

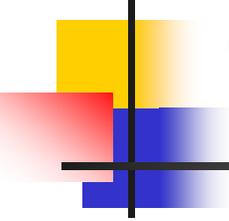
# Annual Health & Safety Training

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## California Integrated Waste Management Board Health & Safety Program

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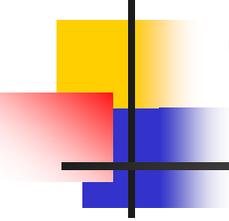


# Training Goal

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Provide ongoing refresher training to:

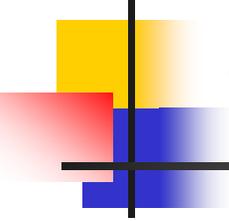
- ✓ Review the potential causes of injury and illness;
- ✓ Maintain employee awareness of the risks associated with workplace hazards;
- ✓ Enhance knowledge and skills to empower staff to take appropriate action to protect themselves, Board assets, the public, and the environment.



# Training Objectives – Back to Basics

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- ❑ List four “rights” afforded workers under Cal/OSHA Law
- ❑ List three required elements of Site Control
- ❑ List four performance criteria for CPC
- ❑ Describe the differences between Level C and B Protection
- ❑ Define three work zones required in Site Control
- ❑ Define three characteristics of chemically resistant PPE
- ❑ List three limitations of Personal Protective Equipment.
- ❑ List three hazards that maybe encountered remediating clandestine drug labs

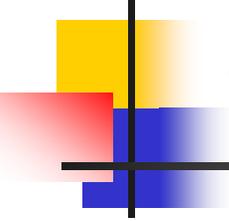


# Occupational Health & Safety

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**Federal Law - Title 29 CFR: Public Law 91-596 December 29, 1970  
Occupational Safety & Health Act      1970 William & Steigers Act  
Fed/OSHA**

- ❑ Department of Labor  
Occupational Safety & Health Administration (Federal OSHA)  
Title 29 Code of Federal Regulations (29 CFR)
  
- ❑ Department of Health & Human Services  
National Institute for Occupational Safety & Health (NIOSH)

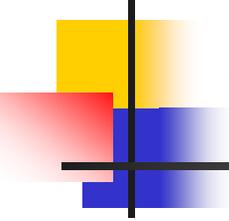


# Occupational Health & Safety

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**State Law - Title 8 CCR: California Labor Code (October 1, 1973)  
California Occupational Safety & Health Act  
Cal/OSHA**

- ❑ Department of Industrial Relations  
Division of Occupational Safety & Health (Cal/OSHA)  
Title 8 California Code of Regulations (T8 CCR)
- ❑ Cal/OSHA Standards Board
- ❑ Cal/OSHA Appeals Board
- ❑ Department of Health Services - HESIS  
Assist in hazard surveillance and developing occupational health standards.



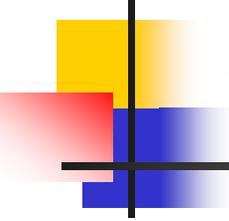
# Occupational Health & Safety

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## **Occupational Carcinogen Control Act 1976**

- ❑ Department of Industrial Relations; and
- ❑ Department of Health Services

Specifically regulates known human carcinogens such as asbestos, vinyl chloride, benzene, ethylene oxide, formaldehyde, etc.

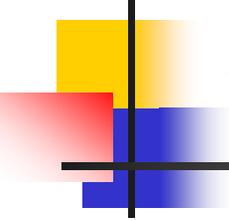


# Occupational Health & Safety

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## **Hazardous Substances Information & Training Act    1980 (Worker Right-to-Know)**

- ❑ DIR - in addition to inspections & enforcement, maintains the Director's List of Hazardous Substances.  
Training & Material Safety Data Sheets must be provided to employees working with any "listed" chemical.  
Proposition 65 List adopted into the regulation.
- ❑ DHS - responsible for surveillance of new chemical hazards in the workplace and maintaining a repository of information. The Hazard Evaluation System & Information Service (HESIS)

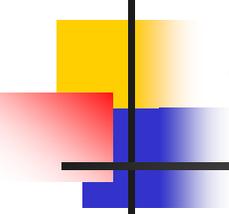


# Occupational Health & Safety

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## **Senate Bill 198 - "Injury & Illness Prevention Programs" 1989**

- ❑ DIR - focuses Cal/OSHA "discretionary" inspections in high-hazard industry;  
Redirects Cal/OSHA towards ensuring employers have an effective occupational injury and illness prevention program;  
Revised Cal/OSHA penalty assessment process; and,  
Amended the Labor and Insurance Codes.
- ❑ Cal/OSHA Standards Board directed to adopt "Injury and Illness Prevention Program" standard.

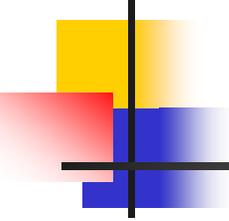


# Occupational Health & Safety

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## **Worker Rights Under OSHA Law**

- ❑ Right to know chemical hazards in the workplace
- ❑ Right to access MSDS's
- ❑ Right To Access Exposure Records
- ❑ Right To Access Medical Records
- ❑ Right To Access Site Specific Health & Safety Plan
- ❑ Right to Participate In Injury and Illness Prevention Program
- ❑ Right To Access and Review Health and Safety Program Records
- ❑ Right to File a Complaint With Cal/OSHA
- ❑ Right to Participate in OSHA Inspection
- ❑ Right to Talk With OSHA Representative Without Threat of Reprisal
- ❑ Right To Refuse to Perform Unsafe Work

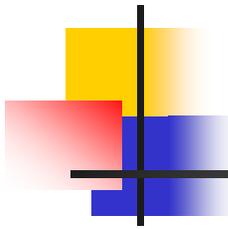


# Environmental Health & Safety

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**Federal Law - Title 40 CFR: Public Law 94-580 1976**  
**RCRA - Resource Conservation & Recovery Act**  
**Environmental Protection Agency (EPA)**

- ❑ Cradle to grave management of hazardous waste generated by industry
- ❑ Hazard criteria:
  - Corrosive -- pH <2 or >12.5
  - Ignitable -- FP >140°F
  - Reactive -- with air, water or unstable (shock sensitive)
  - Toxic
- ❑ Permitted (licensed) treatment, storage, and disposal facilities
- ❑ HZW Transported under Uniform Manifest

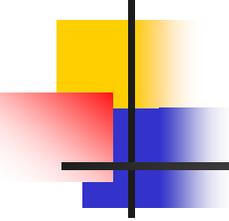


# Environmental Health & Safety

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**State Law - Title 22 CCR: Health & Safety Code Chapter 6.5  
Cal/EPA - Department of Toxic Substances Control 1972**

- ❑ Cal/EPA is the equivalent to the federal EPA for hazardous waste
- ❑ California laws often more protective of the environment and have stronger enforcement authority
- ❑ In some situations Cal/EPA enforces both federal (T40 CFR) and state (T22, T26 CCR) regulations
- ❑ Local agencies (CUPC) responsible for enforcing generator requirements but have no authority to enforce against permitted treatment, storage, or disposal facilities



# Environmental Health & Safety

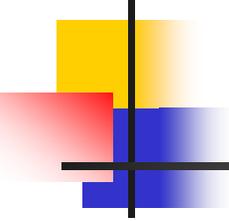
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## CERCLA - 1980

### Comprehensive Environmental Response, Compensation, and Liability Act

□ Gave EPA the authority to:

- respond to threats to the public health or environment
- clean-up releases of hazardous materials to the environment
- provided \$1.6 billion dollars for clean-up activities and enforcement
- established National Priority List (NPL) which ranks sites according to their potential hazard to the surrounding environment
- requires notification of releases of listed hazardous substances



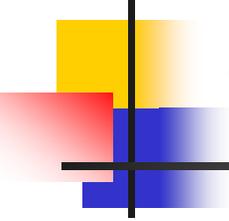
# Environmental Health & Safety

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## SARA - 1986

### Superfund Amendments and Reauthorization Act

- Re-authorized Superfund for five years
  - increased amount in Superfund to \$8.5 billion
  - set completion deadlines for clean-up projects
  - increased EPA enforcement authority
- Title III requirements – Community Right-To-Know
  - Local Emergency Planning Committees – LEPC’s
  - Industry reports – HMS inventories
  - Inventories & MSDS’s to LEPC’s
- Federal OSHA to promulgate a health and safety standard



# Occupational Health & Safety

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**Hazardous Waste Operations & Emergency Response Pub. 1986  
HAZWOPER Adopted 1989 - Enforceable 1990**

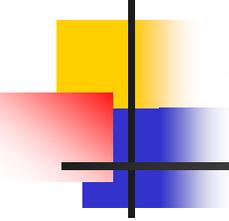
□ Title 29 CFR §1910.120 (§1926.65 CSO)

**Cal/OSHA Standard Adopted late 1991**

□ Title 8 CCR §5192

□ Operations covered:

- Federal Superfund sites
- State Superfund sites
- Sites designated for clean-up by state or local agencies
- Voluntarily cleaning-ups
- Corrective Action at Permitted facilities



# Occupational Health & Safety

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## **Title 8 CCR §5192(e) Training Requirements:**

- ❑ General site clean-up activities -- 40-hr initial training + 3-days OJT
- ❑ Limited site activities (inspections, etc.) -- 24-hr initial + 1-day OJT
- ❑ Supervisors -- 40 or 24-hr initial training + 8-hr additional
- ❑ All HZW operations personnel -- 8-hour annual refresher training

# HMS - Solid Waste - HZW

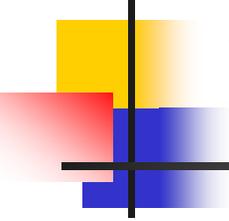


# HMS – Solid Waste - HZW



# HMS - Solid Waste - HZW



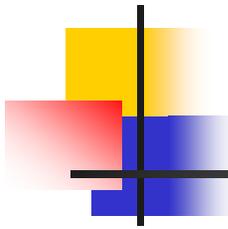


# Hazardous Materials

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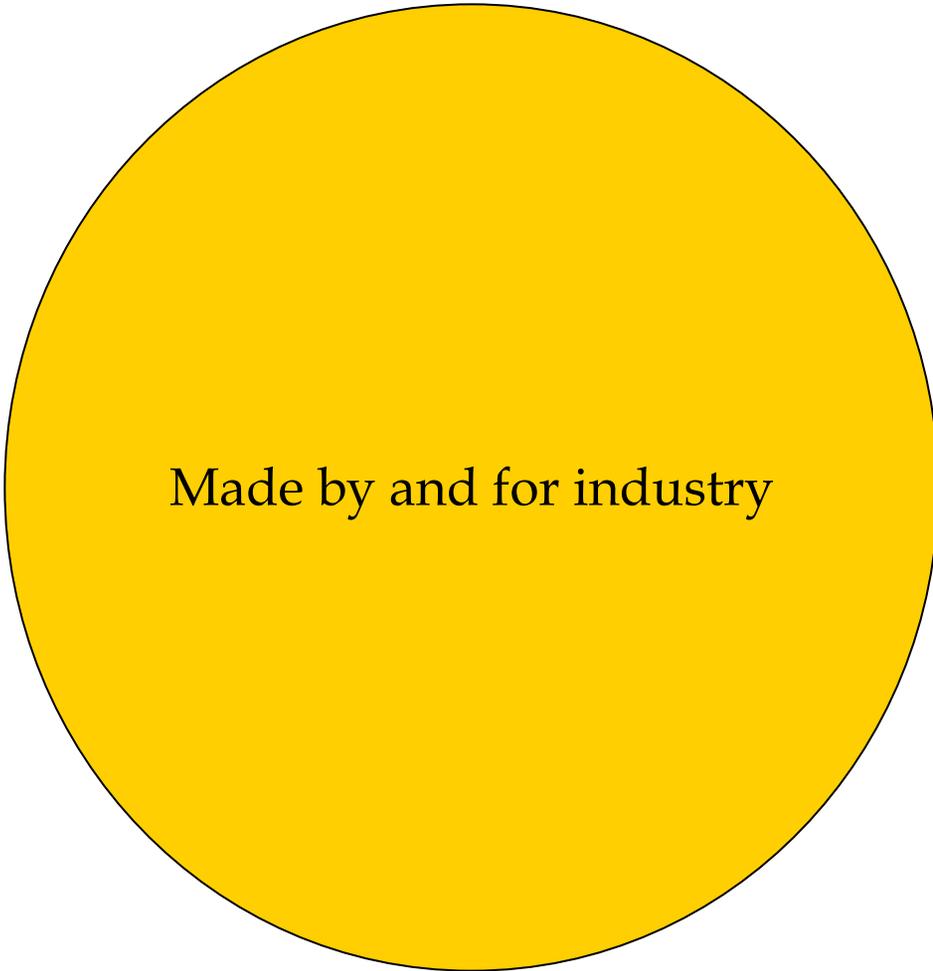


Material Safety Data Sheets

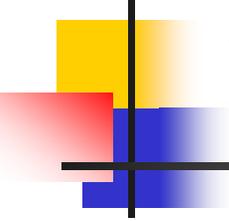


# Hazardous Materials

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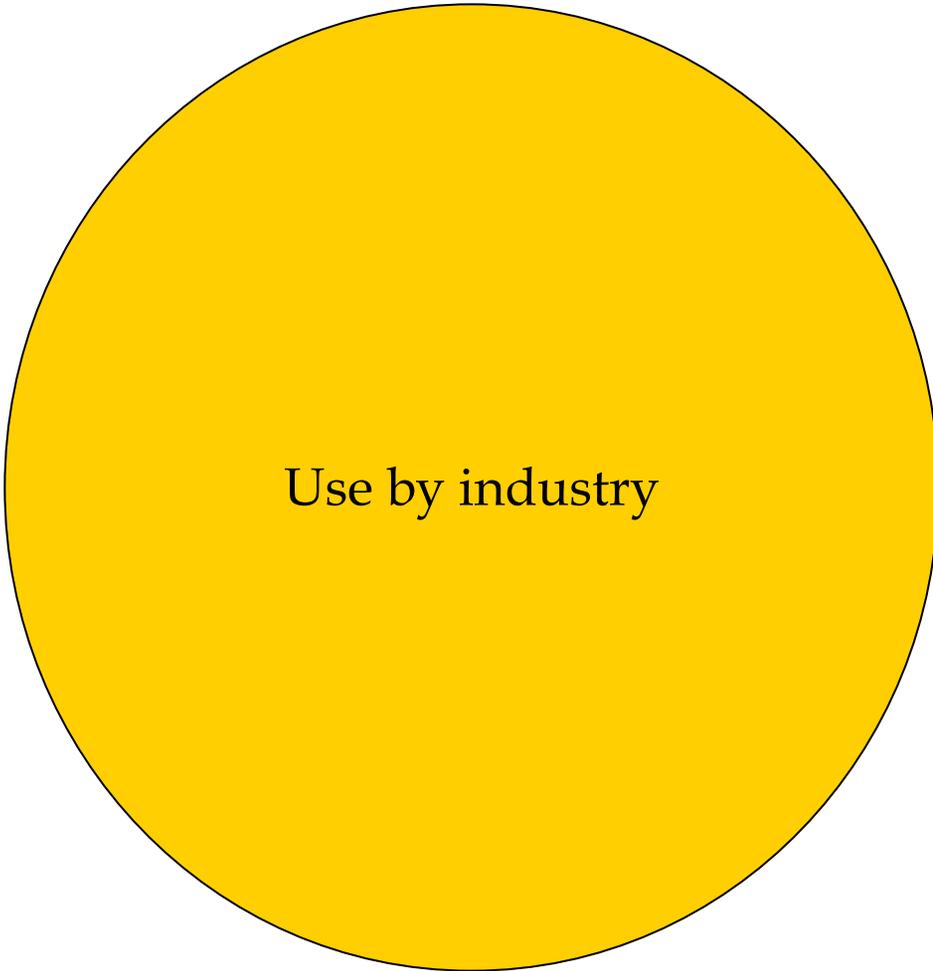


Made by and for industry

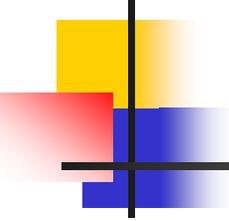


# Hazardous Materials

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Use by industry

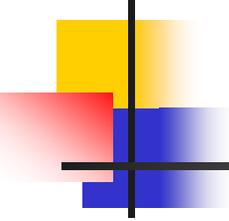


# Hazardous Materials

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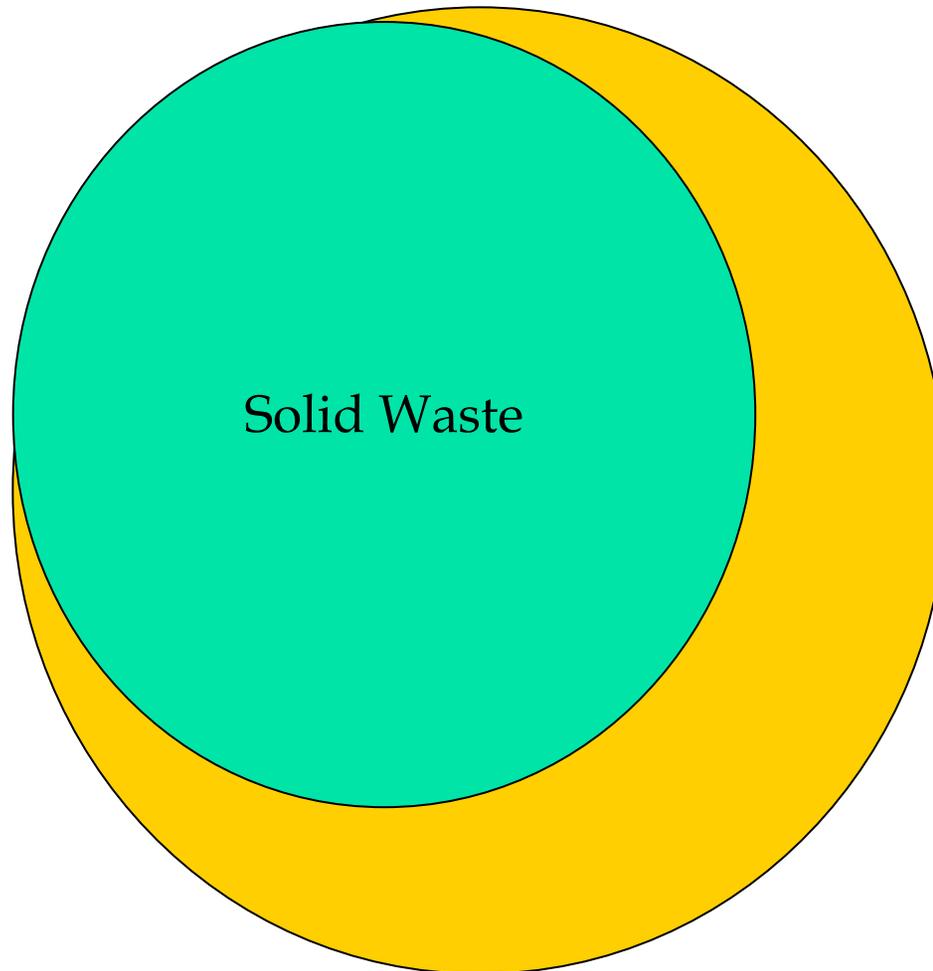


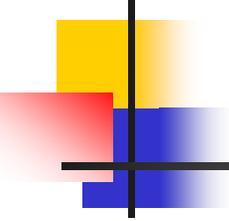
Leave industry as a new HMS,  
or as waste, possibly recyclable.



# Industrial (Solid) Waste

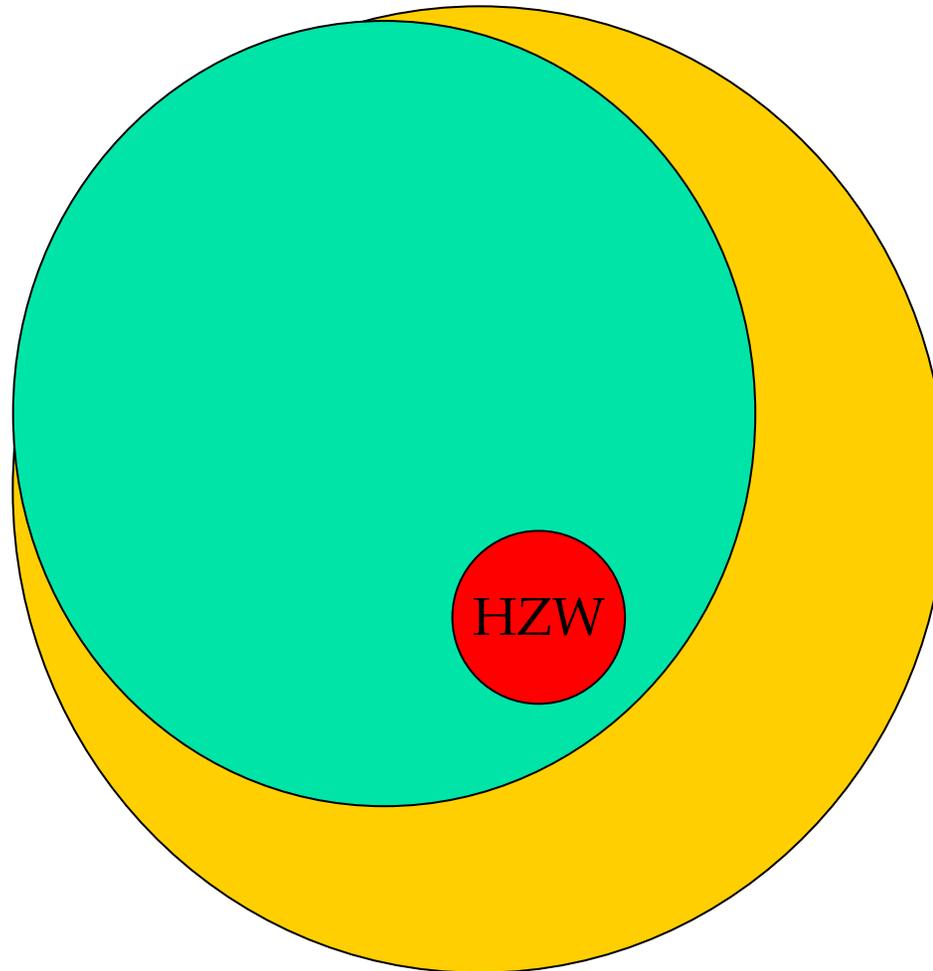
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# Hazardous Waste

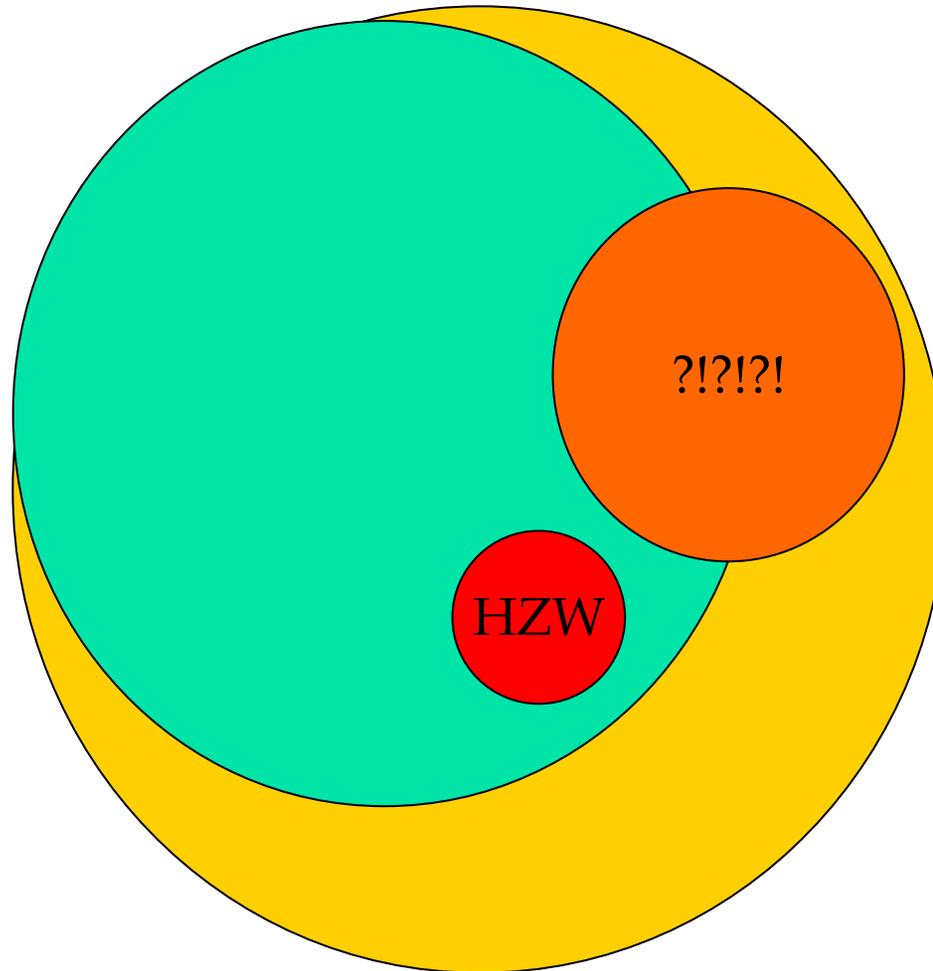
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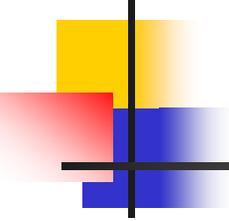


- Toxic
- Corrosive
- Ignitable
- Reactive

Labeling and  
Uniform Manifest

# Hazardous Material Releases





# Health & Safety Planning

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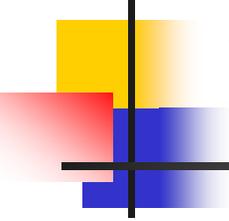
## Clandestine Drug (Met) Labs

**Scenario:** Local law enforcement, responding to an emergency at a MRF in the County has notified your office that the facility has been evacuated and cordoned off. It was evacuated after hazardous materials were discovered leaking from a waste truck as it was unloading inside the building. Liquids, which ran out onto the pavement reacted with the concrete floor leaving it stained.

The California Department of Justice (DOJ), along with local law enforcement had recently conducted a raid on a clandestine methamphetamine drug lab in the area. It's alleged the hazardous materials (waste) were discarded in dumpsters as other suspects fled.

In support of the Hazardous Materials Response Team, and DOJ investigators who are on scene to retrieve evidence, you have been requested to assist in evaluating the situation and recommending actions needed to mitigate potential risks and clean up the release.

Meth

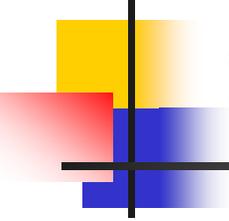


# Health & Safety Planning

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**Tasks:** working in groups, develop the following information for preparing a site safety plan:

- ❑ Prepare a list of potential safety and health hazards that may be encountered.
- ❑ Determine which, if any direct reading field instruments or other field tools may be useful in evaluating potential chemical hazards.
- ❑ Identify significant routes of exposure for potential chemical risks.
- ❑ Develop a list of controls and work practices that would be feasible for controlling potential exposure risks.
- ❑ If engineering controls or work practices are not feasible, what Level of Protection would be appropriate for the potential exposure hazards identified?

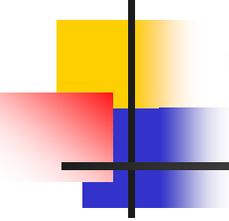


# Site Control - Purpose

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## **Title 8 CCR §5192(d) Site Control:**

- ❑ Control access to the site and to contaminated work areas
- ❑ Prevent the spread of contamination from sources on site
- ❑ Document the type and amount of exposure

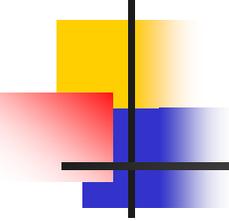


# Site Control - Elements

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## **Title 8 CCR §5192(d) Site Control:**

- Site Map
- Site Work Zones
- The Buddy System
- Site Communication
- Safe Work Practices
- Emergency Services

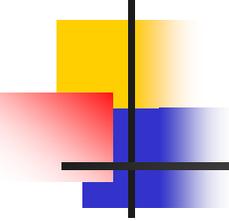


# Site Control Work Zones - Boundaries

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## **Title 8 CCR §5192(d) Site Control:**

- Exclusion Zone
- Contamination Reduction Zone
- Support Zone
- Up Gradient
- Up Wind
- Safe Distances



# Levels of Protection

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## **Title 8 CCR §5192(g) Engineering Controls, Safe Work Practices, and Personal Protective Equipment**

- ❑ Level A Highest level of respiratory and skin protection  
Atmosphere supplying respirator (ASR)  
Fully encapsulating suit – Emergency Response
- ❑ Level B Highest level respiratory protection  
Atmosphere supplying respirator (ASR - SCBA)
- ❑ Level C Air-purifying respirator (APR, PAPR)
- ❑ Level D No inhalation hazard – airborne concentrations <PEL/TLV

# Level A – Fully Encapsulating Suit



# Level B Protection – ASR (SCBA)



# Level C Protection – APR (PAPR)

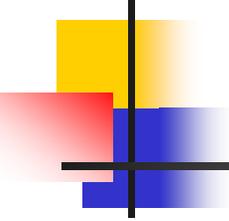


# Level D Protection



# Level D Protection





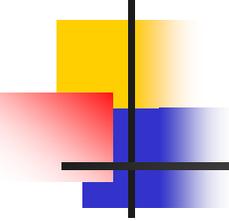
# CPC Performance Requirements

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- ❑ Chemical resistance
- ❑ Durability
- ❑ Flexibility
- ❑ Temperature resistance
- ❑ Service life
- ❑ Clean ability - decontamination
- ❑ Design, size, color, and costs

# Chemical Protective Clothing





# Chemical Resistance

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- ❑ Permeation    movement of chemicals , on a molecular level, through intact material
- ❑ Degradation    molecular breakdown of the material
- ❑ Penetration    transport of chemicals through openings