RCRA waste and Non-RCRA waste, they should call (800) 300-2193. Upon calling that number, the caller will hear a message which will direct them to press #1 to contact the National Response Center (NRC) if they have not yet reported the spill. If they have already made the spill notification, they should press #3 to contact the USEPA Region 9 Duty Officer who will provide the caller with an EPA ID Number for the RCRA waste.

EXCLUDED MATERIALS

The following materials at, or associated with a drug lab will not be removed unless special circumstances exist which are determined by the DTSC Emergency Response Duty Officer to represent a significant threat to human health or the environment:

- Used motor oil (waste oil).
- Gasoline in a regular gasoline container.
- Diesel fuel.
- Radioactive waste.
- Infectious waste, except that needles and syringes found at drug labs will be removed
- Household size hazardous materials a person may legally possess.
- Freon containers or flammable liquid containers which are empty and dry, unless there is some residue/contamination on them which constitutes a direct contact hazard.
- Propane cylinders that are empty or contain propane.
- Oxygen cylinders that are empty or contain oxygen

RADIOACTIVE WASTE

DTSC does not handle radioactive materials. Radioactive wastes are handled by the State Department of Health Services Radiologic Health Branch. They should be contacted for assistance on an incident involving radioactive materials. They can be contacted Monday - Friday from 8AM - 5PM at (916) 445-0931 and after hours through OES.

INFECTIOUS WASTE

DTSC will not provide removal of infectious wastes, except that, at drug labs, and at abandoned drug lab waste sites, removal and disposal of needles and syringes will be provided.

INDIAN LAND

Incidents involving drug labs or abandoned drug lab wastes located on Indian reservation land may not be eligible for DTSC funding and will be handled on a case by case basis.

Revised 8-25-2005

CLAN LAB REMOVAL WORK LOG

Date(s) of Removal: _____ CLUE # _____

Location of Removal: _____

Contractor: _____ Phone: _____

Contractor's Representative: _____

Description of Clandestine Laboratory (Type of Process): _____

Description of Removal Activities: _____

_____

_____

_____

EQUIPMENT USED

DESCRIPTION	TIME ARRIVE	TIME DEPART

LABOR USED

JOB CLASSIFICATION	TIME ARRIVE	TIME DEPART

MATERIALS USED

DESCRIPTION	NUMBER OF UNITS

MATERIALS USED

DESCRIPTION	NUMBER OF UNITS

(USE ADDITIONAL SHEETS FOR THE ABOVE INFORMATION IF NEEDED)

COMMENTS ON CONTRACTOR'S PERFORMANCE: _____

_____

_____

REGISTERED HAULER USED: _____ HAULER NUMBER: _____

MATERIAL TRANSPORTED TO: _____ MANIFEST NUMBER: _____

TIME AND DATE JOB WAS COMLETED:REPORT BY: _____AGENCY: _____ _____

CLAN LAB REMOVAL INCIDENT REPORT

DTSC Duty Officer: _____ CLUE# _____

Date of Incident: _____ Time: _____

Address: _____ Zip: _____

Descriptive Location: _____

_____

HAZARDOUS MATERIALS (ATTACH ADDITIONAL SHEETS, IF NECESSARY)

SUBSTANCE	QUANTITY	HAZCAT RESULTS

CLAN LAB OPERATOR (NAME, DRIVER'S LICENSE NUMBER, DATE OF BIRTH, VEHICLE REGISTRATION NUMBER, ADDRESS, PHONE):

_____

_____

PROPERTY OWNER (NAME, DRIVER'S LICENSE #, DATE OF BIRTH, CAR REGISTRATION NUMBER, ADDRESS, APN, PHONE, ETC.):

_____

_____

_____

US-EPA ID NUMBER (ISSUED FOR CLAN LAB): _____

Warrant Issued: YES _____ or NO _____

Law Enforcement Agency Case Number:

Warrant Number (if available):

REPORT BY (PRINT) : _____ TITLE: _____

OFFICE PHONE: _____ SIGNATURE: _____

AGENCY: _____ TASK FORCE: _____

Reference: Attachment 8 – State Hazardous Materials Incident Contingency Plan

Information Officer

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

ardous Materials DO NOT Cross / Hazardous Materials DO NOT Cross / Hazardous Materials DO NOT Cross / Hazardous Materials DO NOT Cross / Hazardous Materials DO NOT Cross / Hazardous Materia

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, "uIpon 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.

ardous Materials DO NOT Cross / Hazardous Materials DO NOT Cross / Hazardous Materials DO NOT Cross / Hazardous Materials DO NOT Cross / Hazardous Materials DO NOT Cr

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.

Sample News Releases

- 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 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 _____.

El Dorado County Equipment Inventory List

1. El Dorado County Environmental Management Department – Building C
    a. Downstairs
    b. HazMat Ford Expedition
    c. Lab
    d. Office Upstairs
    e. Shed
    f. Union Mine Storage Facility
    g. HazMat F250
2. South Lake Tahoe Vector Control
    a. Trailer
    b. Storage Shed
    c. HazMat Van

INVENTORY
Environmental Management Department - Building C - Downstairs
01/08/2008

Amount	Description
4	Level “A” Haz-mat Suits
3	Level “A” Training Only Suits
3	Level “A” One Suits
2	Level “B” Haz-mat Suits XL
1	Level “B” Haz-mat Suits L
25	Tyvek Suits 4X
100	Tyvek Suits 3X
75	Tyvek Suits 2X
75	Tyvek Suits XL
125	Tyvek Suits L
100	Tyvek Suits S
11	Face Shields
24	Safety Glasses
30 Pair	Nitrile Gloves “Green” 8-8.5
72 Pair	Nitrile Gloves “Blue/Green” 8-8.5, Large
60 Pair	Nitrile Gloves “Blue/Green” 7-7.5, Medium
4 Pair	Heavy Duty Black Gloves
48 Pair	Nitrile Gloves “Green” 7
24 Pair	Nitrile Gloves “Blue/Green” 9-9.5, X-Large
108 Pair	Nitrile Gloves “Green” 10
108 Pair	Nitrile Gloves “Green” 11
16 Boxes	Blue Nitrile “Inner” Gloves
100 Pair	Cotton Glove Liners
6 Rolls	Duct Tape
4	55-Gallon Plastic Drum Pumps
24	Survive Air MC-Multi Contaminate Respirator Cartridge
24	Coliwasa Tubes
1	Ice Chest for Samples
80	4oz Sampling Containers “Plastic” with lids
24	4oz Sampling Containers “Glass” Tall
14	4oz Sampling Containers “Glass”, HCl Preserved
120	16oz Tall, Plastic Containers “no lids”
20	4oz Sampling Containers “Glass/Green Lid”
36	8oz Sampling Containers “Glass/Green Lid” QC Clear Glass Tall Wide
24	16oz Sample Jars, Kept-Clean
24	16oz Sample Jars, Kept-Clean
5	Storm Water “Brown Glass”, HCl Preserved
2	Storm Water “Plastic” NaOH Preserved
20	Storm Water “Plastic As, Fe Test” HNO3 Preserved
1	Storm Water “Plastic Ca, Mg, K, Na Test” HNO3 Preserved
1	Storm Water “Plastic Metals Test” HNO3 Preserved
1	Storm Water “Plastic Sulfide Test” BnAc/NaOH Preserved

2	Storm Water “Plastic” H2SO4 Preserved
7	Storm Water “Glass/Brown O+G Test” HCl Preserved
7	Storm Water “Glass/Brown 5520 B Test” HCl Preserved
15	Storm Water “Plastic Fe Test” HNO3 preserved
12	Storm Water “Plastic Ph, TSS, Ec Test”
12	Storm Water “1oz Glass, TOC Test” H2SO4 Preserved
24	16oz Plastic Sampling Containers
11	10oz Plastic Sampling Containers
24	32oz Plastic Sampling Containers
500	Poly Bags Zip Lock 8X10
400	Poly Bags Zip Lock 5X8
800	Poly Bags 12X16
1000	Poly Bags Zip Lock 12X12
50	Sampling Spoons 1 Teaspoon
1 ½ Boxes	Sampling Spatulas
17 Cases	Petroleum Absorbent Pads 15X19
17 Cases	Booms 3”X8’
20	Booms 5”X10’
2 Boxes	Breg Snake Booms
12 Rolls	Polyethylene Sheeting 20’X100’
6	Magnetic Storm Drain Covers
3 Containers	Mercury Absorb
2	Mercury Spill Clean Up Kit
1	Caustic Neutralizer “5 gallon”
1	Acid Neutralizer “5 gallon”
1	Caustic Neutralizer Spill Kit
1	Horizontal Drum Cart
1	Drum Dolly (Lower Parking Lot)
1	Emergency Roadside Kit For Flatbed
3	Cylinder Brackets For Flatbed
100’	Rope
5 Can	Spray Adhesive
2 Rolls	Yellow Caution Tape
1	Wrench “1in.”
1	White Paint Stick Markers
1	Black Spray Paint “High Heat”
30	Red Paint Stick Markers
4 Cases	Base-Kote Epoxy For HHW Facilities
18 Gallons	Skid-Resistant Floor Covering For HHW Facilities
2	9 Foot Green Umbrellas
3	Level Floats For Convault Oil Tanks
Various	Oil Center Signs
13	Closed Signs, Rubber Maid For Tire Events
18 Pair	Gloves For Tire Events
1 Box	Rain Suites For Tire Events
1	Davis Weather Monitor II
25	BioCheck Powder Screening Kits
25	Ricin Bio Detect Kits

25	Botulinum Toxin Detect Kits
25	Anthrax Detect Kits
1 Case	18 GammaRAE II Personal Radiation Monitors

INVENTORY
Environmental Management Department - Building C - Expedition

01/19/2008

Amount	Description
1	Tow Hitch, 2 5/16", 6,000 Lbs.
1	Tow Hitch, 2 5/16", 10,000 Lbs.
1	Tow Hitch, 2 5/16", 10,000 Lbs. Drop Hitch
1	Tow Hitch, 2", 6,000 Lbs.
33	1oz. Sample Jars
17	4oz. Sample Jars
48	8oz. Sample Jars
24	9oz. Sample Jars
1	Push Broom
1	3 Lbs. ABC Dry Chemical Fire Extinguisher
1	5' Extension Cord With Three Multi Outlets
1	First Aid Kit
1	Steel Round Nose Shovel
1	Steel Flat Nose Shovel
Sewage Spill Kit	3 Stakes, Signs, Staple Gun, Mini Maul, Hot Zone Tape, Warm Zone Tape
1	45 Gallon Spill Basin
1	66 Gallon Enpac Prowler Pool
1	1 Case Drager Tube Pump, 1 Case Drager Tubes
Box #6	Mixed Fluids Spill Kit, 40 Yellow Bags, 50 Spill Pads, 4- 5Gallon Hand Transfer Pumps, 6 Pair XXL Nitrile Gloves, 3-2"X4' Booms, 50 Drained Used Oil Filter Labels
Box #7	Roll Plastic Bags, 2 Containers Gap Seal, Staples, Strike-A-Fire, Master Mend Epoxy, Little Bags of Vermiculate, Pair Gloves, 2 Spray Bottles, 2 Large Eyewash Solutions, 4 Speed Patch, 5 Safety Glasses, Portable Mercury Cleanup Kit, 3 Small Eyewash Solutions, 9 Tubes Repair Putty, 3 Rolls Paper Towels, 2 Towels, 1 Staple Gun, 12 Spill Pads, 1 Small Folding Shovel, Utility Knife, 2 Non-Sparking Drum Wrenches, 7 Tyvek Suits, Stapler
Yellow Bag	4 Full Face Respirators, 1 Half Face Respirator
Clear Bag	14 Organic Vapor Cartridges
Clear Bag	4 Ammonia Cartridges
Box #2	6 Red Bio-Hazard Bags, 24 8oz Glass Jars, 24-4oz Glass Jars, 12 16oz Glass Jars, 5-1000ml Plastic Containers, 1 Roll Paper Towels, 25 Small Pipettes, 15 Large Pipettes.
Box #5	1 Roll Evidence Tape, 5 16oz Glass Jars, 3 16oz Plastic Jars, 9 8oz Plastic Jars, 24 4oz Glass Jars, 4 16oz Plastic Jars, 7 Black Sharpies, 9 Blue Sharpies, 300 Index Cards, 21 Blue Funnels, 17 Spatulas, 27 Spoons, 100 1-Gallon Zip Lock Bags, 20 Small Pipettes

Box #1	1 Hazcat Kit, 1 Chemical Agent Detector Kit (out of date), 1 Propane Bottle, 2 Boxes Matches, 1 Manual Light Propane Torch, 10- Size 10 Green Nitrile Gloves
4	Stakes
2 Yellow Cases	3 Coliwasa Tubes
Box	Forms-Hazmat, Sewage Spills, CUPA, Sampling, etc.
Box	Field ID Guides
3	20 lbs. Oil-Dri Quick Sorb

INVENTORY
Environmental Management Department - Building C - Lab

01/07/2008

Amount	Description
1	Haz-Cat Kit
1 Box	Assortment Of Extra Chemicals
9	PCP/Methaqualone Test Pouches
140	Methamphetamine/MDMA Test Pouches
130	Ephedrine Test Pouches
1	Propane Bottle Torch
Various	Haz-Cat & Chemical Handbooks
1	Carbon Monoxide Calibration Kit (no cal bottles)
1	Calibration Kit For TLV Sniffer (no cal bottles)
1	Gas Tech Calibration Kit (no cal bottles)
1	50% Methane Calibration Test Kit (no cal bottles)
1	AIM Calibration Test Kit (no cal bottles)
1	40% LEL Hexane Calibration Kit (no cal bottles)
1 Box	Assortment Of Calibration Equipment
1 Cylinder	AIM Cal Gas H2S/N2 (Expired Feb 2006)
1 Cylinder	AIM Cal Gas CL2/N2 (Expired Sept 2005)
1 Cylinder	AIM Cal Gas H2S/CO/Petane/O2 (Expired Jan 2006)
1 Cylinder	Multi-RAE Cal Gas H2S/CO/CH4/O2/N2 (Expired Sept 2005)
1 Cylinder	Multi-RAE Cal Gas Cl2/N2 (Expired Aug 2005)
1 Cylinder	Multi-RAE Cal Gas Isobutylene (Expired Oct 2007)
1 Cylinder	Oxygen Bottle (7.0 CuFt)
1	Detergent Test Kit
1 Box	Extra Supplies For Detergent Test Kit
1	Gas Tech O2 Sensor
1 Box	Anti-Microbial Respirator Wipes
1	Eye Wash Solution “32 oz.”
1	Empty Spray Bottle
3	Spray Bottle, Gear II Disinfectant 24 oz.
70	Stirring Rods
40	Transfer Pipets, Large
800	Transfer Pipets, Small
150	One Gallon Zip-Lock Storage Bags

50 Pair	Disposable Vinyl Gloves, XL
1 Box	Clean Equipment Bags And Tags
1/2 Box	Sterile Cotton Balls
200	Cotton Tipped Applicators
100	Sample Spatulas
2 Bottles	Potassium Permanganate
1 Gallon	Hydrochloric Acid
1 Jug	Muriatic Acid
500 Ml	Chloroform
1 Bottle	Phosphoric Acid – ACS Reagent
5 Lbs.	Sodium Hydroxide
1 Gallon	Bleach 5.5%
1	5 Gallon Gas Can For Jeff
1	Dish Rack
Various	Assortment Of Glass Ware
1 Drawer	Small Tools For Calibration And Sampling
2 Pair	Safety Goggles
2 Drawers	Assortment Of Sampling Equipment
35	Serological Pipets, In Drawer (far left)
20	Blue Nitrile Gloves
1	Nickel Cadmium Battery Charger
1	Power Sentry Surge Protector
3 Boxes	13X100 MM Culture Tubes
4 Boxes	16X125MM Culture Tubes
3	Plastic Sample Bottles, “Clear”
9	Glass Sample Bottles, “Brown”
1	2 oz. Sample Bottles, “Glass”
1	Triple Balance Scale
100	4oz. Plastic Sample Containers
1 Box	“Red” Hazardous Materials Do Not Cross Tape
1	Laboratory Hood
1	Chair
3	Small Garbage Containers
1	Soap Dispenser
6	Viomax Antiseptic Handwash
10 Boxes	Surveillance Equipment
30	2747 Particulate Respirators with Exhalation Valve
20	1730 Particulate Respirators
Various	Extra Drager Tubes “Replacements For Expedition” (Expired 2006)
10	Pepper Spray Decon Wipes For Eyes
1	Lead Detector
10	Bio-Check Powder Screening Kits (Expired January 2006)

INVENTORY

Environmental Management Department - Building C – Office Upstairs

09/19/2009

Amount	Description
4	Motorola, MT 2000 Radios
4	Motorola, MT 2000 Radio Chargers
2	Multi-RAE Detectors
1	AIM Multi Detector (Non-op)
1	TIF Combustible Gas Detector
1	Lakeland Level “A” Suit Leak Tester
1	Trelleborg Level “A” Suit Leak Tester
1	Sony Handicam
1	Travel IR HCI
1	Guardian BioThreat Detector
1	Photovac Micro FID
3	Ludium 2241 Radiation Detectors
1	Panasonic Toughbook
1	Draeger Tube Kit
2	BW Gas Alert Micro 5 PID
1	Hazcat Radiological, Biological, Chemical Weapon Field ID Kit
1	Sound Level Meter
1	Nova Lynx WS-18 Portable Weather Station
1	MIRAN 205B SapphiRe Portable Ambient Air Analyzer

INVENTORY
Environmental Management Department - Building C - Shed

01/15/2008

Amount	Description
8 Rolls	Duct Tape
200	Disposable Vinyl Gloves “XL”
1	Tyvek Suits 4X
2	Tyvek Suits 3X
75	Tyvek Suits 2X
1 Box	Boot Covers Tyvek
2	Level B, Haz-mat Suits
1	Survivair Full Face Respirator “Medium”
2	Survivair Half Face Respirators “Medium”
4	Combo Supplied Air/P100 Survivair Respirators
2	Ice Chest
12	Drum Samplers

2	55-Gallon Drum Pumps
1 Case	3”X8’ Booms
2 Cases	3”X4’ Booms
300	Spill Pads “Universal”
200	Oil Spill Only Pads
1	5 Gallon Acid Neutralizer
2	20 Lbs. Containers of Oil-Dri Absorbent
2	22 Lbs. Plastic Bags of Lite-Dri Absorbent
1	Chlorine Emergency Kit “C” Tank Cars & Trucks
4	Post for Sewage Spill Signs
1	Ladder
1	Air Compressor “Portable”
1	Diaphragm Pump And Parts
3	2.5-Gallon Buckets, Screw and Locking Lids
1 Box	Various Size Plastic Containers
60	Methamphetamine/MDMA Test Kits
60	Ephedrine Test Kits
3	Motorola GP300 Radios

INVENTORY
Environmental Management Department – Union Mine Storage Facility
09/19/2009

Amount	Description
2 Pair	Rubber Boots, Size 12, Green
1 Pair	Rubber Boots, Size 8, Black
1 Pair	Rubber Boots, Size 12, Black
1 Pair	Rubber Boots, Size 10, Black
1 Pair	Rubber Boots, Size 9, Black
10	Tyvek Suits, XL
12 Pair	Nitrile Gloves, Green, Size 9
2 Pair	Neoprene Gloves
2 Pair	Butyl Gloves
12 Pair	Silver Shield Glove Covers
3 Pair	Viton Gloves
24 Pair	Cotton Glove Liners
25 Pair	Nitrile Gloves, Blue, 4 mil
1	Level A, Haz-mat Suit, Medium, Trellchem
1	Level A, Haz-mat Suit, Large, Trellchem
4	Coveralls, Large, Chemtex
2	Coveralls, X-Large, Chemtex
2	Protective Coveralls, Large, Nomex
1	Protective Coveralls, X-Large, Nomex
1 Pair	Hip Boots, Size 13
1 Pair	Hip Boots, Size 8
1	66 Gallon Vinyl Secondary Containment
1	Garden Hose
50’	Poly Sheeting

4	4”X8’ Oil Only Booms
300	Oil Absorbent Pads
3	Booms 2”X4’
2	20 Gallon Fiber Drums of Ultrasorb
1	10 Gallon Fiber Drum of Ultrasorb
2	5 Gallon Buckets of Ultrasorb
2	Blow Up Kiddie Pools
2	2.5 Gallon Buckets
1	Small Funnel
1	55 Gallon Drum Hand Pump
10	60 Second Smoke Bombs
3	1” Hose Clamps
4	¾” Hose Clamps
11 Sets	Ear Plugs
1	1” Gallon Cap
1	¾” Gallon Cap
12	Various Sized Lag Screws
7	Washers
1	Plastic Container Of Dye
1	Grounding Cable With Clamp, 10 Foot
5	Sample Containers
1	Spark Proof Pipe Wrench 14”
1	Non-Spark Proof Pipe Wrench 12”
2	Clamps
1	Valve Key
2	25’ Measuring Tapes
1	Battery Carrier
1	Spark Proof Open End Adjustable Wench
1	Spark Proof Hammer
1	Spark Proof Wire Brush
1	Spark Proof Drum Wrench
1	Spark Proof Putty Knife
2	¼ Rolls of Packaging Tape
2	Full Rolls Of Poly Tape
1	Full Roll Of Masking Tape
1	Funnel, Plastic
1	¼ Roll Of Electrical Tape
1 Roll	Danger Do Not Cross Tape “RED”
1	HEINZ - 5 Step Field ID Kit
1	Life Support Product
1	First Aid Kit
24	4oz. Glass Sample Bottles
1	Plug & Dyke Kit
1	Gap Sealing Set
1	Gap Seal
1 Bottle	Fluorescent Gas Leak Detector
1	Speed Patch
1	Lid-Lock Tool Kit
1	Blanket, Survival, Flame Retardant, 62”X84”

5	Plastic Bungs, ¾”
4	Plastic Bungs, 2”
4	Metal Bungs, 2”
3	Metal Bungs, ¾”
20	Sample Spoons, Teaspoon
23	Sample Spatula
9	Sample Pipettes
1 Drawer	Sample Lid Assortment
6	Plastic sample Containers, 16oz.
2	Sample Tubes, 25 ml
1	Small Hand Shovel
1	Fast Release Pipette Pump
6	5ml Pipettes
4	Chain of Custody Forms
1 Box	Plastic Bags, Yellow
Misc.	Wood Blocks
1	Emergency Action Guide
1	Large Red Scoop, Plastic
1	Small Clear Scoop, Plastic
1 Set	CHRIS Manuals
1	Fire Protection Guide On Hazardous Materials
1	PPE For Hazardous Materials Incidents
1 Roll	Yellow Warm Zone Tape
1 Roll	Green Support Zone Tape
1 Roll	Red Hot Zone Tape
1	Emergency Roadside Kit
2	Flashlights
1 Box	Emergency Roadside Flares, 30 Minute
1	Fire Extinguisher
1 Box	Various Forms
1	NIOSH Guide
2	Plastic Shovels, Green Short Handle
2	Crowbars
1	Mallet
1	Orange Flag
1	Flat Nose Shovel
1	Round Nose Shovel
1	4’ Sampler
1	Push Broom
1	Broom
2	Garbage Pick Up Sticks
1	Motorola CDM 1550 Mounted Radio
1	Cell Phone With Charger
1	Solar Powered Trickle 12 Volt Battery Charger
4 Tubes	Magic Bond Epoxy Putty
1 Case	Spring Water
1	55 Gallon Hand Pumps “Plastic”
4	5 Gallon Pail Pumps “Plastic”
1	100’ Tape Measure

2	Decon Scrub Brushes, 1 ½ Foot Handles
2	Decon Scrub Brushes, Short Handles
1	Small Hand Pump With Clear Suction & Discharge Tubing
1	Spill Magnet
1	Hazardous Materials Response “A” Kit

INVENTORY

Environmental Management Department Ford F250
10/09

10Amount	**Description**
1	8000lb bumper mounted recovery winch
2	50 lb bags vermiculite
1	Jumper cables
24	3inch x 4 feet oil absorbent pigs
100	18 x18 universal absorbent pads
100	18 x18 oil absorbent pads
4	Ratcheting tie downs
25	2x Tyveks
20 pair	Heavy Duty rubber outer gloves various sizes
5	3 x Tyveks
1	Roll Nashua 300 tape
10	Tyvek Lg
25	Yellow bags 30 gallon size

INVENTORY

South Lake Tahoe Vector Control - Trailer

02/12/2008

Amount	Description
2	Table
8	Chairs
10	Orange Cones, Large
2	Pool, Kiddy
6	Tarp, Poly 10'X12'
4 rolls	Tape, Yellow, Fire Line Do Not Cross
15	Hard Hat, Yellow
5 pair	Butyl Gloves
10	Saranex Suits, Yellow
1 box	Ear Plugs, Disposable
20	Goggles, Safety
25	Tyvek Suits
60	Respirator, N95
5	Respirator, Survivair, Full Face, Large
1	Respirator, Survivair, Full Face, Medium
1	Respirator, Survivair, Full Face, Small
26	Cartridge, Survivair
1	Triage Tag Kit
1	Vest, Command, Kit
20	Body Bag, Cadaver, White, Vinyl
18	Blanket, 60"X84", 100% Acrylic
40	Blanket, Yellow, Disposable
24	Blanket, Emergency
36	Bandage, Triangular, Non-Sterile, 40"X40"X56"
275	Sponges, All-Purpose, 4 Ply, 4"X4"
2400	Sponges, 3 Ply, 4"X4"
24 rolls	Gauze
36	Pads, Abdominal, $7^{1/2}$" X 8"
12 rolls	Tape, Surgical, 1" X10 yds.
8	Dressing, Non-Adhering, 3"X8"
1	Oxygen, Cylinder
1	Multi-Patient, Oxygen Unit, 6 Max
22	Cannulas, Nasal, Adult
24	Mask, Non-Rebreathing, Adult
1	Decon Tent, Large, With Required Supplies
1	Decon Tent, One Person
1	Hot Water Heater, Instant, Diesel Power

INVENTORY

South Lake Tahoe Vector Control - Storage Shed

02/12/2008

Amount	Description
2	Haz-mat Suit, Level A, Lakeland, XL
1	Haz-mat Suit, Level A, Lakeland, Large
1	Haz-mat Suit, Level A, Lakeland, Medium
8	5" X 10' Booms
3	Booms Unknown Size
4	Empty Plastic Boxes
1	Heinz 5-Step Field ID Kit
Box #15	2-Large Level B Suits
Box #16	2-XL Level B Suits
Box #17	2-XL Level B Suits
Box #18	2-XL Level B Suits
Box #19	25-2X Tyvek Suits
Box #20	25-MediumTyvek Suits
Box #21	12-2X Saranex Suits
Box #22	3-Training Only Suits
Box #23	2-Black Carrying Bags
Box #24	1-Black Carrying Bag
Box #25	1-MSA Med Half Face Respirator, 1-MSA Small Half Face Respirator, 3-Pair Flexi Filters For MSA Respirators, 6-Fast Release Pipettes, 100-5ML Pipettes
Box #26	3-Training Only Suits
Crate #3	14-Size 10 Butyl Gloves
Crate #4	1-Chemical Agent Detector Kit
Crate #5	1Pair Size 10 Rubber Boots, 1 Pair Size 9 Rubber Boots
2	XL Level A, Haz-mat Suits
2	Large Level A, Haz-mat Suits
1	Medium Level A, Haz-mat Suit
2	Panther 60 Minute SCBA's with Cylinders
Box #1	2-XL Level B, Haz-mat Suits
Box #2	2-Large Level B, Haz-mat Suits
Box #3	2-Medium Level B, Haz-mat Suits
Box #4	2-Pair Size 11 Rubber Boots, 2-Pair Size 12 Rubber Boots, 2-Pair Size 13 Rubber Boots
Box #5	10-Large Saranex Suits
Box #6	10-2X Saranex Suits
Box #7	10-3X Saranex Suits
Box #8	25-2X Tyvek Suits
Box #9	25-3X Tyvek Suits
Box #10	25-4X Tyvek Suits
Box #11	4-Blow Up Pools For Decon
Box #12	1-Large Tarp
Box #13	2-Garden Hoses, 2-Nozzles, 3-Decon Brushes, 1- 11/2 Fire Hose To

	Garden Hose Adapter
Box #14	40-DoffIT Personal Privacy Kits
Crate #1	24 Pair, Size 10, Nitrile Gloves, Green
Crate #2	10 Pair, Size 10, Butyl Gloves

INVENTORY

South Lake Tahoe Vector Control - HazMat Van

02/12/2008

Amount	Description
1	Haz-mat Suit, Level A, Lakeland, Large
1	Haz-cat Field ID Kit
1	Radiation Detector, Ludlum
1	Guardian Bio-Threat Alert Test Strip Reader
1	Gallon of Bleach
1	Hand Cleaner
1	Rope
3	Suture Removal Kits
1	Video “Response to Anthrax Threats”
1	Van Equipment Manual
1	County Hazardous Materials Area Plan
1	EDC Disaster Plan
1	Gas Tech Manual
1	Set of Sax’s Dangerous Properties of Industrial Materials
1	Large Flashlight
1	AIM Personal Carbon Monoxide Gas Detector
1	Bacharach TLV Sniffer
1	Extension Cord
1	CGI Gas Detector
1	Box of Sampling Equipment
10	Large Orange Cones
1	Pipe Patch Repair Kit
1	Drum Repair Kit
1	Container of Rags
1	Radiation Detector “Old Yellow”
1	Clor-D-Tech Kit
1	PCB In Soil Test Kit
1	Container of Misc. Labels and Tape
1	Propane Cylinder
1	Spot Light
1	Extension Light
1	Gallon Ammonia Cleaner
1	2 Gallon Pail of Gap Seal
1	Bio-Hazard Kit
1	Bag With Garden Hose
1	Size 12, Rubber Boots
1	Size 9, Rubber Boots

1	Size 11, Rubber Boots
1 Box	Personal Safety Equipment Cleaning Pads
2	Haz-mat Suits Level B
1	MSA Chemical & Biological Warfare Agent Mask, Large
1	MSA Chemical & Biological Warfare Agent Mask, Medium
1	Full Face Respirator, Survivair
1	Box of Misc. Sample Bottles
4	Orange Coveralls
4	Orange Vest
48 Pair	Nitrile Gloves, Green, Size 10
10 Pair	Nitrile Gloves, Size 9-91/2
2	White Hardhats
3 Pair	Knee Pads
6	Green Splash Suits
24 Pair	Butyl Gloves, Size 10
1 Box	Nitrile Gloves, Blue
1 Box	Tyvek Suits
1 Box	Latex Gloves
1 Box	Hearing Protection
1 Box	Various kinds of Gloves
6	MSA Advantage P100/HE/CS/CN Respirator Cartridges
3 Pair	Goggles
3 Pair	Safety Glasses
10	Survivair Respirator Cartridges “Ammonia & Methylamine”
24 Pair	Nitrile Gloves, Green, Size 11
1 Roll	Poly Sheeting
1 Pair	Wader Boots
1 Pair	Size 10 Boots
2	Rolls of Paper Towels
1	1990 ERG
1	1993 ERG
1	Haz-cat Chemical ID User Manual
1	Haz-cat MSDS Sheet Manual
3	NIOSH Pocket Guide, “OLD”
48	60 Mil, Glass Sample Containers
2	Blue Tarps
1 Box	3”X5’ Booms
1	Eye Wash Station
2	Green Poly Shovels
1	Sprayer
1 Set	Booster Cables
1 Box	Yellow Caution Tape
2	25 Gallon Over Pack Containers, Poly
1	Fire Extingusher
1	First Aid Kit
1	First Aid Blanket
1	Hand Operated Drum Pump, Metal, Heavy Duty
1	Hand Operated Drum Pump, Metal, Light Duty
1	5 Gallon Hand Operated Pump, Plastic

10	Narco Pouches, Methaqualone Test Kits
10	Norco Pouches, Methamphetamine/MDMA Test Kits
20	Norco Pouches, Ephedrine Test Kits
1 Box	Bacharach Cotton Refills
1	Air Line Oiler

Pesticide Drift Resource Guide

- This guide contains the MSDS sheets for the 5 most commonly applied pesticides by weight in El Dorado County. The list is ordered from the most heavily used pesticide to the least heavily used pesticide and includes the following:
    - Borax compounds
    - Sulphur
    - Metam-Sodium
    - Glyphosphate, Isopropylamine salts
    - Petroleum Oil

- The MSDS sheets generally contain the following pertinent information:
    - Synonyms and common names
    - Chemical name / ingredients
    - Product Hazards
    - Emergency contact information
    - Accidental release measures
    - Decontamination Considerations
    - Disposal Information
    - Reportable quantities

- To translate information, such as evacuation or decontamination directions for people who may have been exposed to pesticide, access the AT&T Translation line service at 1-888-855-0811 for the following languages.

    - Cantonese
    - Hindi
    - Japanese
    - Korean
    - Mandarin
    - Polish
    - Russian
    - Spanish
    - Tagalog
    - Vietnamese

- Information on Reimbursement of Medical Expenses from a Pesticide Drift incident is also included in the appendix.

Pesticide Drift

At a Glance

- **If people are ill and it is an emergency, call 911.**
- If you believe that drift has occurred and has harmed people, plants, or the environment, call your County Agricultural Commissioner, who will look into your complaint. The number is on the inside back cover of this booklet. You can also get the number by calling DPR's complaint information line, 1-87PestLine (1-877-378-5463).
- Drift can be noticeable as a cloud of pesticide spray or dust, or can be invisible and odorless.
- If you believe you have been exposed to spray drift and have health-related questions, you should contact the doctor or the Poison Control Center, 1-800-222-1222.

If pesticide drift is making people sick, call 911 right away.

We expect pesticides, when applied, to reach a specific target and remain there. That is the goal of all pesticide applications. Application equipment is built for that purpose. It's the focus of applicator training. When a pesticide product goes where it is not needed or wanted, it may endanger the safety and health of people, injure desirable plants and animals, and affect environmental quality.

Scientists recognize that almost every pesticide application produces some amount of drift off the target area. Not all drift may be harmful or illegal. How much a chemical may drift and whether it is harmful depends on such factors as the formulation of the product, the amount used, the application method, the weather, and – most critically – decisions by the applicator.

Drift can occur from residential and household pesticide applications, too. It can even happen indoors.

Because some drift can occur with any application (and may be in amounts too small to affect people or property), the laws focus on preventing substantial drift.

What is pesticide drift?

Drift is the movement of a pesticide through the air away from the intended target. This drift can be in the form of mist, particles, or vapor (gas). It isn't limited to agricultural activities. Drift can occur when a neighbor sprays pesticides in his garden. It can even occur indoors. Air currents created by heating, cooling, and ventilation systems can pick up and spread pesticides you use in your house.

Pesticide drift was originally thought to occur only when applications were not done properly, and pesticide drifted away from the target, harming people or property. Laws and regulations governing pesticide application were written with this kind of illegal, harmful drift in mind.

As we learned more about how chemicals move through air, we found out that pesticides could drift whether or not those using the pesticides are following the rules. As now used, "drift" refers to any off-site movement of a pesticide – not just to illegal applications. Off-site movement often depends on factors like weather, the application site, or the pesticide used. It can happen when traces of pesticide from one or several legal applications accumulate and remain in the surrounding air. The residues in air are usually (but not always) below the level of health concern.

Measuring and evaluating this kind of low-level off-site movement requires scientific monitoring and study, which we at DPR do in collaboration with Cal/EPA's Air Resources Board and the Office of Environmental Health Hazard Assessment. If we find that drift is harming health, we review the pesticide rules and change them as necessary to protect people. County Agricultural Commissioners enforce these rules.

When does drift occur?

Drift isn't limited to the period during or immediately after an application. It can occur hours or even days later. For ease of explanation in this booklet, we will divide drift into two categories: spray drift, and post-application drift.

"Spray drift" describes drift that occurs during or shortly after the pesticide is applied. It often occurs when wind or application equipment blows the pesticide off the intended site. Spray drift can be in the form of liquid droplets, dust particles (if the pesticide was applied as a dust), or vapor. Vapor can be formed as a liquid or oil dries, or it can be drift of a pesticide that is already a gas (such as a fumigant).

"Post-application drift" occurs after an application is completed. Post-application drift may be the result of an illegal application; for example, an applicator may neglect to follow fumigant application rules. (Fumigant pesticides can escape quickly from application sites and cause problems, resulting in illegal drift.)

On the other hand, post-application drift may also occur with correct applications. Days or even weeks after application, pesticides can evaporate ("volatilize") into a gas. Low levels of pesticides may be carried long distances by air currents.

Vapor drift from a legal pesticide application is sometimes difficult to predict. It depends on factors like what the weather will be even days after the application. Also, some pesticides evaporate more easily than others, as do some different formulations of the same pesticide.

Although some pesticide may move off target in any application, applicators can and must prevent harmful drift.

Why is some drift unavoidable?

The air that surrounds this planet carries vapors and particles long distances. Rain clouds, for example, move with the wind over long distances. Think about how you can smell the disinfectant in your bathroom long after you've cleaned. The same thing happens with pesticides; some amount will drift off target, even though the amount may be very small.

Because pesticides can drift, applicators are legally required to take all possible measures to make sure that any off-site

movement does not reach a level that could harm people or the environment. They must:

- Exercise a high degree of professionalism in making decisions about applications.
- Ensure their equipment and techniques produce a minimum of drift that is below potentially harmful levels.
- Make sure they don't apply pesticides when conditions exist that make drift more likely, for example, when it is too windy.

Because they are gaseous pesticides, fumigants are more volatile and special precautions must be taken to prevent harmful drift, such as these tarps placed over fumigated soil.

Are some pesticides more likely to drift?

Yes. Fumigants are gaseous pesticides used to treat homes, storage bins, and soil before planting. Applicators inject them into soil or release them into buildings. Because they are gases, fumigants move easily through soil and air, and will drift away from where they are applied unless they are confined. Various techniques are used. For example, applicators cover buildings with tarps and seal the edges, to keep the fumigant in the structure. In fields, tarps are placed over the soil to minimize leakage. Over time, the gas slowly releases into the air. Application rules focus on ensuring that the fumigant dissipates slowly so it doesn't build up to harmful levels.

Because they are gases, fumigants are especially volatile. This means they are more likely to drift than other pesticides. Fumigant drift can be a problem during or immediately after application, or days later, particularly if applicators do not pay careful attention to the rules governing fumigant use. That is why fumigants are a major focus of DPR's drift reduction efforts.

Is all drift illegal?

No. Some off-site movement occurs with every application, even if only a few molecules. But to protect people and the environment from harm, California has strict standards concerning drift and many rules limiting applications to minimize drift. Additionally, County Agricultural Commissioners direct significant enforcement activity toward preventing harmful spray drift.

Pesticide laws focus on spray drift that causes harm, or has the potential to do so. The law specifically recognizes that pesticides may drift but says that "substantial" drift is not allowed. The law prohibits applications if there is a reasonable possibility of harm to people or property.

Enforcement specialists from the County Agricultural Commissioner's office look at the facts and circumstances of each incident. If an applicator did not follow the rules, he or she could face fines and other penalties.

Sometimes DPR finds that drift from legal applications poses an unacceptable risk. This kind of drift is not related to whether the application was done correctly but to such things as the chemical properties of the product used, the amount used in an area, and the weather. When we learn about post-application problems resulting from legal uses, we look for the causes of the problem. We then change the rules, as necessary, to keep harmful residues out of the air.

To prevent harmful drift, applicators must evaluate their equipment, the surrounding area, weather conditions, and anything else that may cause problems.

What responsibility do applicators have to prevent drift?

People who are applying pesticides have the primary responsibility for drift management. They must take all reasonable precautions to prevent harmful drift. Spray drift can be illegal if the applicator did not follow the instructions on the label or other requirements, or if the drift causes harm to humans and property, or has the potential to do so.

Preventing harmful exposure to people or property requires that applicators, before using pesticides, evaluate:

- Their equipment.
- The weather.
- The site to be treated.
- The surrounding area to decide the likelihood of harm or damage.

After their evaluation, applicators must use available practices to reduce drift that might otherwise occur. Applicators:

- Must not make an application likely to result in harmful drift.

What are the roles of the Department of Pesticide Regulation and County Agricultural Commissioners regarding drift?

It depends on when the drift occurs in relation to the application, and whether the drift was illegal.

County Agricultural Commissioners:

- Enforce the rules designed to prevent harmful drift.
- Investigate pesticide complaints and take enforcement actions when violations are found.
- Put extra controls on certain pesticides when needed to prevent problems (depending on local conditions; for example, to protect area schools or endangered species habitats).

We at DPR set statewide standards and rules on pesticide use. We also monitor and conduct scientific studies to identify and prevent potentially harmful levels of pesticides in air. When we find problems, we develop additional rules on applications.

- Must not proceed with any action likely to result in the reasonable possibility of contaminating people or interfering with use of neighboring property.

Applicators who do not follow the rules (for example, instructions on the pesticide label or other requirements) will be in violation and may be penalized. Also, if their judgment during an application results in injuries to people, damage to property, or unintended harm to the environment, they will be found in violation and penalized.

What is being done to prevent post-application drift?

Some drift into surrounding air is expected with all pesticide applications. Our job is to make sure that legal applications don't result in pesticide levels in ambient air that pose a risk to health or the environment. If the rules aren't doing that, we change them.

Along with the Air Resources Board, we study pesticides in air next to application sites, as well as in rural communities and cities near agricultural operations. If the studies show that pesticide traces from legal applications accumulate to levels that can harm human health or the environment, we impose extra controls to avoid this harm.

For example, after doing air monitoring, we found that applications of fumigants and certain herbicides could lead to unacceptable post-application drift. Among other changes, we added statewide restrictions on the amount of pesticide that can be applied and acreage that can be treated. We also worked with the County Agricultural Commissioners to develop restrictions that would protect public health while allowing use under specific local conditions.

Application of some pesticides also contributes to the formation of smog, so, along with the Air Resources Board, we are putting controls into place that reduce the contribution of pesticide products to smog.

Copper Care
Wood Preservatives, Inc.

MATERIAL SAFETY DATA SHEET

Emergency Telephone: 800-473-0179

COPPER CARE PRODUCT NAME:

CU-BOR

ATTENTION: SAFETY MANAGER
MSDS Number: 71101 Date of Last Revision: 02/2009
USA EPA Registration Number: 54471-10
CANADA PMRA Registration Number: 27621

I. PHYSICAL AND CHEMICAL CHARACTERISTICS

APPEARANCE AND ODOR: Thick blue paste with a faint amine odor.

BOILING POINT (RANGE) (Deg F):	240 – 250	DENSITY (Lbs/Gal)(Water @20C = 8.33):	10.1
VAPOR PRESSURE (mm Hg):	>1	EVAPORATION RATE (nBuAC=1):	<1
VAPOR DENSITY (Air = 1):	>1	% VOLATILE BY WEIGHT:	33.00
SOLUBILITY IN WATER:	Slight	SPECIFIC GRAVITY:	1.21
pH RANGE:	10.60 –11.60	VOC CONTENT	0.469 lb/gal

II. HAZARDOUS INGREDIENTS (See Section X Also)

COMMON NAME	CHEMICAL NAME	C.A.S.#	%	OSHA PEL	ACGIH TLV
Cupric Hydroxide	Copper Hydroxide, Copper Salt Θ	20427-59-2	1-10	1.0 mg/m³	1.0 mg/m³
Rheological Additive	Cellulose Filler Θ	Mixture	1-10	5.0 mg/m³	5.0 mg/m³
Rheological Additive	Attapulgite Clay Θ	70131-50-9	5-15	5.0mg/m³	5.0 mg/m³
10 MOL Borax	Sodium tetraborate, Decahydrate Θ	1303-96-4	35-45	10.0 mg/m³	5.0 mg/m³
Monoethanolamine	2-Aminoethanol (Ethanolamine)	141-43-5	5-15	3.0 ppm	3.0 ppm
Water	Water	7732-18-5	30-40		

Ingredients marked with the (Θ) sign are hazardous as nuisance dusts in dry or granular products. These ingredients may not present a hazard in liquid products.

Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372) requires that certain toxic chemicals be identified. Any such chemicals contained in this product are listed in Section II and are identified by an asterisk (*).

OSHA's Hazard Communication Standard 29CFR 1910.1200, also requires other hazardous chemicals to be listed and the MSDS to identify the hazards associated with the product. This information must be included in all MSDS's that are copied and distributed for this product.

HMIS HAZARD RATINGS

Health Hazard: 2 Fire Hazard: 1 Reactivity: 0 Special Hazard: ----

(Based on the revised National Paint & Coatings Association HMIS Rating System) (1984)

III. HEALTH HAZARD DATA (See Section IX Also)

EMERGENCY AND FIRST AID PROCEDURES:

EYES:

IMMEDIATELY flush eyes with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire eye surface. Seek medical attention IMMEDIATELY.

INGESTION:

NEVER induce vomiting or give anything by mouth to an unconscious person.
Drink promptly large quantities of milk, egg white, gelatin solution, or, if these are not available, water. Avoid alcohol.
DO NOT induce vomiting. If vomiting occurs spontaneously, give liquids again and keep airway clear.
Seek medical attention IMMEDIATELY.

----------**P.O. Box 707 • Columbus, NE 68602 • (402) 562-6815**----------

NOTE TO PHYSICIAN: Probable mucosal damage may inhibit the use of gastric lavage. Depending on the amount of product ingested, emptying the stomach should be considered.

NOTE TO PHYSICIAN: If large amounts have been ingested, treat for Borate toxicity.

INHALATION:
Persons administering first aid to overexposure victims should carefully wash off any visible product from the victim's face. Do not give anything by mouth to an unconscious person.
Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, administer oxygen. Seek medical attention.

SKIN:
Wash with plenty of water. Remove contaminated clothing and footwear. Wash clothing and decontaminated footwear before reuse.
Seek medical attention if irritation persists.

Primary Routes of Entry: Inhalation Eyes Skin Ingestion

SIGNS AND SYMPTOMS OF OVEREXPOSURE;

EYES:
Can cause severe irritation, redness, tearing, blurred vision. Can cause substantial, temporary eye injury.

INGESTION:
Acute Toxicity (Rat): LD50 Greater than 5,000 mg/kg.
Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

INHALATION:
Material is in thick paste form. Under normal conditions, respirable material is not formed.

SKIN:
Acute Dermal Toxicity (Rabbit): LD50 Greater than 2,020 mg/kg.
Prolonged contact may result in erythema and edema.
Sensitizer: Prolonged or frequently repeated skin contact may cause an allergic reaction in some individuals.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None Known.

LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY: None.

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Degrees F, Method): >200 TCC
FLAMMABLE LIMITS IN AIR (LEL/UEL, % by Volume): Non-Combustible. Limits Not Applicable.
EXTINGUISHER MEDIA: Foam, carbon dioxide, water spray, dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Wear MSHA/NIOSH-approved, self-contained breathing apparatus and full protective clothing. Cool exposed containers with water.
Avoid spraying water directly into storage containers due to danger of a boilover.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None Known.

Emergency Telephone: 800-473-0179

V. REACTIVITY DATA

STABILITY: Stable.
INCOMPATIBILITY: Acids, Strong oxidants.
HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of Carbon and Nitrogen.
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: Material is not known to polymerize.
CONDITIONS TO AVOID: None Known.

VI. ENVIRONMENTAL PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: Wear appropriate protective clothing (see section VII.).
Shovel into dry containers. On loose surfaces, shovel up contaminated layer. Avoid generation of dust.

LARGE SPILL: Wear appropriate protective clothing (see Section VII).
Large spills are not likely to occur.
Shovel into dry containers. On loose surfaces, shovel up contaminated layer. Avoid generation of dust.
Follow all local, state, and federal regulations for disposal. Do not contaminate water while cleaning equipment or disposing of wastes. Prohibit contamination of streams, lakes, or other bodies of water.

WASTE DISPOSAL METHODS: If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance. Open dumping is prohibited.
Pesticide wastes are toxic. Improper disposal of excess pesticide and/or pesticide formulation rinsate is a violation of federal law.
Dispose of container in a sanitary landfill or by incineration if allowed by state and local authorities.
If incinerated, stay out of smoke.

VII. SPECIAL PROTECTION EQUIPMENT

VENTILATION REQUIREMENTS: Ventilate via mechanical methods (general or local exhaust) to maintain exposure below TLV(s), if applicable.
Good industrial hygiene practice dictates that indoor work areas should be isolated and provided with adequate local exhaust ventilation.

RESPIRATORY: If TLV for product or any component is exceeded, use a MSHA/NIOSH-approved respirator.

EYE: Chemical worker's goggles or face shield.

GLOVES: Wear impervious gloves, such as: Nitrile rubber, Neoprene, PVA, PVC, or NBR (Buna-N).
Special precautions should be taken to ensure that material cannot get inside gloves. Disoposable Cotton Glove liners may also be worn.

OTHER PROTECTIVE EQUIPMENT: Wear long-sleeved shirts, long pants, and rubber boots or disposable coveralls when handling this product. The clothing should be changed daily. Impervious boots (nitrile rubber), aprons, or chemical suits should be worn when necessary to prevent skin contact. Safety showers or wash water and eyewash stations should be provided in all areas in which this product is stored and/or handled. When working in a treating plant persons exposed routinely to this material should shower prior to leaving work each day. Work clothing should be changed daily.

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Emergency Telephone: 800-473-0179

VIII. OTHER SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS: Store away from food or feed in a secure, well ventilated area protected from extreme temperatures. Do not transfer to an unmarked container. Keep container closed when not in use. Do not store or use in the vicinity of sparks, open flame, or other ignition sources.
Observe good personal hygiene practices. Change protective gloves/clothing when signs of contamination appear. Keep out of reach of children.

OTHER PRECAUTIONS: Wash thoroughly after skin contact and before eating, drinking, use of tobacco products, or using restrooms.

IX. ADDITIONAL INFORMATION

No additional information.

OSHA'S Hazard Communication Standard, 29CFR 1910.1200 requires that a MSDS be kept on file and distributed to employees and/or customers. If this product is used at other locations, it is your responsibility to promptly distribute this information to that location. Additional copies of the Material Safety Data Sheets are available upon request.

X. SHIPPING INFORMATION

FREIGHT CLASSIFICATION: PRESERVATIVES, WOOD, N.O.I., PASTE – NMFC 161490

This product is classified for transportation purposes as follows:

	YES	NO
IATA (Air)	**X**	
IMO (Water)	**X**	
DOT (Land)	**X**	

Contact Copper Care Wood Preservatives, Inc. at 888-817-0131 for any additional information.

DISCLAIMER STATEMENT:

This information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation or guarantee is made as to it's accuracy, reliability, or completeness. It relates to the specific material designated and may or may not be valid for such material used in combination with any other materials or in any process. All liability for any loss damage that may occur from the use of this information is disclaimed. It is the user's responsibility to satisfy himself from other sources that this material is suitable for his own particular use. This is neither a license under any applicable patents nor an assurance of freedom from claims under pending or issued patents.

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Issue Date: 11/2003

MATERIAL SAFETY DATA SHEET
Terro®-PCO Liquid Ant Bait

SECTION 1 - PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Terro®-PCO Liquid Ant Bait**
DISTRIBUTED BY: Nisus Corporation
100 Nisus Corporation
Rockford, TN 37853
(800) 264-0870
FAX: (865) 577-5825

SECTION 2 - INGREDIENTS INFORMATION

Sodium Borate, decahydrate 5.4% (CASN 1303-96-4)
[PEL-TWA 10 mg/m3; TLV-TWA 5 MG.M3]

SECTION 3 - HEALTH HAZARD INFORMATION

EYE CONTACT: Avoid contact with eyes. May cause eye irritation.
SKIN CONTACT: Not an irritant.
INGESTION: This material may be harmful if swallowed.
Acute Oral LD50 – Greater than 5000 mg/kg
Acute Dermal LD50 – Greater than 2000 mg/kg
Dermal Irritation – Not a primary irritant
Dermal Sensitivity – Not a sensitizer

SECTION 4 - EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush with water for at least 15 minutes with clean water. Seek medical attention if irritation persists.
SKIN CONTACT: Wash with soap and water.
INGESTION: If more than one (1) to two (2) ounces are ingested, induce vomiting and seek medical attention.

SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	Nonflammable
EXTINGUISHING MEDIA:	No known incompatibilities
SPECIAL FIRE FIGHTING PROCEDURES:	None
EXPLOSION HAZARDS:	None

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Wipe up and place in clean dry container for later disposal and flush area with plenty of water.

SECTION 7 - HANDLING AND STORAGE

Store in a dry place. Keep container closed when not in use.

100 Nisus Drive ● Rockford, TN 37853
(800) 264-0870
www.nisuscorp.com

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

VENTILATION:	General ventilation is adequate
RESPIRATORY PROTECTION:	None required
EYE PROTECTION:	None required
HAND PROTECTION:	None required

NB: When used as a pesticide the mandatory EPA PPE given on the label must be used.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/ODOR:	Clear odorless liquid
BOILING POINT:	100 degrees °C
SOLUBLE IN WATER:	Yes

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:	Stable
REACTIVITY:	Hazardous polymerization will not occur
INCOMPATIBILITIES:	Oxidizing agents
HAZARDOUS DECOMPOSITION PRODUCTS:	Oxides of carbon

SECTION 11 - ECOLOGICAL INFORMATION

Large volumes may be phytotoxic and toxic to aquatic life.

SECTION 12 - DISPOSAL CONSIDERATION

Product as supplied is not classified as hazardous waste. Dispose of large volumes in accordance with federal, state and local regulations.

SECTION 13 - TRANSPORTATION INFORMATION

DOT CLASSIFICATION: Not classified as hazardous

SECTION 14 - REGULATORY INFORMATION

SARA TITLE III DISCLOSURE: None

SECTION 15 - OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This information and product are furnished on the condition that the persons receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use thereof.

MATERIAL SAFETY DATA SHEET
TERRO? ANT KILLER II

*** SECTION 1 * PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME - TERRO? Ant Killer II
UPC CODE – 0-70923-00100-2
MANUFACTURER – Senoret Chemical Company, Inc.
PREPARED BY – Product Safety Group, 8009 34th Avenue South, Suite 1050, Minneapolis, MN 55425, USA (612-814-7100)
DATE RELEASED: July 31, 1997
MSDS No. 5-1013

*** SECTION 2 * COMPOSITION, INFORMATION ON INGREDIENTS**

SodiumTetraborate, decahydrate 5.4% (CASN 1303-96-4) (PEL-TWA 10 mg/m3; TLV-TWA 5 mg/m3)

*** SECTION 3 * HAZARD IDENTIFICATION**

OSHA HAZARD CLASSIFICATIONS – None
ACUTE HEALTH EFFECTS – None expected
CHRONIC HEALTH EFFECTS – None expected
CARCINOGENICITY – Not considered to be a carcinogen by either OSHA, NTP, or IARC
TARGET ORGANS – None known

*** SECTION 4 * FIRST AID MEASURES**

For Medical Emergencies Call Toll Free 1-888-478-0798
SKIN/EYE CONTACT – Flush with water, seek medical attention if irritation develops and persists
INGESTION – Dilute with 1-2 glasses of water, contact physician or poison control center.
INHALATION – Move to fresh air, contact physician if breathing difficulty develops

*** SECTION 5 * FIRE FIGHTING MEASURES**

FLASH POINT – Nonflammable
EXTINGUISHING MEDIA – No known incompatibilities
SPECIAL FIRE FIGHTING PROCEDURES – None
EXPLOSION HAZARDS – None

*** SECTION 6 * ACCIDENTAL RELEASE MEASURES**

Wipe up and place in clean dry container for later disposal

*** SECTION 7 * HANDLING AND STORAGE**

Store in dry place. Keep container closed when not in use.

*** SECTION 8 * EXPOSURE CONTROLS AND PERSONAL PROTECTION**

VENTILATION – General ventilation is adequate

*** SECTION 10 * STABILITY AND REACTIVITY**

STABILITY – Stable
REACTIVITY – Hazardous polymerization will not occur
INCOMPATIBILITES: None known
HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon

*** SECTION 11 * TOXICOLOGY INFORMATION**

Not available

*** SECTION 12 * ECOLOGICAL INFORMATION**

Not available

*** SECTION 13 * DISPOSAL CONSIDERATION**

Product as supplied is not classified as hazardous waste.

*** SECTION 14 * TRANSPORATION INFORMATION**

DOT CLASSIFICATION – Not classified as hazardous

*** SECTION 15 * REGULATORY INFORMATION**

SARA TITLE III DISCLOSURE – None

*** SECTION 16 * OTHER INFORMATION**

This information is furnished without warranty, expressed or implied, except that it is accurate to the best of our knowledge.

AMERADA HESS CORPORATION

NFPA 704 (Section 16)

MATERIAL SAFETY DATA SHEET

Sulfur **MSDS No. 6192**

1. CHEMICAL PRODUCT and COMPANY INFORMATION (rev. Mar-98)

Amerada Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

EMERGENCY TELEPHONE NUMBER (24 hrs): **CHEMTREC (800)424-9300**
COMPANY CONTACT (business hours): Corporate Safety (732)750-6000

SYNONYMS: Brimstone; Sulphur
See Section 16 for abbreviations and acronyms.

2. COMPOSITION and INFORMATION ON INGREDIENTS (rev. Mar-98)

INGREDIENT NAME	EXPOSURE LIMITS	CONCENTRATION PERCENT BY WEIGHT
Sulfur CAS NUMBER: 7704-34-9	None established by OSHA or ACGIH	100
Hydrogen Sulfide (H_2S) CAS NUMBER: 7783-06-4	OSHA PEL-Ceiling/Peak: 20 / 50 ppm ACGIH TLV-TWA/STEL: 10 / 15 ppm	< trace - see below >

Hydrogen Sulfide (H_2S) may be present in trace quantities (by weight) in molten sulfur but may accumulate to toxic or flammable concentrations in enclosed spaces such as molten sulfur storage pits, tanks, or tanker/railcar headspaces. H_2S is not considered a hazard associated with solid sulfur.

3. HAZARDS IDENTIFICATION (rev. Mar-00; Tox-99)

EMERGENCY OVERVIEW
DANGER!
FLAMMABLE SOLID - BURNING SULFUR EMITS TOXIC AND SUFFOCATING SULFUR DIOXIDE - MOLTEN SULFUR MAY EVOLVE TOXIC AND FLAMMABLE HYDROGEN SULFIDE GAS - MOLTEN SULFUR CAN CAUSE THERMAL BURNS

Solid and molten sulfur can be ignited; burning sulfur produces sulfur dioxide, an irritating, toxic, and suffocating gas.

Dust particles may be irritating to the eyes, nose, throat, and skin. Molten sulfur can cause thermal burns.

Molten sulfur may evolve HYDROGEN SULFIDE (toxic gas) which may accumulate in storage container vapor space. High concentration may cause immediate unconsciousness - death may result unless victim is promptly and successfully resuscitated. Hydrogen sulfide causes eye irritation.

EYES
Contact with molten sulfur may cause serious burns and blindness. Sulfur vapor may cause eye irritation. Dust contact with eyes may cause mechanical irritation (abrasion), characterized by a scratchy discomfort. This may progress to burning and tearing, with blurring of vision upon repeated or prolonged exposure. These symptoms are generally reversible once exposure is discontinued. Excessive exposure may cause more severe symptoms such as redness, pain, sensitivity to light, and conjunctivitis. Some severe exposure cases have resulted in permanent damage.

Exposure to approximately 8 ppm sulfur vapor has been shown to cause eye irritation.

SKIN
Prolonged contact with sulfur dust in a localized area may result in irritation, primarily from abrasive action. Molten sulfur may cause 1st, 2nd, or 3rd degree thermal burns.

INGESTION
Ingestion of small amounts of solid sulfur should not cause significant health effects. Large does can produce mucous membrane irritation, difficult swallowing, redness of the throat and tongue, stomach, and urinary disturbances. Vomiting, abdominal pain and diarrhea may also occur. Long-term ingestion of small amounts may have a laxative effect.

INHALATION
Inhalation of low concentrations of dust should not cause significant health effects. Inhalation of large amounts of dust may cause inflammation of the nose and throat, resulting in secretions from the nose. Symptoms include sore throat, tightness of the chest, chest pain, lightheadedness, and persistent cough with sputum.

WARNING: Irritating and toxic hydrogen sulfide gas may be found in confined vapor spaces. Greater than 15 - 20 ppm continuous exposure can cause mucous membrane and respiratory tract irritation. 50 - 500 ppm can cause headache, nausea, and dizziness, loss of reasoning and balance, difficulty in breathing, fluid in the lungs, and possible loss of consciousness. Greater than 500 ppm can cause rapid or immediate unconsciousness due to respiratory paralysis and death by suffocation unless the victim is removed from exposure and successfully resuscitated.

The "rotten egg" odor of hydrogen sulfide is not a reliable indicator for warning of exposure, since olfactory fatigue (loss of smell) readily occurs, especially at concentrations above 50 ppm. At high concentrations, the victim may not even recognize the odor before becoming unconscious.

CHRONIC
Long-term exposure to high concentrations can cause respiratory disease - see Section 11, Toxicological Information.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Exposure may aggravate preexisting bronchitis, asthma, and open wounds, skin disorders, and dermatitis (rash).

4. FIRST AID MEASURES (rev. Jan-99; Tox-99)

EYES
In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

SKIN
Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

INGESTION
DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

INHALATION
Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

5. FIRE FIGHTING MEASURES (rev. Feb-94)

FLAMMABLE PROPERTIES:

FLASH POINT:	405 ^{o}F (207 ^{o}C)
AUTOIGNITION TEMPERATURE:	450 ^{o}F (232 ^{o}C)
LOWER EXPLOSIVE LIMIT (%):	35 gm/m^3 (dust); 4% for hydrogen sulfide
UPPER EXPLOSIVE LIMIT (%):	1,400 gm/m^3 (dust); 44% for hydrogen sulfide

FIRE AND EXPLOSION HAZARDS

Reference NFPA 655 “Prevention of Sulfur Fires and Explosions,” 1993.

Flammable solid with a relatively low ignition temperature. Sulfur dust ignites easily in air. Grinding sulfur may produce an explosion hazard. Static discharge may ignite sulfur dust.

Sulfur burns with a pale blue flame that may be difficult to see in daylight. Burning sulfur will flow and emits large quantities of sulfur dioxide (SO_2), a toxic, irritating, and suffocating gas that can cause severe lung damage and death.

Molten sulfur may evolve hydrogen sulfide (H_2S) - H_2S is a flammable gas and may present an explosion hazard in a confined space. Under certain conditions, H_2S can react to form pyrophoric iron compounds in enclosed spaces such as sulfur pits.

EXTINGUISHING MEDIA

SMALL FIRES: dry chemical, sand, water spray, fire fighting foam

LARGE FIRES: Water spray, fog or fire fighting foam. Water stream may scatter material. Steam may be used to snuff fire in confined spaces such as sulfur pits.

FIRE FIGHTING INSTRUCTIONS

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Steam may be used to snuff a sulfur fire in a confined space.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

See Section 16 for the NFPA 704 Hazard Rating.

6. ACCIDENTAL RELEASE MEASURES (rev. Mar-98)

ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.

Remove or secure ignition sources near molten sulfur release. Allow liquid to solidify. Do not touch liquid sulfur - thermal burn hazard. Carefully contain and stop the source of the spill, if safe to do so. Do not flush down sewer or drainage systems. Protect bodies of water, such as by diking. Water may be used to help solidify molten sulfur but should be applied with care to avoid splattering.

Consideration should be given to environmental clean-up and waste material generation when determining if the use of large volumes of water is appropriate for non-fire emergency situations. Cleanup crews must be properly trained and must utilize proper protective equipment.

Special precautions for solid sulfur are generally not necessary unless excessive dust is generated. Keep open flames away from solid sulfur or sulfur dust. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Cleanup crews must be properly trained and must utilize proper protective equipment.

7. HANDLING and STORAGE (rev. Feb-94)

HANDLING and STORAGE PRECAUTIONS

Store solid sulfur in a well ventilated area away from incompatible materials. The hazards of hydrogen sulfide should be considered when storing or transporting molten sulfur. H2S can accumulate in confined spaces such as sulfur pits and headspaces of truck trailers and railcars. Exposure to H2S is possible during product transfer into/out of truck trailers and railcars.

Use appropriate engineering controls or respiratory protection. Sulfur pits should be vented away from possible worker exposure areas.

Prohibit smoking in storage and work areas. Electrical installations and equipment in hazardous locations should be installed according to articles 501 and 502 of the National Electric Code. Reference also NFPA 655 Standard for the Prevention of Sulfur Fires and Explosions.

WORK/HYGIENIC PRACTICES

Protect against hot liquid. Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use gasoline or solvents (naphtha, kerosene, etc.) for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Consider the need to discard contaminated leather shoes and gloves.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION (rev. Mar-98)

ENGINEERING CONTROLS

Use adequate ventilation to keep vapor, hydrogen sulfide and dust concentrations of this product below occupational exposure limits and flammability limits, particularly in confined spaces. Use explosion-proof equipment and lighting in classified/controlled areas.

EYE/FACE PROTECTION

Safety goggles are recommended for excessive dust exposure. Use faceshield for protection against molten sulfur.

SKIN PROTECTION

Avoid repeated or prolonged skin contact. For protection from molten sulfur, gloves and skin protection constructed of leather or heat resistant materials are recommended.

RESPIRATORY PROTECTION

If a hydrogen sulfide hazard is present (that is, exposure potential above H_2S permissible exposure limit), use a positive-pressure SCBA or Type C supplied air respirator with escape bottle.

Dust protection: where it has been determined that there is no hydrogen sulfide exposure hazard (that is, exposure potential below H_2S permissible exposure limit), a NIOSH/ MSHA-approved air-purifying respirator with dust cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL and CHEMICAL PROPERTIES (rev. Mar-00)

APPEARANCE

Yellow solid in block or pellet for; easily crushed into yellow dust. Hot, yellow liquid

ODOR

Pure sulfur is odorless and tasteless. However, trace hydrocarbon impurities may give it a faint oily and/or rotten egg odor.

Hydrogen sulfide (H_2S) has a rotten egg “sulfurous” odor. This odor should not be used as a warning property of toxic levels because H_2S can overwhelm and deaden the sense of smell. Also, the odor of H_2S in heavy oils can easily be masked by the petroleum-like odor of the oil. Therefore, the smell of H_2S should not be used as an indicator of a hazardous condition - a H_2S meter or colorimetric indicating tubes are typically used to determine the concentration of H_2S.

BASIC PHYSICAL PROPERTIES

BOILING POINT:	832 ^{o}F (445 ^{o}C)
MELTING POINT:	235 to 248 ^{o}F (113 to 120 ^{o}C)
VAPOR PRESSURE:	4x10-6 mm Hg @ 86 ^{o}F (30 ^{o}C)
SPECIFIC GRAVITY (H_2O = 1):	AP 1.96 (varies)
PERCENT VOLATILES:	Negligible
SOLUBILITY:	Insoluble in water

10. STABILITY and REACTIVITY (rev. Feb-94)

STABILITY: Stable. Hazardous polymerization will not occur.

CONDITIONS TO AVOID

Avoid high temperatures, open flames, welding, smoking and ignitions sources. Under certain conditions, H_2S can react to form pyrophoric iron compounds in enclosed spaces such as sulfur pits. Exposure of pyrophoric compounds to air or moisture can cause excessive heat generation, smoke and toxic gases, and fire.

INCOMPATIBLE MATERIALS

Sulfur is incompatible with a number of chemical materials including, but not limited to, chlorates, nitrates, other oxidizers, carbides, halogens, phosphorus, and heavy metals. This incompatibility may result in fire, excessive heat generation, uncontrolled reaction, release of toxic products and/or explosion. A comprehensive list of incompatible materials may be found in the latest edition of Sax's “Dangerous Properties of Industrial Materials” and the NFPA “Hazardous Materials Guide”.

HAZARDOUS DECOMPOSITION PRODUCTS:

Sulfur burns to sulfur dioxide. Sulfur reactions with hydrocarbons and other organic materials may produce hydrogen sulfide and carbon disulfide. Other possibly toxic reaction or decomposition products are highly dependent on the incompatible material.

11. TOXICOLOGICAL PROPERTIES (rev. Jan-99; Tox-99)

ACUTE TOXICITY

Large doses (15 grams) by mouth may lead to hydrogen sulfide production in the body, chiefly due to bacterial action within the colon.

Rat-oral LD50 = 175 mg/kg

CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenicity: **OSHA:** NO **IARC:** NO **NTP:** NO **ACGIH:** NO

Prolonged inhalation of dust over several years (as demonstrated in miners) may cause respiratory disease, complicated by emphysema and bronchiectasis. Asthma and inflammation of the frontal and maxillary sinuses are frequent complications. Pulmonary function may be reduced showing increased oxygen consumption, reduced respiratory volume, and impaired carbon dioxide diffusion capacity. Radiological examinations have revealed irregular opacities in the lungs and nodulation.

12. ECOLOGICAL INFORMATION (rev. Mar-98)

Keep out of sewers, drainage and waterways. Report spills and releases, as applicable, under Federal and State regulations.

13. DISPOSAL CONSIDERATIONS (rev. Mar-98)

Consult federal, state and local waste regulations to determine appropriate disposal options.

14. TRANSPORTATION INFORMATION (rev. Feb-94)

	DOMESTIC SHIPMENT	INTERNATIONAL SHIPMENT
PROPER SHIPPING NAME:	SULFUR	SULFUR
HAZARD CLASS, PACKING GROUP:	9, PG III	4.1, PG III
DOT IDENTIFICATION NUMBER:	NA 1350	UN 1350
DOT SHIPPING LABEL:	CLASS 9	FLAMMABLE SOLID
PROPER SHIPPING NAME:	SULFUR, MOLTEN	SULFUR, MOLTEN
HAZARD CLASS, PACKING GROUP:	9, PG III	4.1, PG III
DOT IDENTIFICATION NUMBER:	NA 2448	UN 2448
DOT SHIPPING LABEL:	CLASS 9	FLAMMABLE SULFUR

15. REGULATORY INFORMATION (rev. Mar-98)

U.S. FEDERAL, STATE and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a “petroleum exclusion” clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304) may still apply.

SARA SECTION 311/312 - HAZARD CLASSES

ACUTE HEALTH	CHRONIC HEALTH	FIRE	SUDDEN RELEASE OF PRESSURE	REACTIVE
X	X	X	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product does not contain any chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372.

CANADIAN REGULATORY INFORMATION (WHMIS)

Class B, Division 4 (Flammable Solid) and Class D, Div 1A (Very Toxic material - hydrogen sulfide)

16. OTHER INFORMATION (rev. Mar-00)

NFPA® HAZARD RATING:	HEALTH:	1	Slight
	FIRE:	1	Slight
	REACTIVITY:	0	Negligible
HMIS® HAZARD RATING:	HEALTH:	1	Slight
	FIRE:	1	Moderate
	REACTIVITY:	0	Negligible

SPECIAL HAZARDS: Toxic and flammable hydrogen sulfide (poison gas) may accumulate in the vapor space of molten sulfur storage container

SUPERSEDES MSDS DATED: 01/14/99

ABBREVIATIONS:

AP = Approximately < = Less than > = Greater than
N/A = Not Applicable N/D = Not Determined ppm = parts per million

ACRONYMS:

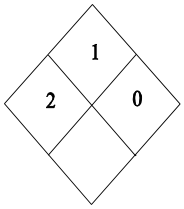
ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute (212) 642-4900
API	American Petroleum Institute (202) 682-8000
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation [General Info: (800)467-4922]
EPA	U.S. Environmental Protection Agency
HMIS	Hazardous Materials Information System
IARC	International Agency For Research On Cancer
MSHA	Mine Safety and Health Administration
NFPA	National Fire Protection Association (617) 770-3000
NIOSH	National Institute of Occupational Safety and Health
NOIC	Notice of Intended Change (proposed change to ACGIH TLV)
NTP	National Toxicology Program
OPA	Oil Pollution Act of 1990
OSHA	U.S. Occupational Safety & Health Administration
PEL	Permissible Exposure Limit (OSHA)
RCRA	Resource Conservation and Recovery Act
REL	Recommended Exposure Limit (NIOSH)
SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	Self-Contained Breathing Apparatus
SPCC	Spill Prevention, Control, and Countermeasures
STEL	Short-Term Exposure Limit (generally 15 minutes)
TLV	Threshold Limit Value (ACGIH)
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average (8 hr.)
WEEL	Workplace Environmental Exposure Level (AIHA)
WHMIS	Canadian Workplace Hazardous Materials Information System

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

MATERIAL SAFETY DATA SHEET



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME(S): VAPAM® HL Soil Fumigant; METAM 426; METAM SODIUM 42% TECHNICAL; METACIDE 42; VAPAM® RUP; Tierracide 510; RID-A-VEC® II; RID-A-VEC®
CHEMICAL NAME: Sodium N-methyldithiocarbamate solution
MOLECULAR FORMULA: $C_2H_4NNaS_2$
GENERAL USE: Soil Fumigant
PRODUCT DESCRIPTION: Orange to light yellow-green liquid with the possibility of an amine or a sulfur odor.
EPA Registration Number(s): 5481-421; 5481-423; 5481-446; 5481-468; 5481-477
MSDS No.: 141_21
Current Revision Date: 31 August, 2004

MANUFACTURER:
AMVAC CHEMICAL CORPORATION
4100 E. Washington Blvd.
Los Angeles, CA 90023-4406
Phone: 323-264-3910
FAX: 323-268-1028

EMERGENCY TELEPHONE NUMBERS:
MANUFACTURER: 323-264-3910
TRANSPORTATION (24 HOURS)
CHEMTREC: 800-424-9300
OTHER:
AMVAC: 323-264-3910

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	WT %	CAS No.
Sodium N-methyldithiocarbamate (VAPAM®, Metam Sodium)	42.0%	137-42-8
Inert Ingredients	58.0%	

Ingredients not precisely identified are proprietary or nonhazardous.
Values are not product specifications.

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)

COMPONENT	HAZARD	OSHA PEL*	ACGIH TLV*
NONE LISTED			

* Exposure Limits 8 hrs. TWA (ppm)

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

DANGER! Dilution with water may generate poisonous gases (Methyl isothiocyanate (MITC) or Hydrogen sulfide). Dilution with acids may generate flammable gases (Carbon disulfide or Monomethylamine). WARNING: Product is corrosive to skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Harmful if swallowed. Harmful if inhaled. Harmful if absorbed through the skin. Irritating to eyes, nose and throat. Do not get on skin or clothing. Avoid breathing vapor or spray mist. Do not get in eyes.

Toxic to fish. Do not contaminate water bodies.

POTENTIAL HEALTH EFFECTS

ROUTE(S) OF ENTRY: Skin contact, inhalation, ingestion, and eye contact with the liquid product. As a result of use of the product, applicators and other persons present in the area of the application can be exposed to MITC and/or hydrogen sulfide. These chemicals can be evolved as gases from the soil of an application. MITC has a horseradish like odor and can be very irritating to the eyes. Hydrogen sulfide has a rotten egg odor and can be very offensive. If either odor is detected near an application of Metam, notify the applicator of the problem and take appropriate measures to minimize/avoid exposure. The nose becomes deadened to a hydrogen sulfide odor, so not being able to detect the odor any longer does not mean the exposure has ended.

SIGNS OF ACUTE OVEREXPOSURE: Overexposure to Metam Sodium as sold may result in damage to the skin, skin irritation, excessive salivation, sweating, fatigue, weakness, nausea, headache, dizziness, eye, nose, throat and respiratory tract irritation. In addition, dilution to use levels results in the release of methyl isothiocyanate (MITC) and/or hydrogen sulfide. Overexposure to MITC may result in strong skin and eye irritation, running nose, dizziness, cramps, nausea, vomiting, and mild to severe disturbances of the nervous system. Overexposure to hydrogen sulfide may result in severe irritation to the eyes and mucous membranes. In addition, exposure may result in headache, dizziness, excitement, staggering gait, diarrhea, difficult or painful urination, difficult breathing, chronic pulmonary edema, coma and death.

SIGNS OF CHRONIC OVEREXPOSURE: Same as above, plus conjunctivitis, photophobia, digestive disturbances, weight loss, general bodily weakness, and blurred vision. In addition, laboratory studies have shown that exposure to the active ingredient, followed by ingestion of alcohol, may cause an adverse reaction, including low blood pressure, rapid heart beat, and flushing of the skin. Consumption of alcohol during and after exposure to this product should be avoided.

3. HAZARDS IDENTIFICATION, cont'd

OTHER POTENTIAL HEALTH EFFECTS: Laboratory studies have shown some carcinogenic effects and some developmental effects in laboratory animals. *In vitro* laboratory studies have shown some evidence of mutagenicity, but there is no conclusive evidence *in vivo*. Exposure monitoring studies conducted during agricultural applications of Metam sodium have shown that human exposure is extremely low; therefore, any potential risk to humans from Metam sodium exposure is considered minimal.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Impaired pulmonary function and preexisting eye problems may be aggravated. Preexisting skin diseases may also be aggravated by exposure to the decomposition products.

Care should be exercised and all label instructions should be followed, in the handling of products containing Metam Sodium.

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4. FIRST AID MEASURES

EYES: Immediately flush the eyes with copious amounts of clear, cool running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Contact a physician immediately. If there will be a delay in getting medical attention, rinse the eyes for at least another 15 minutes.

INHALATION: Remove victim to fresh air. If breathing has ceased, clear the victim's airway and start mouth-to-mouth artificial respiration. If breathing is difficult, give oxygen. Contact a physician immediately.

INGESTION: Immediately dilute the swallowed product by giving large quantities of water, but do not induce vomiting. If vomiting occurs, give fluids again. Have a physician determine if condition of patient will permit induction of vomiting or evacuation of stomach. Never give anything by mouth to an unconscious person. Contact a physician immediately.

SKIN: Immediately flush all affected areas with large amounts of clear water for at least 15 minutes. Remove contaminated clothing. Do not attempt to neutralize with chemical agents. Wash clothing before reuse. If skin irritation develops, contact a physician immediately.

NOTE TO PHYSICIANS: Treat symptomatically. Contact your local, state, or national poison control center for further information.

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5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Flash Point: > 200°F (TCC)
Autoignition Temperature: Not available

5. FIRE FIGHTING MEASURES, cont'd

Flammable Limits:
Lower flammable limit: Not available
Upper flammable limit: Not available

EXPLOSIVITY:
Mechanical Impact: Not available. Not expected to be sensitive to mechanical impact.
Static Discharge: Not available
Rate of Burning: Not available
Explosive Power: Not available

HAZARDOUS COMBUSTION PRODUCTS: This product can release toxic fumes of methylisothiocyanate (MITC) and hydrogen sulfide, as well as nitrogen oxides, when heated to decomposition or diluted with water.

EXTINGUISHING MEDIA: This product is not flammable. However, this product may support combustion under fire conditions and will generate toxic fumes under fire conditions. Base extinguisher media on surrounding materials. **NOTE:** Dilution with water may cause generation of flammable and toxic fumes of MITC and Hydrogen sulfide. See **Chemical Stability** information in SECTION 10.

FIRE FIGHTING INSTRUCTIONS: Evacuate nonessential personnel from the area. Wear self-contained breathing apparatus and impervious clothing. Clean all clothing before reuse.

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6. ACCIDENTAL RELEASE MEASURES

GENERAL: Use adequate ventilation and air-supplied respirators, as well as impervious clothing and safety goggles. Contact with moisture in the soil can generate the flammable and toxic gases MITC and Hydrogen sulfide. Keep bystanders upwind and away from the spill.

SMALL SPILL: Cover with absorbent (clay, sawdust, straw, kitty litter, etc.), to absorb the liquid and vapors. Sweep into an open drum. Clean the area with common powdered household detergent and a stiff brush and just enough water to make a slurry. Absorb and sweep into the same open drum. Rinse with water, absorb, and add to the waste drum. Close the drum and dispose of properly.

LARGE SPILL: Dike the spill to prevent contamination of local water sources. Siphon the majority of the liquid into drums for use or disposal, depending on the circumstances. Clean the area as described for a small spill.

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7. HANDLING AND STORAGE

HANDLING: Prevent skin contact. Do not breathe fumes. Wear appropriate personal protective equipment. Wash thoroughly and change clothes after handling. See product label for more detailed handling procedures.

7. HANDLING AND STORAGE, cont'd

STORAGE: Do not contaminate water, food or feed by storage or disposal. Store product in a cool, dry, locked place out of reach of children. Do not store below 32°F. Product crystallizes at lower temperatures. See label for specific instructions.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: A well-ventilated area is recommended for handling Metam Sodium. Use of mechanical or local exhaust systems is recommended.

RESPIRATORY PROTECTION: A properly FIT-TESTED NIOSH/MSHA approved respirator fitted with organic vapor cartridges may be required when working with this product. Specific use regulations are listed on the label.

SKIN PROTECTION: Chemical resistant gloves, body covering clothing that has long sleeves and long pants, and chemical resistant shoes or boots, are required to prevent skin contamination. A chemical resistant apron may be required under certain circumstances. Wear clean clothes daily. Wash well with soap and water after handling this product. See the label for more specific instructions.

EYE PROTECTION: Safety glasses must be worn whenever working with chemicals. Face-sealing goggles (or full-face respirators) are required whenever ventilation is poor or a rotten egg odor is detected.

OTHER PROTECTION: An eyewash station and a safety shower should be located in the work area.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	Orange to light yellow-green liquid.
Odor:	Essentially odorless to fairly strong odor of amine or sulfur.
Boiling Point:	112°C/234°F
Freezing/Melting Point:	0°C
Vapor Pressure (mm/Hg):	24 mm Hg @ 25°C
Vapor Density:	Not available
Specific Gravity:	1.21 g/mL @ 20°C/4°C(68°F/39°F)
Density:	10.1 lb/gal
Evaporation Rate:	1.0 as compared to water.
Percent Volatile by Vol:	82% (to 150°C)
Solubility in Water:	Miscible
pH:	9.5 - 11.0
Partition Coefficient (W/O):	Not applicable

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10. STABILITY AND REACTIVITY

CHEMICAL STABILITY (Conditions to avoid): Metam Sodium decomposes, when diluted with water, to methyl isothiocyanate (MITC, a lachrymator and moderate poison) and/or to hydrogen sulfide (a highly poisonous gas). Use the solution promptly after mixing. Do not allow the solution to stand. As originally packaged, Metam Sodium solutions are stable under normal storage conditions for up to 2 years.
Metam Sodium can also decompose to carbon disulfide and monomethylamine (both highly flammable) if contacted with a strong acid.

INCOMPATIBILITY: This product is incompatible with additional water and strong aqueous acids. In addition, it is corrosive to copper, brass, and zinc, and may soften and/or discolor iron.

HAZARDOUS DECOMPOSITION PRODUCTS: When treated with water or heated to decomposition, this product will give off toxic fumes of methyl isothiocyanate (MITC), hydrogen sulfide, and nitrogen oxides. If treated with strong acids, fumes of carbon disulfide and monomethylamine will be given off.

HAZARDOUS POLYMERIZATION: This product will not polymerize.

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11. TOXICOLOGICAL INFORMATION

Information has been included for the product and for two potential decomposition products in order to help potential users to have a clearer idea of the hazards associated with this product.

Toxicological Category	Specific Application	Metam Sodium (Product)	MITC (Decomposition)	Hydrogen sulfide (Decomposition)
INGESTION	Oral LD_{50} (rat):	812 mg/kg	55-220 mg/kg	
INHALATION	Inhalation LC_{50} (rat)	2.28 mg/L	1.9 mg/L air (1 hr)	444 ppm
DERMAL	Skin LD_{50} (rabbit)	>2020 mg/kg	33 - 202 mg/kg	
IRRITATION	Eye (rabbit) Skin (rabbit)	Mild Irritant Moderate Irritant	Corrosive Corrosive	Corrosive No information
OTHER	Skin sensitization (guinea pig)	Sensitizer	Sensitizer	No Information

11. TOXICOLOGICAL INFORMATION, cont'd

TERATOGENICITY: Laboratory studies on Metam Sodium 42% have shown some developmental effects in laboratory animals.

MUTAGENICITY: Laboratory studies on Metam Sodium 42% have shown some evidence of mutagenicity *in vitro* but no conclusive evidence *in vivo*.

CARCINOGENICITY: Laboratory studies on Metam Sodium 42% have shown some carcinogenic effects in laboratory animals.

REPRODUCTIVE TOXICITY: Laboratory studies on Metam Sodium 42% have shown no evidence of reproductive toxicity in laboratory animals.

TOXICOLOGICALLY SYNERGISTIC PRODUCTS: No data are available for Metam Sodium products.

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12. ECOLOGICAL INFORMATION

This product is toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

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13. DISPOSAL CONSIDERATIONS

Disposal must be at an approved waste facility for chemical wastes. The empty container must be triple rinsed prior to disposal. Consult the label and Federal, State, or local disposal authorities for the actual method(s) to be followed.

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14. TRANSPORTATION INFORMATION

DOT Class:	8
UN Number:	UN3266
IMDG Class (Sea):	8
Marine Pollutant:	Yes
IATA (Air):	8
Packing Group:	III
Hazard Label(s):	CORROSIVE
ADR Class (Road):	Not listed in ADR
Proper Shipping Name(s):	Corrosive liquid, basic, inorganic, n.o.s.(Metam Sodium 42%)
Reportable Quantity:	No

14. TRANSPORTATION INFORMATION, cont'd

PACKAGING

General Description: Bulk; 5 gallon, 30 gallon, and 55 gallon poly drums; 300 gallon stainless steel and rigid plastic tote bins

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15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

This product is registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.
When these products are used for small areas they are considered to be RESTRICTED USE PESTICIDES. Due to acute toxicity, retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's Certification.

SARA TITLE III DATA

Section 311 & 312 Hazard Categories:

Immediate Health Hazard:	Yes
Delayed Health Hazard:	Yes
Fire Hazard:	No
Reactive Hazard:	No
Sudden Pressure Release Hazard:	No

Section 302 Extremely Hazardous Substances: None

Section 313 Toxic Chemicals: Metam Sodium (CAS 137-42-8) - 42%

CERCLA/EHS Reportable Quantity (RQ): None

STATE REGULATIONS:

CALIFORNIA (Proposition 65): Warning: This product contains Metam Sodium, a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

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16. OTHER INFORMATION

MSDS Status:

Date This Revision: 31 August, 2004
Date Previous Revision: 22 August 2003
Person Responsible for Preparation: Gary A. Braden

Reasons for Revision: Annual Review. Changes have been made in sections 1, 2, 3, 10, 11, and 15 to update information and/or to make the information easier to understand and use.

16. OTHER INFORMATION, cont'd

DISCLAIMER:
This information is provided for the limited guidance to the user. While AMVAC believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for its purposes. The user is advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional, or variable conditions or circumstances exist (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates.

ABBREVIATIONS:

ACGIH	-	American Conference of Governmental Industrial Hygienists
CERCLA	-	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	-	Department of Transportation
EHS	-	Extremely Hazardous Substance
EPA	-	Environmental Protection Agency
FIFRA	-	Federal Insecticide, Fungicide, and Rodenticide Act
HIS	-	Health Information Services
IARC	-	International Agency for Research on Cancer
IATA	-	International Air Transport Association
IMDG	-	International Maritime Dangerous Goods
NTP	-	National Toxicology Program
OSHA	-	Occupational Safety and Health Agency
SARA	-	Superfund Amendments and Reauthorization Act
TSCA	-	Toxic Substances Control Act

This is the last page of this MSDS. There should be 9 pages.

Material Safety Data Sheet

MEYCHEM GLYPHOSATE Herbicide
Manufactured for
MEY Corporation
121 S. Estes Drive, Suite 101
Chapel Hill, NC 27514 U.S.A.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name
MEYCHEM Glyphosate Herbicide (alternate brand name Wise Up Plus)

EPA Reg. No.
80967-1

Chemical name
Not applicable

Synonyms
None

Company
MEY Corporation, 121 S. Estes Drive, Suite 101, Chapel Hill, NC 27514

Telephone: (919) 932-5800 Fax: (919) 932-5820

Emergency numbers
FOR CHEMICAL EMERGENCY, SPILL LEAK, FIRE, EXPOSURE, OR ACCIDENT Call CHEMTREC - Day or Night: 1-800-424-9300 toll free in the continental U.S., Puerto Rico, Canada, or Virgin Islands. For calls originating elsewhere: 1-703-527-3887 (collect calls accepted).

2. COMPOSITION/INFORMATION ON INGREDIENTS

Active ingredient
Isopropylamine salt of N-(phosphonomethyl)glycine;
{Isopropylamine salt of glyphosate}

Composition

COMPONENT	**CAS No.**	% **by weight (approximate)**
Isopropylamine salt of glyphosate	38641-94-0	41.0
Other ingredients		59.0

OSHA Status
This product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

3. HAZARDS IDENTIFICATION

Emergency overview
Appearance and odor (color/form/odor):
Amber - Brown / Liquid, (viscous) / Slight

CAUTION!
CAUSES MODERATE EYE IRRITATION

Potential health effects

Likely routes of exposure

Skin contact, eye contact, inhalation

Eye contact, short term

Irritating to eyes.

Skin contact, short term

Not expected to produce significant adverse effects when recommended use instructions are followed.

Inhalation, short term

Not expected to produce significant adverse effects when recommended use instructions are followed.

Refer to section 11 for toxicological and section 12 for environmental information.

4. FIRST AID MEASURES

Eye contact

Immediately flush with plenty of water.
Continue for at least 15 minutes.
If easy to do, remove contact lenses.
If there are persistent symptoms, obtain medical advice.

Skin contact

Immediately wash affected skin with plenty of water. Take off contaminated clothing, wristwatch, jewellery. Wash clothes before re-use.

Inhalation

Remove to fresh air.

Ingestion

Immediately offer water to drink.
Never give anything by mouth to an unconscious person.
Do NOT induce vomiting unless directed by medical personnel. If symptoms occur, get medical attention.

Advice to doctors

This product is not an inhibitor of cholinesterase.

Antidote

Treatment with atropine and oximes is not indicated.

5. FIRE FIGHTING MEASURES

Flash point None.

Extinguishing media
Recommended: Water, foam, dry chemical, carbon dioxide (CO2)

Unusual fire and explosion hazards
Minimize use of water to prevent environmental contamination.
Environmental precautions: see section 6.

Hazardous products of combustion
Carbon monoxide (CO), nitrogen oxides (NOx), phosphorus oxides (PxOy)

Fire fighting equipment
Self-contained breathing apparatus.
Equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protection recommended in section 8.

Environmental precautions
SMALL QUANTITIES:
Low environmental hazard.
LARGE QUANTITIES:
Minimize spread.
Contain spillage with sand bags or other means.
Keep out of drains, sewers, ditches and water ways.
Notify authorities.

Methods for cleaning up
Absorb in earth, sand or absorbent material. Dig up heavily contaminated soil.
Collect in containers for disposal.
Refer to section 7 for types of containers.
Flush residues with small quantities of water.
Minimize use of water to prevent environmental contamination.

Refer to section 13 for disposal of spilled material.

7. HANDLING AND STORAGE

Good industrial practice in housekeeping and personal hygiene should be followed.

Storage
Compatible materials for storage: stainless steel, aluminum, fiberglass, plastic
Incompatible materials for storage: unlined mild steel, galvanized steel, see section 10.
Keep out of reach of children.
Keep away from food, drink and animal feed. Keep only in the original container.
Shelf life currently under test.
Recommended maximum shelf life: 2 years.
Follow all local/regional/national regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne exposure limits

Components	Exposure Guidelines
Isopropylamine salt of glyphosate	No specific occupational exposure limit has been established.
Other ingredients	No specific occupational exposure limit has been established.

Engineering controls
No special requirement when used as recommended.

Eye protection
If there is significant potential for contact: Wear chemical goggles.
Applicators and other handlers must wear eye protection.

Skin protection
If repeated or prolonged contact: Wear chemical resistant gloves.

Respiratory protection
No special requirement when used as recommended.

When recommended, consult manufacturer of personal protective equipment for the appropriate type of equipment for a given application.

9. PHYSICAL AND CHEMICAL PROPERTIES

These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

Color/color range:	Amber - Brown
Form:	Liquid (viscous)
Odor:	Slight
Flash point:	None.
Specific gravity:	1.16
pH:	4.0 – 6.0

10. STABILITY AND REACTIVITY

Stability
Stable under normal conditions of handling and storage.

Hazardous decomposition
Thermal decomposition: Hazardous products of combustion: see section 5.

Materials to avoid/Reactivity
Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

11. TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professionals.

Data obtained on similar products and on components are summarized below.

Acute oral toxicity

Rat, LD50: > 5,000 mg/kg body weight Practically non-toxic.
FIFRA category IV.

Acute dermal toxicity

Rat, LD50: > 5,000 mg/kg body weight Practically non-toxic.
FIFRA category IV.

Skin irritation

Rabbit, 6 animals, OECD 404 test: Days to heal: 10
Primary Irritation Index (PII): 1.7/8.0 Slight irritation.
FIFRA category IV.

Eye irritation

Rabbit, 6 animals, OECD 405 test:
Days to heal: 7
Moderate irritation.
FIFRA category III.

Acute inhalation toxicity

Rat, LC50, 4 **hours, aerosol:** > 2.01 mg/L Practically non-toxic.
FIFRA category IV.

Skin sensitization

Guinea pig, Buehler test:
Positive incidence: 0 %
Negative.
No skin sensitization

N-(phosphonomethyl)glycine; {glyphosate}

Mutagenicity

In vitro and in vivo mutagenicity test(s):
Not mutagenic.

Repeated dose toxicity

Rabbit, dermal, 21 days:
NOAEL toxicity: > 5,000 mg/kg body weight/day Target organs/systems: none
Other effects: none

Rat, oral, 3 months:
NOAEL toxicity: > 20,000 mg/kg diet Target organs/systems: none
Other effects: none

Carcinogenicity

Mouse, oral, 24 months:
NOEL tumour: > 30,000 mg/kg diet NOAEL toxicity: ~ 5,000 mg/kg diet Tumours: none
Target organs/systems: liver
Other effects: decrease of body weight gain, histopathologic effects

Rat, oral, 24 months:

NOEL tumour: > 20,000 mg/kg diet NOAEL toxicity: ~ 8,000 mg/kg diet Tumours: none
Target organs/systems: eyes
Other effects: decrease of body weight gain, histopathologic effects

Toxicity to reproduction/fertility

Rat, oral, 3 generations:

NOAEL toxicity: > 30 mg/kg body weight NOAEL reproduction: > 30 mg/kg body weight Target organs/systems in parents: none
Other effects in parents: none
Target organs/systems in pups: none
Other effects in pups: none

Developmental toxicity/teratogenicity

Rat, oral, 6 - 19 days of gestation:

NOAEL toxicity: 1,000 mg/kg body weight NOAEL development: 1,000 mg/kg body weight
Other effects in mother animal: decrease of body weight gain, decrease of survival
Developmental effects: weight loss, post-implantation loss, delayed ossification
Effects on offspring only observed with maternal toxicity.

Rabbit, oral, 6 - 27 days of gestation:

NOAEL toxicity: 175 mg/kg body weight NOAEL development: 175 mg/kg body weight Target organs/systems in mother animal: none Other effects in mother animal: decrease of survival Developmental effects: none

12. ECOLOGICAL INFORMATION

This section is intended for use by ecotoxicologists and other environmental specialists.

Data obtained on similar products and on components are summarized below.

Similar formulation

Aquatic toxicity, fish

Rainbow trout (Oncorhynchus mykiss):

Acute toxicity, 96 hours, static, LC50: 5.4 mg/L Moderately toxic.

Bluegill sunfish (Lepomis macrochirus):

Acute toxicity, 96 hours, static, LC50: 7.3 mg/L Moderately toxic.

Aquatic toxicity, invertebrates

Water flea (Daphnia magna):

Acute toxicity, 48 hours, static, EC50: 11 mg/L Slightly toxic.

Avian toxicity

Mallard duck (Anas platyrhynchos):

Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet Practically non-toxic.

Bobwhite quail (Colinus virginianus):

Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet Practically non-toxic.

Arthropod toxicity

Honey bee (Apis mellifera):

Oral/contact, 48 hours, LD50: > 100 µg/bee Practically non-toxic.

Soil organism toxicity, invertebrates

Earthworm (Eisenia foetida):

Acute toxicity, 14 days, LC50: > 1,250 mg/kg soil Practically non-toxic.

Isopropylamine salt of glyphosate (62%)

Aquatic toxicity, algae/aquatic plants

Green algae (Scenedesmus subspicatus):

Acute toxicity, 72 hours, static, EbC50 (biomass): 72.9 mg/L Slightly toxic.

N-(phosphonomethyl)glycine; (glyphosate)

Bioaccumulation

Bluegill sunfish (Lepomis macrochirus): Whole fish: BCF: < 1

No significant bioaccumulation is expected.

Dissipation

Soil, field:

Half life: 2 - 174 days

Koc: 884 - 60,000 L/kg

Adsorbs strongly to soil.

Water, aerobic: Half life: < 7 days

Full denomination of most frequently used acronyms. BCF (Bioconcentration Factor), BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), EC50 (50% effect concentration), ED50 (50% effect dose), I.M. (intramuscular), I.P. (intraperitoneal), I.V. (intravenous), Koc (Soil adsorption coefficient), LC50 (50% lethality concentration), LD50 (50% lethality dose), LDLo (Lower limit of lethal dosage), LEL (Lower Explosion Limit), LOAEC (Lowest Observed Adverse Effect Concentration), LOAEL (Lowest Observed Adverse Effect Level), LOEC (Lowest Observed Effect Concentration), LOEL (Lowest Observed Effect Level), MEL (Maximum Exposure limit), MTD (Maximum Tolerated Dose), NOAEC (No Observed Adverse Effect Concentration), NOAEL (No Observed Adverse Effect Level), NOEC (No Observed Effect Concentration), NOEL (No Observed Effect Level), OEL (Occupational Exposure Limit), PEL (Permissible Exposure Limit), PII (Primary Irritation Index), Pow (Partition coefficient n-octanol/water), S.C. (subcutaneous), STEL (Short-Term Exposure Limit), TLV-C (Threshold Limit Value-Ceiling), TLV-TWA (Threshold Limit Value - Time Weighted Average), UEL (Upper Explosion Limit)

13. DISPOSAL CONSIDERATIONS

Product

Recycle if appropriate facilities/equipment available. Burn in special, controlled high temperature incinerator.
Keep out of drains, sewers, ditches and water ways.
Follow all local/regional/national regulations.

Container

See the individual container label for disposal information.
Triple rinse empty containers.
Pour rinse water into spray tank.
Store for collection by approved waste disposal service.
Recycle if appropriate facilities/equipment available.
Emptied containers retain vapor and product residue.
Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.
Follow all local/regional/national regulations.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Not hazardous under the applicable DOT, ICAO/IATA, IMO, TDG and Mexican regulations.

15. REGULATORY INFORMATION

TSCA Inventory

All components are on the US EPA's TSCA Inventory

OSHA Hazardous Components

Surfactant(s)

SARA Title III Rules

Section 311/312 Hazard Categories
Immediate
Section 302 Extremely Hazardous Substances
Not applicable.
Section 313 Toxic Chemical(s)
Not applicable.

CERCLA Reportable quantity

Not applicable.

16. OTHER INFORMATION

The information given here is not necessarily exhaustive but is representative of relevant, reliable data.
Follow all local/regional/national regulations.
Please consult supplier if further information is needed.

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, MEY Corporation makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for the purposes prior to use. In no event will MEY Corporation be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR TO THE PRODUCT TO WHICH INFORMATION REFERS.

1. IDENTIFICATION

Product name:	**Quali-Pro® Glyphosate T&O**
Chemical name of active ingredient(s):	Glyphosate: N-(phosphonomethyl) glycine (in the form of its isopropylamine salt)
Manufacturer:	FarmSaver.com, LLC. 4515 Falls of Neuse Road, Suite 300 Raleigh, NC 27609 Phone: 1-800-979-8994
For fire, spill, and/or leak emergencies, contact Chemtrec:	Phone: 1-800-424-9300 Outside US: 1-703-527-3887
For medical emergencies and health and safety inquiries, contact Prosar:	Phone: 1-800-308-5391

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMMON NAME	CAS NO.	%	OSHA PEL	ACGIH TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Isopropylamine salt of glyphosate	38641-94-0	41	NA	NA	NA	NA

3. HAZARDS IDENTIFICATIONS

PHYSICAL PROPERTIES

Appearance: Amber brown liquid
Odor: Slight

EMERGENCY OVERVIEW: WARNING Keep out of reach of children. Causes substantial but temporary eye injury. Harmful if swallowed or inhaled. Do not get in eyes or on clothing. Avoid breathing vapor or spray mist.

HAZARDOUS PRODUCTS OF COMBUSTION: Carbon monoxide (CO), nitrogen oxides (NOx), phosphorous oxides (PxOy).

LIKELY ROUTES OF EXPOSURE: Skin and eye contact.

SYMPTOMS OF ACUTE EXPOSURE: Causes temporary eye irritation. Not expected to produce significant adverse effects when recommended instructions are followed. Symptoms of acute exposure include gastro-intestinal irritation, nausea, vomiting, diarrhea, increased fluid in lungs, and decreased blood pressure.

MEDICAL CONDITIONS LIKELY TO BE AGGRAVATED BY EXPOSURE: None known.

4.FIRST AID MEASURES

FIRST AID	
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment.
IF SWALLOWED:	• Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For medical emergencies involving this product, call 1-800-308-5391.	

5. FIRE FIGHTING MEASURES

FLASH POINT: Not applicable
FLAMMABLE LIMITS: LFL/UFL: Not applicable
AUTOIGNITION TEMPERATURE: Not applicable
FLAMMABILITY: Not applicable

EXTINGUISHING MEDIA: Water, dry chemical, carbon dioxide (CO_2), foam

UNUSUAL FIRE, EXPLOSION, AND REACTIVITY HAZARDS: None

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide (CO), nitrogen oxides (NOx), phosphorous oxides (PxOy)

FIRE-FIGHTING PROCEDURES: Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent unauthorized entry to the fire area. Equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: For small spills, flush spill area with water. Keep wash water out of drains, sewers, ditches and waterways. For large spills, absorb in sand or absorbent material. Dig up contaminated soil. Collect in containers for disposal. Flush residues with small quantities of water. Minimize use of water to prevent environmental runoff. Dispose of in accordance with local, state, and federal regulations.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING: Good industrial practice in housekeeping and personal hygiene should be followed. Avoid contact with skin and eyes. When using, do not eat, drink or smoke. Wash hands thoroughly after handling or contact with the product. Thoroughly clean equipment after use. Emptied containers retain vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. Follow labeled warnings even after container is empty.

PRECAUTIONS TO BE TAKEN IN STORAGE: DO NOT contaminate water, foodstuffs, feed or seed by storage or disposal. Keep container closed to prevent spills and contamination. Store product in original container only.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION EQUIPMENT (PPE) ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

INGESTION PROTECTION: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material.

EYE PROTECTION: Wear chemical goggles or full-face shield.

HAND PROTECTION: Chemical-resistant gloves made of any waterproof material.

SKIN PROTECTION: Long-sleeved shirt, long pants, shoes plus socks.

ADDITIONAL PROTECTIVE MEASURES: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:
Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

EXPOSURE GUIDELINES: Refer to Section 2.
ENGINEERING CONTROLS: Use adequate ventilation to minimize airborne concentrations of this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Amber brown liquid
ODOR: Slight
FLASH POINT: Does not flash.
pH: 4.4 – 5.0
BOILING POINT: 150°C @ 760 mmHg
SPECIFIC GRAVITY/DENSITY: 1.1655 g/mL @ 20°C/15.6° C

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal use and storage conditions.
CONDITIONS TO AVOID: None known.
MATERIALS TO AVOID: Reacts with bases to liberate heat. Reacts with galvanized steel or unlined mild steel to product hydrogen, a highly flammable gas that could explode.
HAZARDOUS POLYMERIZATION: Not known to occur.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide (CO), nitrogen oxides (NOx), phosphorous oxides (PxOy)

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/IRRITATION STUDIES

Acute Oral LD_{50} (Rat):	>5,000 mg/kg
Acute Dermal LD_{50} (Rat):	>5,000 mg/kg
Acute Inhalation LC_{50} (Rat):	>2.6 mg/L air (4-hr.)
Eye Irritation (Rabbit):	Moderate irritation
Dermal Irritation (Rabbit):	No irritation
Dermal Sensitization (Guinea Pig):	Not a skin sensitizer

REPRODUCTIVE/FERTILITY EFFECTS
None observed.

CARCINOGENICITY
None observed.

DEVELOPMENTAL TOXICITY/TERATOGENICITY
None observed.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. DO NOT contaminate water when cleaning of equipment or disposing of equipment washwaters.

SUMMARY OF EFFECTS: Moderately toxic to fish and algae/aquatic plants. Slightly toxic to invertebrates. Practically non-toxic to birds and bees.

ECO-ACUTE TOXICITY:

Rainbow Trout 96-hour LC50:	8.2 mg/L
Bluegill Sunfish 96-hour LC50:	5.8 mg/L
Daphnia magna 48-hour EC50:	12.9 mg/L
Green algae 96-hour EC50:	2.6 mg/L
Bobwhite Quail LC50:	>5,620 mg/kg
Mallard Duck LC50:	>5,620 mg/kg
Honey Bee LD50:	>100 µg/bee

13. DISPOSAL CONSIDERATIONS

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.

PRODUCT DISPOSAL: Wastes that result from using this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal, or in accordance with all applicable Federal, state, or local procedures. Empty containers retain vapor and product residues. Follow all labeled safeguards until container is cleaned, reconditioned, or destroyed.

CONTAINER DISPOSAL: Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

14. TRANSPORT INFORMATION

DOT CLASSIFICATION:
Not regulated

INTERNATIONAL TRANSPORTATION
IMO (vessel): Not regulated

IATA (air): Not regulated

15. REGULATORY INFORMATION

SARA TITLE III CLASSIFICATION:

Section 302:	Not applicable
Section 311/312:	Acute health hazard (immediate)
Section 313:	Not applicable

CA PROPOSITION 65: Not applicable

CERCLA RQ: Not applicable

RCRA CLASSIFICATION: Not applicable

TSCA STATUS: Not applicable

16. OTHER INFORMATION

NFPA HAZARD RATINGS	**NFPA**		
HEALTH:	1	0	MINIMAL
FLAMMABILITY:	0	1	SLIGHT
REACTIVITY:	0	2	MODERATE
		3	HIGH
		4	SEVERE

MSDS DATE: 2-18-09.

The information herein is given in good faith, but no warrant, express or implied, is made. Consult FarmSaver.com, LLC for further information.

Material Safety Data Sheet

Effective Date: 23-JAN-2000
Product: OMNI SUPREME SPRAY OIL

I. IDENTIFICATION

Chemical Name: PARAFFIN BASE MINERAL OIL
Chemical Family: HIGHLY REFINED PETROLEUM OIL.
Formula: FORMULATED MIXTURE
Synonyms: SOL-OIL 97
CAS Number: 64742-55-8
EPA Number: 5905-368

II. PHYSICAL DATA

Boiling Point: >500 DEGREES F.
Freezing Point: <0 DEGREES C.
Spec Gravity: 0.866 GMS/CC
Vapor Pressure: <0.01 MM HG
Vapor Density: (AIR=1) >5
Solubility: DISPERSIBLE
Volatiles: NEGLIGIBLE
Evaporation: <0.01
Melting Point: NOT APPLICABLE
Appearance: COLORLESS LIQUID, SLIGHT ODOR.

III. INGREDIENTS

Material	CAS Number	Percent	TLV	Hazard
DISTILLATES (PETROLEUM) HYDROTREATED LIGHT PARAFFINIC OIL		98.00	5 MG/M3	MILD SKIN & EYE IRRITANT
INERT INGREDIENTS		2.00	NOT ESTABLISHED	NOT ESTABLISHED

IV. FIRE AND EXPLOSION HAZARD

Flash Point: >300 DEGREES F.
Autoignition Temp: >500 DEGREES F.
Flammable Limit: NOT AVAILABLE
Extinguishing Media: WATER FOG, ALCOHOL FOAM, DRY CHEMICAL AND CARBON DIOXIDE EXTINGUISHING MEDIA.
Special Fire Fight Proc: WEAR POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. AVOID GETTING WATER FROM FIRE FIGHTING INTO DOMESTIC OR IRRIGATION WATER SUPPLIES.
Fire and Expl Hazard: CONTAINERS MAY RUPTURE VIOLENTLY IF

OVERHEATED. AFTER FIRE IS CONTROLLED, DO NOT HANDLE CONTAINERS UNTIL THEY HAVE RETURNED TO AMBIENT TEMPERATURES.

V. HEALTH HAZARD

Carcinogen Information: NONE CURRENTLY KNOWN.

ACUTE EFFECTS OF OVER EXPOSURE

Swallowing:	THIS PRODUCT IS JUDGED TO HAVE AN ACUTE ORAL LD50 (RAT) GREATER THAN 5 G/KG OF BODY WEIGHT.
Skin Absorption:	THIS PRODUCT IS JUDGED TO HAVE AN ACUTE DERMAL LD50 (RABBIT) GREATER THAN 3.16 G/KG OF BODY WEIGHT.
Inhalation:	MAY CAUSE IRRITATION OF NASAL PASSAGES AND THROAT.
Skin contact:	PROLONGED OR REPEATED EXPOSURE MAY LEAD TO RASH OR SENSITIVITY DUE TO REMOVAL OF NATURAL OILS AND FATS FROM SKIN.
Eye Contact:	MAY CAUSE EYE IRRITATION, INCLUDING TEARING, SMARTING, AND REDNESS.
Chronic Effects:	SYMPTOMS OF EXPOSURE INCLUDE HEADACHE, NAUSEA, WEAKNESS, AND CONFUSION.
Other Hazard:	NONE CURRENTLY KNOWN.

EMERGENCY AND FIRST AID PROCEDURES

Swallowing:	DO NOT INDUCE VOMITING; CALL A PHYSICIAN IMMEDIATELY.
Skin:	WASH SKIN THOROUGHLY WITH SOAP AND WATER. IF IRRITATION DEVELOPS, CONSULT A PHYSICIAN.
Inhalation:	MOVE TO FRESH AIR. IF BREATHING BECOMES DIFFICULT, CONSULT A PHYSICIAN.
Eyes:	FLUSH EYES WITH WATER FOR 15 MINUTES, HOLDING EYELIDS OPEN. IF IRRITATION DEVELOPS, CONSULT A PHYSICIAN.
Notes to Physician:	IN THE EVENT OF AN ADVERSE RESPONSE, TREATMENT SHOULD BE DIRECTED TOWARD CONTROL OF THE SYMPTOMS.

VI. REACTIVITY

Stability:	Stable
Conditions to Avoid:	NONE CURRENTLY KNOWN.
Polymerization:	Will Not Occur
Conditions to Avoid:	NONE CURRENTLY KNOWN.

Material Safety Data Sheet

Effective Date: 23-JAN-2000
Product: OMNI SUPREME SPRAY OIL

Incompatibility material: DO NOT ALLOW CONTACT WITH OXIDIZING MATERIALS.
Hazardous Combustion: PRODUCT MAY PRODUCE CARBON DIOXIDE AND CARBON MONOXIDE UNDER FIRE CONDITIONS.

VII. SPILL OR LEAK PROCEDURES

Spill or Leak Proc: DIKE AND CONTAIN. IF UNCONTAMINATED, REUSE PRODUCT. IF CONTAMINATED, ABSORB SPILL WITH CLAY, SAND OR SAWDUST. PLACE IN A CHEMICAL WASTE CONTAINER FOR PROPER DISPOSAL. SPILL AREA WILL BE QUITE SLIPPERY.
Waste Disposal Method: THIS MATERIAL MUST BE DISPOSED OF ACCORDING TO FEDERAL, STATE, OR LOCAL PROCEDURES UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT.

VIII. SPECIAL PROTECTION INFORMATION

Respiration: USE SUPPLIED-AIR RESPIRATORY PROTECTION IN CONFINED OR ENCLOSED SPACES, IF NEEDED.
Ventilation: LOCAL EXHAUST SUFFICIENT.
Gloves: CHEMICAL-RESISTANT
Eyes: SPLASH PROOF GOGGLES.
Other: EYE WASH STATION, IMPERVIOUS APRON AND FOOTWEAR.

IX. SPECIAL PRECAUTIONS

Special precaution: KEEP OUT OF REACH OF CHILDREN. DO NOT STORE WITH FOOD, FEED, OR OTHER MATERIAL TO BE USED OR CONSUMED BY HUMANS OR ANIMALS. DO NOT CONTAMINATE WATER SUPPLIES, LAKES, STREAMS, OR PONDS. KEEP CONTAINERS CLOSED WHEN NOT IN USE. DO NOT STORE NEAR HEAT, SPARKS, FLAME OR STRONG OXIDANTS.
Other precaution: EMPTY CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION.

Material Safety Data Sheet

Effective Date: 23-JAN-2000
Product: OMNI SUPREME SPRAY OIL

X. SHIPPING INFORMATION

Shipping name: NOT REGULATED BY DOT, IATA OR IMDG.
Hazard Class: NONE
Identification No: NONE
Labels Required: NONE REQUIRED
Placarding: NONE REQUIRED
Freight Class: INSECTICIDES OR FUNGICIDES, AGRICULTURAL, N.O.I.(NMFC ITEM 102120, CLASS 60)

Chemical Name	Equivalent R.Q.
NOT APPLICABLE	NOT APPLICABLE

XI. GENERAL PRODUCT INFORMATION

National Fire Protection Association Rating:
(Rating level: 4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum

Health: 1 Fire: 1 Reactivity: 0

S.A.R.A. Title III Hazard Classification: (Yes/No)

Immediate (Acute) Health: N Delayed (Chronic) Health: N
Sudden Release of pressure: N Fire: N
Reactive: N

Mail inquiries to: 225 Schilling Blvd., Suite 300 Collierville, TN 38017

Material Safety Data Sheet

PURESPRAY SPRAY OIL 10E

1 . Product and company identification

Common name : PURESPRAY SPRAY OIL 10E

Code : SPREM10, 440-177

Material uses : Emulsified Spray Oils are severely hydrotreated mineral oils with added emulsifier, used as dormant oils for agricultural spray.

Manufacturer : PETRO-CANADA
P.O. Box 2844
150 – 6th Avenue South-West
Calgary, Alberta
T2P 3E3

In case of emergency : **Petro-Canada: 403-296-3000**
Canutec Transportation:
613-996-6666
Poison Control Centre: Consult local telephone directory for emergency number(s).

2 . Hazards identification

Physical state : Viscous liquid.

Odour : No odour or slight petroleum oil like.

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Emergency overview : No specific hazard.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes : Slightly irritating to the eyes.

Skin : Slightly irritating to the skin.

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Medical conditions aggravated by over-exposure : Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated skin exposure can produce local skin destruction or dermatitis.

See toxicological information (section 11)

3 . Composition/information on ingredients

Name	CAS number	%
Mixture of severely hydrotreated and hydrocracked base oil (petroleum).	Mixture	-

4 . First-aid measures

Eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin contact : Wash skin thoroughly with soap and water or use recognised skin cleanser. Get medical attention if irritation occurs. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Ingestion : Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately.

4 . First-aid measures

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

5 . Fire-fighting measures

Flammability of the product : May be combustible at high temperature.

Products of combustion : Carbon oxides (CO, CO2), smoke and irritating vapours as products of incomplete combustion.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : In a fire or if heated, a pressure increase will occur and the container may burst.

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards : Low fire hazard. This material must be heated before ignition will occur.

Special remarks on explosion hazards : Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up : Large spill: Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7 . Handling and storage

Handling : Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk. Evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapour/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles.

Storage : Keep container tightly closed. Store away from incompatible materials (see section 10). Keep container in a cool, well-ventilated area.

8 . Exposure controls/personal protection

Product name	Exposure limits
Mixture of severely hydrotreated and hydrocracked base oil (petroleum).	**ACGIH TLV (United States). Notes: (oil mist)** TWA: 5 mg/m³ 8 hour(s). STEL: 10 mg/m³ 15 minute(s).

Consult local authorities for acceptable exposure limits.

Engineering measures : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Recommended: organic vapour filter

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Recommended: neoprene, nitrile, polyvinyl alcohol (PVA), Viton.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9 . Physical and chemical properties

Physical state : Viscous liquid.

Flash point : Open cup: 173°C (343.4°F) [Cleveland.]

Auto-ignition temperature : Not available.

Flammable limits : Not available.

Colour : Colourless to light yellow.

Odour : No odour or slight petroleum oil like.

pH : Not available.

Boiling/condensation point : Not available.

Pour Point : Not available.

Melting/freezing point : Not available.

Relative density : 0.8532 kg/L @ 15ºC (59ºF)

Vapour pressure : Not available.

Vapour density : Not available.

Volatility : Not available.

Odour threshold : Not available.

Evaporation rate : Not available.

Viscosity : 9.6 cSt @ 40°C (104ºF), 2.5 cSt @ 100°C (212ºF)

Solubility : Insoluble in water. Easily dispersed in water.

$LogK_{ow}$: Not available.

9 . Physical and chemical properties

Softening Point : Not available.

Dropping Point : Not available.

Penetration : Not available.

Physical/chemical properties comments : Not available.

10 . Stability and reactivity

Stability and reactivity : The product is stable.

Conditions of instability : Not available.

Incompatibility with various substances : Reactive with oxidising agents.

Hazardous decomposition products : May release COx, smoke and irritating vapours when heated to decomposition.

Hazardous polymerisation : Will not occur.

11 . Toxicological information

Toxicity data

Product/ingredient name	Test	Result	Route	Species
PURESPRAY SPRAY OIL 10E	LD50	>2000 mgkkg	Oral	Rat
	LD50	>2000 mg/kg	Dermal	Rabbit
	LC50	>5 mg/L (4 hours)	Inhalation	Rat

Specific effects

Carcinogenic effects : Not listed as carcinogenic by OSHA, NTP or IARC.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / Reproductive toxicity : No known significant effects or critical hazards.

Sensitisation

Ingestion : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Eyes : Slightly irritating to the eyes.

Skin : Slightly irritating to the skin.

Synergistic products : Not available.

12 . Ecological information

Ecotoxicity data

Product/ingredient name	Species	Period	Result

Environmental precautions : This product is inherently biodegradable.

Bioconcentration factor Not available.

BOD and COD Not available.

Biodegradable/OECD Not available.

Mobility Not available.

Special remarks on the products of biodegradation Not available.

13 . Disposal considerations

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Waste disposal : The generation of waste should be avoided or minimised wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
TDG Classification	Not regulated.	-	-	-		-
DOT Classification	Not available.	Not available.	Not available.	-		-

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Not regulated.

Canada

WHMIS (Canada) : Not controlled under WHMIS (Canada).

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

International regulations

International lists

Canada inventory status : Listed

EC INVENTORY (EINECS/ELINCS) : Listed

TSCA 8(b) inventory : Listed

16 . Other information

Hazardous Material Information System (U.S.A.) :

Health	1
Fire hazard	1
Reactivity	0
Personal protection	B

National Fire Protection Association (U.S.A.) :

16 . Other information

References : Available upon request.
TM/MC Marque de commerce de Petro-Canada - Trademark

Date of printing : **5/30/2008.**

Date of issue : **5/30/2008.**

Date of previous issue : **12/12/2006.**

Responsible name : **Product Safety - JDW**

Version : **2**

For Copy of (M)SDS : The Canadian Controlled Products Regulations (CPR) (Under the Hazardous Products Act, part of the WHMIS legislation) only apply to WHMIS Controlled (i.e., hazardous) products. Therefore, the CPR and the 3-year update rule specified therein do not apply to WHMIS Non-Controlled products. Although this is true, customarily Petro-Canada reviews and updates Non-Controlled product MSDS if a customer requests such an update. These Non-Controlled product updates are given a lower priority than Controlled products but are handled as soon as practicable. If you would like to verify if the MSDS you have is the most current, or you require any further information, please contact:

Internet: lubricants.petro-canada.ca/msds

Lubricants:
Western Canada, telephone: 1-800-661-1199; fax: (780) 464-9564
Ontario & Central Canada, telephone: 1-800-268-5850 and (905) 822-4222; fax: 1-800-201-6285
Quebec & Eastern Canada, telephone: 1-800-576-1686; fax: 1-800-201-6285

For Product Safety Information: (905) 804-4752

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet
J. R. Simplot Company
AgriBusiness

Trade Name: PHT V-440 Spray Oil **M77445**
Registration No: 2935-542-7001

SECTION 1 CHEMICAL PRODUCT AND COMPANY INFORMATION

Manufacturer or Formulator: J.R. Simplot Company
PO Box 70013
Boise, ID 83707
Emergency Phone - Chemtrec: 1-800-424-9300

Product Name: PHT V-440 Spray Oil
Common Name: V-440 Spray Oil
Chemical Type: Petroleum Distillates

SECTION 2 HAZARDS IDENTIFICATION

Ingestion: Do not ingest. Wash thoroughly before eating, drinking, or smoking. Do not store near food or feed.
Inhalation: Mist carries PEL/TLV 5 mg/m^3. Wear appropriate respiratory protection for exposures above the PEL/TLV.
Eye Contact: May be mildly irritating to the eyes. Wear proper eye protection to reduce splash exposure. If exposed, flush eyes for a minimum of 15 minutes with water.
Skin Absorption: Not normally absorbed through the skin.
Skin Contact: Can cause mild skin irritation or dermatitis after prolonged contact. Wear proper personal protective equipment to reduce exposure.
Effects of Overdose: Ingestion may cause nausea, throat irritation, central nervous system depression and narcosis. May cause skin irritation and dermatitis. No known chronic effects. Preexisting medical conditions involving the above symptoms may become aggravated by exposure.

SECTION 3 COMPOSITION INFORMATION

Chemical Name and Synonyms	C.A.S. No.	Chemical Formula	WT%	TLV	PEL
			Hazardous		
Petroleum Distillates	64742-55-8	N/A		5 mg/m^3 (Oil mist) 10 mg/m^3 STEL (Oil mist)	5 mg/m^3 (Oil mist)
			Non-Hazardous		
None listed.					

SECTION 4 FIRST AID MEASURES

Ingestion: If swallowed, DO NOT induce vomiting.
Inhalation: Remove victim to fresh air, and administer artificial respiration if necessary. Seek medical attention if conditions persist.
Eyes: Flush eyes with clean water for a minimum of 15 minutes.
Skin: Remove contaminated clothing, and wash skin with soap and water. Wash contaminated clothing before wearing.

SECTION 5 FIRE FIGHTING MEASURES

Extinguishing Media: Water fog, foam, CO_2, or dry chemical.
Special Fire Fighting Procedures: Fight fire upwind. Wear positive pressure self-contained breathing apparatus and full protective equipment. Avoid breathing vapors and spray mist. Avoid fallout and runoff. Dike to prevent from entering drains, sewers, or water courses. Evacuate people downwind from fire.
Unusual Fire and Explosion Hazards: None listed.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled: Wear appropriate respiratory and personal protective equipment. Absorb with inert material and vacuum or sweep into an approved disposal container. Treat spill area with detergent and water. Absorb with inert material and place in approved disposal containers. Repeat as necessary until area is clean.

SECTION 7 HANDLING AND STORAGE

Precautions to be taken in handling and storing: Keep out of the reach of children. Read and follow all label instructions. Store in tightly closed containers, and keep away from open flame, heat or ignition sources.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation Protection: Local exhaust ventilation of at least 60 fpm.
Respiratory Protection: Use NIOSH/MSHA approved respirator for organic vapors for exposures up to 10 times the PEL/TLV. Positive pressure self-contained breathing apparatus (SCBA) should be used for confined space entry and exposures above 10 times the PEL/TLV.
Protective Clothing: None normally required for this product. When conditions dictate, use rubber or neoprene gloves, and an oil-impervious apron.
Eye Protection: Safety glasses with side shield or chemical goggles to protect against splashes.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: Not applicable
Specific Gravity: 0.87 (H_2O = 1)
Flashpoint: 206°F (TCC)
pH: Not listed.
Appearance: Light liquid with hydrocarbon-like odor.
Extinguishing Media: Use media suitable for extinguishing source of fire.

Solubility in Water: Insoluble.
% Volatiles (by volume): Not listed.
Vapor Pressure, mm Hg: <0.01 @ 20°C
Vapor Density: > 12 (Air = 1)
Reaction with Water: Not listed.

SECTION 10 STABILITY AND REACTIVITY

Stability (Normal Conditions): Stable.
Conditions to Avoid: Open flame, heat and ignition sources.
Incompatibility (Material to Avoid): Oxidants, liquid chlorine, concentrated O_2.
Hazardous Decomposition Products: CO_X
Possibility of Hazardous Reactions: Will not occur.

SECTION 11 TOXICOLOGY INFORMATION

None listed.

SECTION 12 ECOLOGICAL INFORMATION

None listed.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal Procedures: Absorb with inert material and vacuum or sweep into an approved disposal container, and dispose of in accordance with all Federal, State and Local regulations.

SECTION 14 TRANSPORT INFORMATION

Shipping name: Not regulated by DOT
Hazard Class: None
Reportable Quantity (RQ): None
Marine Pollutant: No
ERG Number: None
Haz Waste No: None
EPA Regist No: None

C.A.S. Number: 64742-55-8
Sub. Hazard Class: None
D.O.T. Number: None
Labels Required: None
Placard: None

SECTION 15 REGULATORY INFORMATION

Carcinogenicity: by IARC?: Yes ( ) No (X) by NTP?: Yes ( ) No (X)

Not on the SARA 302 list of reportable quantities.

SECTION 16 OTHER INFORMATION

Flash Point (Test Method):	206°F (TCC)	**Flammable Limits**	**LOWER**	**UPPER**
Autoignition Temperature:	Not applicable	(% BY VOLUME)	N/A	N/A

Hazard Rating (NFPA): **Health:** 2 **Fire:** 1 **Reactivity:** 0 **Specific:** None
This NFPA rating is a recommendation by the manufacturer using the guidelines or published evaluations of the National Fire Protection Association (NFPA).

MSDS Version Number: 2 (revision to Section 1)

Reviewed by: The Environmental Health & Safety Department
October 2008 (208) 389-7394

MATERIAL SAFETY DATA SHEET

DATE PREPARED: 05/10/2001

MSDS No: 7098

ORTHO® Volck® Oil Spray Dormant Season Insect Killer Concentrate

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ORTHO® Volck® Oil Spray Dormant Season Insect Killer Concentrate
PRODUCT DESCRIPTION: Horticultural Spray Oil.

MANUFACTURER

The ORTHO Group
P.O. Box 1749
Columbus, OH 43216

24 HR. EMERGENCY TELEPHONE NUMBERS

Emergency Phone: 1-800-225-2883

EPA REG. NO.:239-16A **PN:**710

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS#
Mineral Oil	97	64742-55-8
INERT INGREDIENTS	3.0	

``Inert Ingredients'' is a term defined by the U.S. Environmental Protection Agency under the Federal Insecticide, Fungicide, and Rodenticide Act (40 CFR 158.153). It refers to any substance, other than an active ingredient, which is intentionally added to a pesticide product. Some inert ingredients may be hazardous chemicals, as defined by the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). The hazards associated with these inert ingredients have been included in this document.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE:Light amber liquid

IMMEDIATE CONCERNS:- HARMFUL IF SWALLOWED
- AVOID BREATHING VAPOR OR SPRAY MIST
- AVOID CONTACT WITH EYES
- KEEP OUT OF REACH OF CHILDREN

POTENTIAL HEALTH EFFECTS

EYES:This substance is slightly irritating to the eyes. Eye contact may include discomfort, tearing, swelling, redness, and blurred vision. See Toxicological Information, section 11.

SKIN:This substance is not expected to cause prolonged or significant skin irritation. If absorbed through the skin, this substance is considered practically non-toxic to internal organs.

INGESTION:If swallowed, this substance is considered practically non-toxic to internal organs. This product contains a petroleum distillate. Due to the low viscosity of petroleum distillate, it can directly enter the lungs if it is swallowed (this is called aspiration). This can occur during the act of swallowing or when vomiting the substance. Once in the lungs, the substance is very difficult to remove and can cause severe injury to the lungs and death.

INHALATION:If inhaled, this substance is considered practically non-toxic to internal organs. This substance may be irritating if inhaled.

4. FIRST AID MEASURES

EYES: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.

Call a poison control center or doctor for treatment advice.

SKIN: If on skin or clothing, take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION: If swallowed, call a poison control center or doctor immediately for treatment advice. Have person sip glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Never give anything by mouth to an unconscious person.

INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

NOTES TO PHYSICIAN: Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

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5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: 360°F TAG CC

AUTOIGNITION TEMPERATURE: >500°F

EXTINGUISHING MEDIA:CO2, dry chemical, foam and water fog.

HAZARDOUS COMBUSTION PRODUCTS: Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

FIRE FIGHTING PROCEDURES: This material will support combustion although it is not easily ignited. Products of combustion from fires involving this material may be toxic. Avoid breathing smoke and mists. Avoid personnel and equipment contact with fallout and runoff. Minimize the amount of water used for fire fighting. Do not enter any enclosed area without full protective equipment, including self-contained breathing equipment. Contain and isolate runoff and debris for proper disposal. Decontaminate personal protective equipment and fire fighting equipment before reuse. Read the entire document.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Soak up spilled material with paper towels and discard in trash.

LARGE SPILL: Eliminate all sources of ignition in vicinity of spill or released vapor.

Liquid spills on floor or other impervious surfaces should be contained or diked, and should be absorbed with attapulgite, bentonite or other absorbent material. Collect contaminated absorbent, place in plastic-lined metal drum and dispose of in accordance with instructions provided under Section 13. "DISPOSAL". Thoroughly scrub floor or other impervious surface with a strong industrial type detergent solution and rinse with water.

For liquid spills that soak into the ground, contact the applicable Federal, State and or County Health Dept. for disposal recommendations. If disposal is required then refer to Section 13 "DISPOSAL" for instructions.

Leaking containers should be separated from non-leakers and either the container or its contents transferred to a drum or other non-leaking container and disposed of in accordance with instructions provided under Section 13 "Disposal". Any recovered spilled liquid should be similarly collected and disposed of.

Do not contaminate water, foodstuffs or feed by storage or disposal.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Store in a secure, preferably locked, storage area. Do not store diluted spray.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Use this material only in well ventilated areas.

PERSONAL PROTECTION

EYES AND FACE:Do not get this material in your eyes. Eye contact can be avoided by wearing chemical goggles.

SKIN:No special skin protection is usually necessary. Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing protective clothing. Wash throughly with soap and water after handling.

RESPIRATORY:No special respiratory protection is normally required. However, if operating conditions create high airborne concentrations, the use of an approved respirator is recommended.

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

	EXPOSURE LIMITS		
Chemical Name	**OSHA PEL**	**ACGIH TLV**	**ACGIH STEL**
Mineral Oil	5 mg/m3	5 mg/m3	10 mg/m3

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9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

APPEARANCE: Light, straw-colored liquid with mild petroleum odor

pH: No Data Available

BOILING POINT:~540°F ASTM D 2887

FREEZING POINT:<15°F

SOLUBILITY IN WATER: Miscible with water.

EVAPORATION RATE:<0.01(n-Butyl Acetate=1)

DENSITY: No Data Available

SPECIFIC GRAVITY:0.84 at 20°C

COMMENTS:

VAPOR PRESSURE: Less than 0.01 mm Hg @ 20°C

VAPOR DENSITY: Greater than 5 (Air = 1)

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10. STABILITY AND REACTIVITY

STABLE:YES

HAZARDOUS POLYMERIZATION:NO

CONDITIONS TO AVOID: Avoid contact with heat or open flame.

HAZARDOUS DECOMPOSITION: No Data Available

INCOMPATIBLE MATERIALS: May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

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11. TOXICOLOGICAL INFORMATION

ACUTE

EYES:Rabbit - moderately irritating, irritation cleared by 48 hours.
EPA FIFRA toxicity category - lll.

DERMAL LD_{50}:The dermal LD50 (rabbits) was >5 g/kg, EPA FIFRA Toxicity Category - IV. Dermal irritation (rabbits) - nonirritating, EPA FIFRA Toxicity Category - IV.

ORAL LD_{50}:The oral LD50 (rats) is >5 g/kg. EPA FIFRA Toxicity Category - IV.

INHALATION LC_{50}:The acute inhalation LC50 was >2.0 mg/l air - Practically Nontoxic, EPA FIFRA Toxicity Category - IV. The potential health effects by inhalation exposure include mild irritation of the respiratory tract. Aspiration of petroleum distillates can cause severe lung irritation and rapidly developing pulmonary edema and central nervous excitement followed by depression.

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12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No data available.

ECOTOXICOLOGICAL INFORMATION: This material is toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.

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13. DISPOSAL CONSIDERATIONS

FOR LARGE SPILLS: Material collected that cannot be reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, State or local procedures.

PRODUCT DISPOSAL: If necessary to dispose of partially filled product container, securely wrap it in several layers of newspaper and discard in trash.

EMPTY CONTAINER: Do not reuse container. Wrap empty container in several layers of newspaper and discard in trash.

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14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated

PRIMARY HAZARD CLASS/DIVISION: None

UN/NA NUMBER:NONE

PACKING GROUP:NO

U.S. SURFACE FREIGHT CLASS: Insecticides, Fungicides, Insect or animal repellents or vermin exterminators, NOI, Other than poison

AIR (ICAO/IATA)

PROPER SHIPPING NAME: Not Regulated

SPECIAL SHIPPING NOTES: The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

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15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

PRODUCT CLASSIFICATION UNDER SECTION 311 OF SARA				
ACUTE: YES	**CHRONIC:** NO	**FIRE:** NO	**REACTIVITY:** NO	**PRESSURE GENERATING:** NO

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: All components are on the US EPA's TSCA Inventory List.

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16. OTHER INFORMATION

HMIS CODES

FIRE:1 **HEALTH:**1 **REACTIVITY:**0 **PROTECTION:**-

NFPA CODES

FIRE:1 **HEALTH:**1 **REACTIVITY:**0 **SPECIAL:**-

APPROVAL DATE:05/10/2001

REVISION SUMMARY New MSDS

MANUFACTURER DISCLAIMER: The information contained herein is, to the best of the Manufacturer's (see Section 1) knowledge and belief, accurate and reliable as of the date of preparation of this document. However, no warranty or guarantee, express or implied, is made as to the accuracy or reliability, and the Manufacturer shall not be liable for any loss or damage arising out of the use thereof. No authorization is given or implied to use any patented invention without a license. In addition, the Manufacturer shall not be liable for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

California Department of Pesticide Regulation

Reimbursing Medical Costs of Persons Injured In Pesticide Incidents

January 2005

New rules require violators to pay certain medical costs

Beginning in 2005, if a pesticide use violation causes illness or injury, violators will be legally responsible to pay certain medical costs of victims.

The new requirement was passed and signed into law in 2004 (Senate Bill 391, Florez). The new law squarely places the financial burden to pay for acute medical costs on those businesses that are responsible for the harm. It also increases penalties the Department of Pesticide Regulation (DPR) and the County Agricultural Commissioners (CACs) can impose for pesticide violations.

The law was prompted by several incidents in which large numbers of persons living near agricultural fields were made ill by pesticide drift. Many were without medical insurance, and did not have the means to pay for medical treatment themselves.

WILL THE NEW LAW CHANGE THE ROLE OF PESTICIDE ENFORCEMENT?

The new law places the financial burden to pay for acute medical costs on those that are responsible for the harm when they violate pesticide rules.

No. The CACs enforce pesticide laws locally and are responsible for investigating pesticide illnesses and incidents in their jurisdictions.

After determining whether pesticide laws were violated, a CAC has a variety of enforcement options including administrative civil penalties. The law also increases the level of civil penalty authority for CACs.

The major emphasis of the law involves the responsibility of the violator to pay for medical costs.

Under the new law, if a pesticide use violation causes illness or injury, the penalty action a CAC issues will also include a statement notifying the violator of his or her responsibility to pay the uncompensated medical costs of those who suffered acute illness or injury and sought immediate medical treatment (Section 12997.5[a] [b], Food and Agricultural Code [FAC]).

There is no obligation, expectation or authority for the CAC to oversee the reimbursement process.

(continued on page 2)

(continued from page 1)

› ***After the CAC issues a final enforcement order that includes the statement of a violator's responsibility for reimbursing victims, what happens next?***

After the final enforcement order is issued, the violator has 30 days to submit a written plan to DPR, detailing how unreimbursed medical costs will be paid (FAC 12997.5[c]).

› ***Does the CAC determine what the medical costs are, or who qualifies for reimbursement?***

No. Although the county will probably identify most individuals who were made ill, neither the CAC nor DPR are obligated to determine the amount of uncompensated medical costs, or who qualifies for reimbursement.

The violator is ultimately responsible for covering the costs of those affected.

› ***Who gets the reimbursement?***

The violator must compensate the injured individuals or their medical providers, such as ambulance companies, doctors, and hospitals.

› ***What if the CAC doesn't know the names of everyone who was injured? Can people who come forward later have their medical costs reimbursed?***

Determining the scope of the incident and interviewing victims is part of an investigation. By the time an investigation is complete and an enforcement order issued, the CAC usually has the names of those made ill by the illegal application. The CAC can provide a list to the responsible party as soon as possible.

However, under the law, it is not the responsibility of the CAC to identify all persons entitled to medical reimbursement. If additional individuals who suffered acute illness and sought immediate medical care are identified later, they can contact the violator to claim medical reimbursement.

› ***What happens if a violator refuses to reimburse medical costs as required by law?***

Violators who refuse to comply with their legal responsibility are subject to enforcement actions by DPR as needed. Additionally, the violator may be subject to lawsuits by private individuals.

› ***Investigations usually take several weeks. What happens to victims in the meantime?***

The new law strongly encourages the CACs to complete investigations of and take appropriate action on these incidents within 45 days, and DPR will assist the counties in this effort (FAC 12997.5 [g]). Violators would not be responsible under the law to pay for medical costs until they have exhausted due process appeal rights.

(Continued on page 3)

The law defines *acute* illness or injury as "a medical condition that involves a sudden onset of symptoms due to an illness, injury, or other medical problem that required prompt medical attention and that has a limited duration."

(Continued from page 2)

However, the law provides an incentive for persons responsible for the application to pay medical costs **before** an investigation is complete. If the responsible party pays medical costs immediately, the law gives CACs the option of reducing penalties by as much as 50 percent. (FAC 12997.5[g])

However, the amount of a fine reduction does not affect the costs a responsible party must pay in medical expenses.

› *Can victims file a civil suit for damages if they have accepted payment for medical costs?*

Yes. The law says that accepting payment of emergency medical costs does not affect a victim's right to file suit. However, any damages awarded by a court must be reduced by the amount the victim received in medical reimbursement from the violator. (FAC 12997.5[e])

› *Does the new requirement for medical reimbursement apply in all pesticide incidents in which persons are injured?*

No, it applies only to incidents in which pesticides were used **in production of an agricultural commodity**. Furthermore, the medical payment provisions are limited to persons who at the time of exposure were **not** performing work as an employee.

› *What about employees who suffer injuries or illnesses?*

Under pre-existing law, medical costs of employees are already covered by the workers' compensation system. These provisions are unaffected by the new law. Workers who are injured follow the same procedure as before: employers are required to see that they get medical treatment immediately, and costs are covered by the workers' compensation system.

› *The law also increased the maximum penalties. How?*

These provisions of the law are broader than the medical reimbursement requirements. SB 391 authorizes DPR and the CACs to levy a **separate** penalty for **each** person who is injured or made ill by a pesticide violation.

DPR and the CACs had previously been allowed to levy separate penalties only for multiple violations of worker safety regulations—the number of workers injured did not increase the penalty, only the number of code sections violated.

Now, a one person/one violation provision applies to violations involving workers as well as victims in non-occupational settings. DPR and CACs have the authority to multiply the amount of the penalty by the number of victims.

What this means is that DPR and the CACs could levy a penalty of up

(Continued on page 4)

Uncompensated medical costs **are defined in the law as the cost of care not covered by any other program, such as (but not limited to) medical insurance, the Healthy Families Program, or Medi-Cal. The law specifies that medical expense payments shall not be more than 125% of Medi-Cal reimbursement rates.**

(Continued from page 3)

to $5,000 for each person injured or made ill as a result of a violation of any pesticide law or regulation, significantly increasing the potential penalties. (FAC 12996.5[b])

› *What about people injured in past incidents?*

The new requirements went into effect on January 1, 2005. There are no provisions in the law to apply it retroactively. This means the law was not written to apply to people injured before January 2005.

The new law only applies to incidents that occur *after* January 1, 2005, in which violations occur and there are non-occupational injuries.

› *The law also requires development of better response mechanisms for emergency agencies. How will this work?*

The California Environmental Protection Agency (Cal/EPA) is taking the lead on this element of the law. Over the next year, Cal/EPA will work with the County Agricultural Commissioners, local health officers, other local government agencies, and affected community members on standard protocols"— standardized operating procedures — for pesticide incidents. The goal will be to improve procedures used to:

- Request and provide access to pesticide-specific information to help emergency responders identify pesticides involved in a drift incident, as well as appropriate treatments.
- Define specific agency responsibilities and the process for responding to calls, notifying residents, and coordinating evacuation, if needed.
- Establish emergency shelters, if needed.
- Access services in languages known to be spoken in the affected area.
- Ensure access to health care within 24 hours of the exposure and up to a week afterwards.
- Notify medical providers regarding their eligibility for reimbursement under the new law.

› *If I have more questions, whom do I ask?*

Contact DPR's chief legal counsel, Polly Frenkel, 916-324-2666, or via email to pfrenkel@cdpr.ca.gov.

The new requirements went into effect in January 2005. They do not cover persons injured in earlier incidents.

Department of Pesticide Regulation
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P.O. Box 4015
Sacramento, CA 95812

www.cdpr.ca.gov

ABOUT THE DEPARTMENT OF PESTICIDE REGULATION

The California Department of Pesticide Regulation (DPR) protects human health and the environment by regulating pesticide sales and use and by fostering reduced-risk pest management. DPR's strict oversight includes product evaluation and registration, environmental monitoring, residue testing of fresh produce, and local use enforcement through the county agricultural commissioners. DPR is one of six boards and departments within the California Environmental Protection Agency.