# ATTENDANCE SHEET

**DATE:** 12/1/11  
**TIME:** 8:00am to 10:00am  
**INSTRUCTOR:** Stanton Stubbs, CSP  
**COURSE:** Hazardous Waste Generator Training  
**LOCATION:** Gavilan CCD

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<td>Martha Cavin</td>
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<td>Arnold Gutierrez</td>
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<td>Ann Lewis Timmons</td>
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<td>Luis Ayala</td>
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Overview

- Introductions
- Laws & Regulations
- Hazardous Waste Procedures
- Hazardous Waste Characteristics
- Manifesting
- Labeling
- Marking
- Accumulation Times

Laws & Regulations

- Federal Regulations
  -- Code of Federal Regulations (CFR)
    - BPA regulation 40 CFR
    - OSHA regulation 29 CFR
    - DOT regulation 49 CFR
  -- HHWCL regulation
    -- California Code of Regulations (CCR)
    -- California Health & Safety Code (CH&SC)
Waste Regulations

- Congress defined waste and gave statutory authority to the Environmental Protection Agency (EPA) to regulate it. RCRA (Resource Conservation and Recovery Act) had cradle-to-grave control that regulated the generation, transportation, treatment, storage and disposal of hazardous waste.
- RCRA also provided the framework for handling non-hazardous waste.

Waste Regulations

- 1984, RCRA amended to include HSWA (hazardous and solid waste amendments), requiring generators to:
  -- certify that they have a waste minimization program in place (Small waste generators need to make a good faith effort to minimize orWritten program needed section 403 25160.23)
  -- identify efforts to be taken to reduce the quantity and toxicity of the waste

California

- RCRA allows California to implement its own RCRA program
- The program must be at least as stringent
- Multi agency and levels of government
  - Federal EPA (Region 9 - San Francisco)
  - California EPA (Cal-EPA - Sacramento)
  - Department of Toxic Substance Control (DTSC)
  - Local (city or county) Certified Unified Program Agencies (CUPA)
CUPAs & Other Agencies

- CUPA
  - Responsible for applying statewide standards in its jurisdiction of the following programs
    - Hazardous Waste Generator Program
    - Clinic HW Treatment Tiered Permitting Program
    - Above Ground Storage Tank Program
    - Underground Storage Tank Program
    - HM Release Response Plans & Inventory Program
    - Hazardous Management Plans & HM Inventory

CUPA is required to Inspect Waste Generators

- Inspectors can review:
  - Manifests
  - Contingency Plans
  - Training Records
  - Inspection Records
  - Inspect operations and waste storage areas
  - Interview employees

Most Common Violations Cited by inspectors

- Inadequate Training
- Improper Labeling
- Improper Record Keeping
- Failure to properly inspect waste storage areas
Conduct weekly inspection of waste storage areas.
- Inspection items include
  - Open, damaged or leaking containers
  - Improper labeling
  - Date of accumulation is correct
  - Incompatible stored together
  - Items contained by secondary containment and containment is clean and dry

What exactly is a hazardous material?

DOT (49 CFR § 171.8) defines a hazardous material as any material that is "Capable of posing an unreasonable risk to health, safety, and property when transported in commerce."

What exactly is a hazardous waste?

EPA (40 CFR § 261.2) defines a hazardous waste as any material that is "discarded, abandoned, or inherently wastelike... which because of its quantity, concentration, or physical, chemical, or infectious characteristics may... pose a hazard to human health or the environment."
Hazardous Characteristics

- Determining whether a material is hazardous is the first challenge you face in the hazmat identification process.

Characteristic Wastes

Those that exhibit a "characteristic" hazard like:
- Ignitable (D001)- if the waste is a liquid and has a flashpoint less than 140 degrees F.
- Corrosive (D002)- If the waste has a pH of 2 or less, or 12.5 or more, or if it corrodes steel at a certain rate.

Characteristic Wastes Cont.

- Reactive (D003) - if the material reacts with water, forms explosive mixtures with water, generates toxic fumes or vapors when mixed with water, is a cyanide or sulfide bearing waste which generates hazardous fumes or vapors, or is explosive.

- Toxic (D004-43) - if the wastes contain more than a certain level of some toxic materials. Includes heavy metals, organics, and pesticides.
Personal Protection

- Choice based on type of exposure the material represents
- Routes of entry
  - Inhalation
  - Absorption
  - Ingestion
  - Injection

Personal Protection

- Four levels
  - Level A
    - Highest level of respiratory, dermal and eye protection
  - Level B
    - Highest level of respiratory protection, lower level of dermal protection
  - Level C
    - Lower level of respiratory and dermal protection
  - Level D
    - No respiratory and limited dermal protection

Hazardous Waste Labeling

- Point of Generation Labeling must have
  - Words "Hazardous Waste"
  - Composition and physical state of waste (solid, liquid)
  - Date of accumulation
  - Hazardous Properties (Flammable, Toxic, Corrosive, Reactive)
- Universal Waste must say "Universal Waste" and not "Hazardous Waste"
California UWR - Wastes

Wastes added by regulations:
- Hazardous waste batteries
- Hazardous waste thermostats
- Hazardous waste lamps
- Hazardous waste cathode ray tubes (CRT) (Have had CRT training?)
- Certain mercury-containing products
- Consumer electronic devices (CEDs)

California UWR - Wastes

Universal waste batteries
- All hazardous waste batteries except vehicle (cranking) spent lead-acid batteries
- Hazardous for:
  - Corrosivity – Alkaline or acidic electrolyte
  - Heavy metals – Lead, zinc, nickel, cadmium, mercury, silver, etc
  - Reactivity – Lithium (unspent)

California UWR - Wastes

Universal waste thermostats
(Only those that use glass ampoules of mercury)
- Hazardous due to mercury content
California UWR - Wastes

Universal waste lamps

Hazardous due to:
- Mercury content
  (fluorescent tubes, high intensity discharge, sodium lamps)
- Reactivity (low pressure sodium)
- Leaded glass (some HID lamps)

California UWR - Wastes

Empty aerosol cans
- Empty means that all the contents are used that could be used when the delivery mechanism functions properly
- Hazardous due to reactivity (and...)

California UWR - Wastes

Waste cathode ray tubes (CRT)
- Hazardous due to lead content
- Televisions and monitors
Universal Waste

- Small Quantity Generators of universal waste are businesses that accumulate less than 11,000 lbs of total universal waste at any one time.
- Most businesses are small quantity generators.

Manifest

- The "Uniform Hazardous Waste Manifest" is the shipping document that travels with hazardous waste from the point of generation, through transportation, to the final treatment, storage, or disposal facility (TSDF).

Manifest

The Generator needs to get signed copy form designated facility.

What if you don't get the last signed copy?
- Contact the transporter(s) and/or facility if you have not received the last, signed copy of the manifest form within 30 days of the shipment date. Try to find out where your waste is and why you have not yet received the signed copy.
Manifest

Submit an exception report to the DTSC if you have not received the last copy of the manifest within 45 days of the shipment date. The report, which you should keep for at least five years, must include the following:

* A copy of the manifest for which you do not have a copy signed by the facility, and
* A cover letter explaining the steps you took to find out what happened to your waste shipment and the results.

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Generator Classifications

- Small Quantity Generator - 220 to 2,200 lbs of hazardous waste and less than 2,200 lbs of acute hazardous waste per month.
  - Acquire an EPA L.D. number.
  - Follow EPA storage facility requirements.
  - Follow DOT packaging requirements.
  - Prepare manifests to accompany shipments.
  - Include certification with each shipment on the proper treatment method.
  - Allowed to store waste longer than 90 days.
**Loss Control**

**Large Quantity Generator**

- LQG generate more than 2,200 lbs of hazardous waste and 2.2 lbs of acute hazardous waste per month.
  - Prepare a written contingency plan and hazwoper training for all responders.
  - Biennial reports to EPA referencing waste shipments, waste minimization efforts.
  - Comply with land band restrictions.

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**Loss Control**

**Accumulation Areas**

- Waste can be accumulated in satellite areas with minimal regulatory burden.
  - Must be at or near the process generating the waste.
  - 55 gallon accumulation limit.
  - Excess of 55 gallons must be removed within 72 hours.
  - Containers must be marked, "Hazardous Waste," composition and physical state with words that identify the contents and hazardous properties (Ex. Flammability)

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**Loss Control**

**Hazardous Waste**

**Accumulation Rules**

1) Store chemical waste in the designated area.
   - Not on the floor or in the fume hood
2) Keep containers closed.
   - Never leave funnels in the drums, bottles, or lids unscrewed.
Hazardous Waste Accumulation Rules

- Stoppers or caps are unacceptable.
- Containers must be compatible with the waste.
- Must be properly labeled.
- Must have completed Waste Label
- Do not overfill
  * leave 2 inches headspace in all bottles and containers

Hazardous Waste Accumulation Rules

Label all containers.
- Put Waste labels on all waste bottles i.e. waste toluene.
- Identify the material. Disposal of unknown waste is very expensive.
- Complete all information on the label and date.

Hazardous Waste Accumulation Rules

- Print clearly
- Do not use formulas, symbols or abbreviations.
- Commingled Waste must equal 100%, including water and trace chemicals.
- Dilution is not the Solution. Waste placed into neat (virgin) material makes the whole container waste.
- Place only compatible materials together.
Hazardous Waste Accumulation Rules

Avoid excessive accumulation of waste. Less waste means safer conditions and more working space for you.

Inspect your accumulation areas to make sure they are clean, no leaks, lids on, labeled and segregated.

Secondary Containment Rags

Training Requirements

- Training
  - Familiar with proper waste handling
  - Emergency Procedures
  - Relevant to your responsibilities during normal operation
  - Must have one person for an emergency contact at all times

Emergency Planning

- Contingency Plans (Your HMBP)
  - Business emergency plans
  - Hazardous materials inventory and locations
  - Emergency Equipment and Systems
  - Shutdown procedures (Gas?)
  - Communication and Alarm Systems

Emergency Procedures
Questions?

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