Basic Hazardous Waste Management
40 CFR 262.16(b)(9)(iii) & 22 CCR 66265.16

Prepared & Presented for the 21st Annual CalCUPA Conference
Presenter

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  ▪ 30+ years of hazardous waste management experience
Course Objectives

This course will provide an overview of federal and state regulations regarding the classification, management, transportation, and disposal of hazardous waste for California hazardous waste generators.
Course Outline

Basic Hazardous Waste Management

- Regulatory Overview & Recordkeeping Requirements
- Hazardous Waste Determination
- Container & Tank Management
- Shipping Requirements
Regulatory Overview & Recordkeeping Requirements
<table>
<thead>
<tr>
<th>Gov’t Level</th>
<th>Law</th>
<th>Year Enacted</th>
<th>Regulation</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>RCRA</td>
<td>1976</td>
<td>40 CFR 260-268, 273</td>
<td>Environmental Protection Agency (EPA)</td>
</tr>
<tr>
<td>State</td>
<td>HWCL</td>
<td>1972</td>
<td>22 CCR 66260-66268, 66273</td>
<td>Department of Toxic Substances Control (DTSC)</td>
</tr>
<tr>
<td>Federal</td>
<td>OSHA</td>
<td>1970</td>
<td>Title 29 CFR</td>
<td>Occupational Safety and Health Administration (OSHA)</td>
</tr>
<tr>
<td>State</td>
<td>Cal/OSHA</td>
<td>1973</td>
<td>Title 8 CCR</td>
<td>Division of Occupational Safety and Health (DOSH or Cal/OSHA)</td>
</tr>
<tr>
<td>Federal</td>
<td>HMTA</td>
<td>1975</td>
<td>Title 49 CFR</td>
<td>Department of Transportation (DOT)</td>
</tr>
<tr>
<td>State</td>
<td>CVC</td>
<td>1935</td>
<td>Title 13 CCR</td>
<td>California Highway Patrol (CHP) / Department of Motor Vehicles (DMV)</td>
</tr>
</tbody>
</table>
United States Environmental Protection Agency (U.S. EPA) protects human health and the environment:

- Writes and enforces environmental regulations
- Regulations enforced by regional offices
California Department of Toxic Substances Control (DTSC) protects people and the environment from harmful effects of toxic substances by:

- Enforcing hazardous waste regulations
- Inspecting permitted facilities and hazardous waste generators
- Taking enforcement actions to ensure compliance
The Certified Unified Program Agency (CUPA) consolidates, coordinates, and makes consistent portions of the following six existing programs:

- **Hazardous Waste Generators**
- Underground Storage Tanks (USTs)
- Hazardous Materials Business Plans (HMBPs)
- California Accidental Release Prevention Program (CalARP)
- Aboveground Storage Tanks (SPCC Plans)
- California Fire Code
Regulatory Overview

Unified Program Regulatory Directory:

http://cersapps.calepa.ca.gov/Public/Directory/
A generator is any person, by site, whose act or process produces hazardous waste or whose act first causes a waste to become subject to regulation as a hazardous waste.
1. Improperly labeled hazardous waste containers (violation count – 6,199)
2. Failure to obtain and/or maintain ID number (violation count – 3,243)
3. Failure to maintain manifest copies (violation count – 2,437)
4. Failure to properly close hazardous waste containers when not in use (violation count – 1,868)
5. Failure to properly label & manage used oil filters (violation count – 1,838)

Data compiled by Cal EPA for fiscal year July 1, 2017 – June 30, 2018
## Generator Status

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LQG</strong></td>
<td>≥ 1,000 kg hazardous waste and/or &gt; 1 kg acutely hazardous waste and/or &gt; 1 kg extremely hazardous waste during any calendar month</td>
</tr>
<tr>
<td><strong>SQG</strong></td>
<td>&lt; 1,000 kg hazardous waste and/or ≤ 1 kg acutely hazardous waste and/or extremely hazardous waste during any calendar month</td>
</tr>
<tr>
<td><strong>VSQG</strong> (previously CESQG)</td>
<td>≤ 100 kg hazardous waste and/or ≤ 1 kg acutely hazardous waste and/or extremely hazardous waste during any calendar month – this is a category defined by EPA and not recognized in California</td>
</tr>
</tbody>
</table>
Generator Status

- Waste volume based on:
  - RCRA and non-RCRA wastes
  - Amount generated each month, not amount shipped off-site
• Each site that generates hazardous waste must have an ID number
  ▪ California ID numbers issued by DTSC (< 220 pounds RCRA hazardous waste in any month)
  ▪ CAL – permanent; CAC – provisional; CAS – permanent for emergency response
  ▪ EPA ID numbers issued by U.S. EPA (> 220 pounds RCRA hazardous waste in any month)
  ▪ CAR – current; CA – not issued since 1995; CAD – not issued since 1993; CAT – preceded CAD; CAP – provisional
Generators must verify their ID numbers (state and federal) annually through DTSC.

If ID numbers are not verified, they will be deactivated.
Spells out emergency actions involving hazardous waste
  ▪ Fire
  ▪ Explosives
  ▪ Unplanned, sudden releases/spills
Contingency Plan Contents – LQG

• Emergency Coordinator
• Emergency procedures
• Emergency services and arrangements to coordinate response actions
• Emergency equipment
• Evacuation Plan
• Cal OES contact
Emergency Procedures – SQGs

- At all times, there must be at least one employee, either on the premises or on call, available to respond to an emergency.
- Information must be posted next to telephones OR in areas directly involved in the generation and accumulation of hazardous waste:
  - Name & number of Emergency Coordinator
  - Location of fire extinguishers & spill control equipment
  - Fire Department number

In case of a fire, spill, or other emergency involving hazardous chemicals or wastes, do the following:

**Major Emergency**

⇒ Evacuate the affected areas per the facility Evacuation Plan
⇒ Call 911 and report the emergency
⇒ Report the emergency to the facility Emergency Coordinator

**Minor Emergency**

⇒ Try to control the emergency if you are trained to do so and can do it safely
⇒ Report the emergency to the facility Emergency Coordinator

### Facility Emergency Coordinators

<table>
<thead>
<tr>
<th>Name</th>
<th>Work Phone</th>
<th>24 Hour Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Emergency Agencies

<table>
<thead>
<tr>
<th>Agency</th>
<th>Phone No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Dept., Ambulance, Police</td>
<td>911</td>
</tr>
<tr>
<td>Governor’s Office of Emergency Services</td>
<td>(800) 852-7550</td>
</tr>
</tbody>
</table>

### Emergency Equipment

Locations of fire extinguishers, fire alarms (if any), and equipment for controlling chemical spills are shown on the facility site plan posted with this notice.

This document is only a summary of emergency procedures. Refer to this facility’s written emergency response plan for detailed procedures.
Tank Assessments – LQGs

• Tank assessments required for LQGs who accumulate hazardous waste in tanks:
  ▪ Tank system and components certified by qualified professional engineer (PE)
  ▪ Supported and protected from corrosion
  ▪ Tested for tightness
  ▪ Protected from settlement, expansion, or contraction
  ▪ Must be completed prior to putting tank into service and then once every 5 years for new tanks
Biennial Hazardous Waste Report – LQGs

- Required & certified by RCRA LQGs
- Report covers odd-numbered year
  - Amounts by waste code
  - Identify source & origin of waste
  - Identify disposal method (recycled, incinerated, etc.)
  - Waste minimization efforts
- Due March 1st of following year (even year – 2020) for waste generated prior year (odd year – 2019)
Disposal & Recycle Records

- Manifests
- Land disposal restriction forms
- Consolidated manifests
- Maintained for three years from date of shipment
Other Records

• Waste analytical test analyses
  ▪ Three years from date was last shipped off-site
• Container and tank inspections
  ▪ Three years from date of inspection
• Emergency equipment inspections
  ▪ Three years from date of inspection (best management practice – BMP for SQGs)
Employees must be familiar with proper waste handling and emergency response procedures relevant to their responsibilities.

Annual training is a BMP.
• Personnel must successfully complete a program of either:
  ▪ Classroom, computer-based, or electronic instruction; OR
  ▪ On-the-job (OTJ) training
• Training must cover hazardous waste management procedures and emergency response training
• Training must be provided within 180 days of hire / job placement
• Annual training required
Training Requirements – LQGs

Personnel involved in shipping hazardous waste must receive DOT Hazmat Employee training. [49 CFR 172.704]
• Documentation:
  ▪ Description for each position related to hazardous waste management including the requisite skills, education, or other qualifications and duties of employees assigned to each position
  ▪ Job title for each position related to hazardous waste management and the name of the employee filling each job
  ▪ [Continued…]
• Description of the type and length of training needed for each position
• Records to document training has been provided and completed
• Records are to be kept until facility closure for current employees
  ◦ 3 years for former employees
Hazardous Waste Determination
A person who generates a waste shall determine if it is hazardous by determining if the waste:

- Is excluded from regulation
- Is listed
- Exhibits any hazardous waste characteristics

Determinations can be made by:

- Testing the waste
- Generator’s knowledge

22 CCR 66262.11
Hazardous Waste Determination

- **Waste** is any discarded material of any form (liquid, semi-solid, solid, or gaseous) that is not excluded by regulation or statute:
  - Relinquished (disposed of, burned or incinerated, or accumulated, stored, or treated prior to or in lieu of disposal)
  - Recycled (applied to land in a manner constituting disposal, used in products that are applied to land, burned to recover energy, reclaimed, or speculatively accumulated)
  - [Continued…]
Hazardous Waste Determination

- Inherently waste-like materials when recycled (e.g., F020, F021 [with one exception], F022, F023, F026, and F028 – all dioxin-precursor waste)
- A material that poses a threat to human health and/or the environment that has been mislabeled or unlabeled for more than 10 days (i.e., 10 days from the day that the labeling deficiency was first discovered)
- A material that poses a threat to human health and/or the environment contained in a deteriorated or damaged packaging for more than 96 hours
Hazardous Waste Determination

- Materials that are not waste:
  - Industrial wastewater discharges
  - Nuclear byproducts
  - Spent sulfuric acid used to produce virgin sulfuric acid
  - Pulping liquors reclaimed in a pulping liquor recovery furnace
  - Secondary materials that are returned to the original process
Hazardous Waste Determination

- Wastes that are not hazardous waste:
  - Infectious wastes consisting only of animal carcasses
  - Materials not classified as a solid waste that do not exhibit a hazardous waste characteristic
  - Used oil re-refining distillation bottoms used as a feedstock for asphalt
  - Used CFC refrigerants that are reclaimed
  - [Continued…]
Hazardous Waste Determination

- Solid waste from the extraction and processing of ores and minerals
- Hazardous wastes generated in a tank or manufacturing process unit
  - Exclusion applies until waste exits unit or remains in non-operational unit for more than 90 days
- Samples
- Controlled substances
- CRT glass

22 CCR 66261.4
Hazardous Waste Determination

**RCRA Hazardous Waste**

- Listed
  - Unspent (U & P)
  - Spent (F & K)
- Characteristic
  - Ignitable (D001)
  - Corrosive (D002)
  - Reactive (D003)
  - Toxic (D004 – D043)

**Non-RCRA Hazardous Waste**

- Presumptive lists
  - Common name
  - Chemical constituents
- Characteristic
  - Ignitable
  - Corrosive
  - Reactive
  - Toxic
Spent Waste Codes

- F Listed: Non-specific sources
  - F001 – F039
- K Listed: Specific sources
  - K001 – K175

Unspent Waste Codes

- P Listed: Acute hazardous waste
  - P001 – P205
- U Listed: Toxic hazardous waste (unless noted)
  - U001 – U411
• Liquid (other than < 24% alcohol by volume) with a flash point < 140°F (60°C)
• A solid that can cause fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burns vigorously and persistently
• Is an ignitable compressed gas
• Is an oxidizer
RCRA Corrosive Characteristic – D002

- Aqueous with pH \leq 2.0 \text{ or } \geq 12.5; \text{ OR}
- Liquid that corrodes steel at \frac{1}{4} \text{ inch (6.35 mm)} per year
Unstable and undergoes violent change w/o detonating;
Reacts violently with water;
Forms an explosive mixture with water;
Generates toxic gases, vapor fumes with water;
Cyanide or sulfide-bearing waste producing toxic gases, vapors, or fumes @ pH 2 – 12.5;
Capable of detonation or an explosive reaction; OR
Forbidden explosive (49 CFR 173.51)
RCRA Toxic Characteristic – D004 – D043

- Applies to 8 inorganic elements and 32 organic compounds
- Tested using EPA Toxicity Characteristic Leaching Procedure (TCLP)
- Regulated if > specified threshold
California Presumptive Lists

• Chemical names
• Common names
• Presumed to create a non-RCRA hazardous waste based on hazardous characteristic
  ▪ X: Toxic
  ▪ C: Corrosive
  ▪ I: Ignitable
  ▪ R: Reactive

22 CCR, Div. 4.5, Chap. 11, Article 5, Appendix X
Non-RCRA Ignitable Characteristic – D001
(Same as Federal)

- Liquid (other than < 24% alcohol by volume) with a flash point < 140°F (60°C)
- A solid that can cause fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burns vigorously and persistently
- Is an ignitable compressed gas
- Is an oxidizer
Non-RCRA Corrosive Characteristic

• Aqueous with pH $\leq 2.0$ or $\geq 12.5$
• Liquid that corrodes steel at $\frac{1}{4}$ inch (6.35 mm) per year
• Non-aqueous wastes that yield pH $\leq 2.0$ or $\geq 12.5$ when mixed with an equivalent weight of water
• Non-liquids that corrode steel at $\frac{1}{4}$ inch (6.35 mm) per year when mixed with an equivalent weight of water
Non-RCRA Reactive Characteristic – D003
(Same as Federal)

- Unstable and undergoes violent change w/o detonating;
- Reacts violently with water;
- Forms an explosive mixture with water;
- Generates toxic gases, vapor fumes with water;
- Cyanide or sulfide-bearing waste producing toxic gases, vapors, or fumes @ pH 2 – 12.5;
- Capable of detonation or an explosive reaction; OR
- Forbidden explosive (49 CFR 173.51)
Non-RCRA Toxic

- Exceeds TTLC or STLC for 20 inorganics (Table II) or 18 organics (Table III)
- Oral LD$_{50}$ < 2,500 mg/kg
- Dermal LD$_{50}$ < 4,300 mg/kg
- Inhalation LC$_{50}$ < 10,000 ppm
- Aquatic 96-hr LC$_{50}$ < 500 mg/L
- Listed carcinogen > 0.001% (10 ppm) by weight
Used Oil

Used oil is defined as oil that has been refined from crude oil, or any synthetic oil, that has been used, and, as a result of use or as a consequence of extended storage or spillage, has been contaminated with physical or chemical impurities.
<table>
<thead>
<tr>
<th>Used Oil</th>
<th>Not Used Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Crankcase oil</td>
<td>▪ Antifreeze</td>
</tr>
<tr>
<td>▪ Gear oil</td>
<td>▪ Brake fluid</td>
</tr>
<tr>
<td>▪ Vegetable or animal oil used as a lubricant</td>
<td>▪ Fuels</td>
</tr>
<tr>
<td>▪ Hydraulic oil</td>
<td>▪ Other automotive wastes</td>
</tr>
<tr>
<td>▪ Transformer oil</td>
<td>▪ Solvents</td>
</tr>
<tr>
<td>▪ Transmission fluid</td>
<td>▪ Oil with a flash point &lt; 100°F</td>
</tr>
<tr>
<td></td>
<td>▪ Oil with ≥ 5 ppm PCBs</td>
</tr>
<tr>
<td></td>
<td>▪ Oil with &gt; 1,000 ppm halogens</td>
</tr>
</tbody>
</table>
California Waste Codes

- Restricted Wastes: 700-800
- Inorganics: 100-199
- Organics: 200-300
- Sludges: 400-499
- Miscellaneous: 500-600
Exemptions

- Contaminated containers [22 CCR 66261.7]
- Scrap metal [22 CCR 66261.6(a)(3)(B)]
- Spent lead-acid storage batteries [22 CCR 66266.80 & 66266.81]
- Universal wastes [22 CCR 66273]
- Used oil filters [22 CCR 66266.130]
- Recyclable latex paint [HSC 25217.4]
Container & Tank Management
A container is a device that is open or closed, and portable, in which material can be stored, handled, treated, transported, recycled, or disposed of.
A tank is a stationary device designed to contain an accumulation of hazardous waste constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) that provide structural support.
Generators must have a designated Central Accumulation Area (CAA)
- Generators can have multiple CAAs
- LQGs – CAA must be > 50 ft from property line if ignitable (D001) or reactive (D003) waste present
- Facility must be maintained & operated to minimize possibility of a fire, explosion, or release
## Container Accumulation Areas

### Accumulation Time Limits and Volumes

<table>
<thead>
<tr>
<th>Type</th>
<th>Time Limit and Volume Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>LQG</td>
<td>90 days; no limit for hazardous waste stored on-site</td>
</tr>
<tr>
<td>SQG</td>
<td>180 days (270 days if shipped ≥ 200 miles); maximum 6,000 kg hazardous waste stored on-site</td>
</tr>
<tr>
<td>VSQG (previously CESQG)</td>
<td>No time limit until 100 kg of hazardous waste (180 days) or 1 kg of acutely or extremely hazardous waste is reached (then 90 days)</td>
</tr>
</tbody>
</table>
Container Accumulation Areas

- Located in secure area with access controlled
Central Accumulation Areas

- Emergency equipment:
  - Internal communication devices
  - Fire extinguishers
  - Spill control equipment
- Equipment must be tested and maintained
- LQGs – inspection schedule must be implemented, records maintained

40 CFR 262.16(b)(8); 22 CCR 66265.15(b) & 66265.32-33
• Hazardous waste containers must be marked with the following:
  ▪ “Hazardous Waste”
  ▪ Generator’s name and address
  ▪ Contents
  ▪ Physical state
  ▪ Hazardous properties
  ▪ Accumulation start date
• Labels must be legible and visible!

22 CCR 66262.34(f)
• Hazardous waste containers must be:
  ▪ In good condition (no signs of rust, damage, or leakage)
  ▪ Compatible with the waste
  ▪ Closed (except when adding or removing waste)
  ▪ Managed in a manner so they are not ruptured or caused to leak

40 CFR 262.16(b)(2)(i-iii); 22 CCR 66265.171-173(a)
Funnels must meet closure requirements.
Aisle space between containers must allow for unimpeded access to containers.
### TECHNOTE: POTENTIALLY INCOMPATIBLE WASTES

Mixing a Group A material with a Group B material may have the following consequences.

<table>
<thead>
<tr>
<th>Group 1-A</th>
<th>Group 1-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetylene sludge</td>
<td>Caustic wastewater</td>
</tr>
<tr>
<td>Alkaline caustic liquids</td>
<td>Lime wastewater</td>
</tr>
<tr>
<td>Alkaline cleaner</td>
<td>Lime and water</td>
</tr>
<tr>
<td>Alkaline corrosive liquids</td>
<td>Spent caustic</td>
</tr>
<tr>
<td>Alkaline corrosive battery fluid</td>
<td>Lime sludge</td>
</tr>
</tbody>
</table>

**Potential consequences:** *Heat generation; violent reaction.*

<table>
<thead>
<tr>
<th>Group 2-A</th>
<th>Group 2-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>Zinc powder</td>
</tr>
<tr>
<td>Beryllium</td>
<td>Sodium</td>
</tr>
<tr>
<td>Calcium</td>
<td>Potassium</td>
</tr>
<tr>
<td>Lithium</td>
<td>Magnesium</td>
</tr>
<tr>
<td>Other reactive metals and metal hydrides</td>
<td></td>
</tr>
</tbody>
</table>

**Potential consequences:** *Fire or explosion; generation of flammable Hydrogen gas.*

<table>
<thead>
<tr>
<th>Group 3-A</th>
<th>Group 3-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohols</td>
<td>Calcium</td>
</tr>
<tr>
<td></td>
<td>Potassium</td>
</tr>
<tr>
<td></td>
<td>Other water-reactive waste</td>
</tr>
<tr>
<td></td>
<td>SO₂Cl₂, SOCl₂, PCl₃</td>
</tr>
<tr>
<td></td>
<td>CH₃SiCl₃</td>
</tr>
</tbody>
</table>

**Potential consequences:** *Fire, explosion or heat generation; generation of flammable or toxic gases.*

<table>
<thead>
<tr>
<th>Group 4-A</th>
<th>Group 4-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohols</td>
<td>Aldehydes</td>
</tr>
<tr>
<td>Nitrated hydrocarbons</td>
<td>Halogenated hydrocarbons</td>
</tr>
<tr>
<td>Unsaturated hydrocarbons</td>
<td>Other reactive organic compounds and solvents</td>
</tr>
</tbody>
</table>

**Potential consequences:** *Fire or explosion; generation of flammable or toxic gases.*

<table>
<thead>
<tr>
<th>Group 5-A</th>
<th>Group 5-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spent cyanide and sulfide solutions</td>
<td></td>
</tr>
</tbody>
</table>

**Potential consequences:** *Generation of toxic Hydrogen cyanide or Hydrogen sulfide gas.*

<table>
<thead>
<tr>
<th>Group 6-A</th>
<th>Group 6-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorates</td>
<td>Perchlorates</td>
</tr>
<tr>
<td>Chlorine</td>
<td>Permanganates</td>
</tr>
<tr>
<td>Chlorites</td>
<td>Peroxides</td>
</tr>
<tr>
<td>Chronic acid</td>
<td>Nitrates</td>
</tr>
<tr>
<td>Hypochlorites</td>
<td>Other strong oxidizers</td>
</tr>
<tr>
<td>Nitric acid, fuming</td>
<td></td>
</tr>
</tbody>
</table>

**Potential consequences:** *Fire, explosion, or violent reaction.*

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- Incompatible hazardous waste cannot be placed in the same container
Tank Management

- Hazardous waste tanks must be labeled with the following:
  - “Hazardous Waste”
  - Accumulation start date
  - Hazardous property of the waste
A log to demonstrate the tank has been emptied within 180 days from hazardous waste first entering the tank must be maintained.
• Containers and tanks used to store used oil must be marked with “Used Oil” (in addition to hazardous waste markings)

• **Do not** mark used oil containers and tanks with “Waste Oil”
Container Storage Area Inspections

• Weekly:
  ▪ Leaking containers
  ▪ Deterioration of containers
  ▪ LQGs – containment systems

• Inspections should be documented
Tank Inspections – SQGs

- Daily (unless tank has secondary containment):
  - Discharge controls
  - Monitoring data
  - Tank level
- Weekly
  - Construction materials of the tank
- Inspections should be documented

40 CFR 262.16(b)(3)(iii)
Tank Inspections – LQGs

• At least once each operating day:
  ▪ Overfill / spill control equipment
  ▪ Aboveground portions of tank
  ▪ Monitoring & leak detection equipment
  ▪ Area surrounding externally accessible portion of tank system (secondary containment)

• Inspections must be documented
• Inspection records maintained for 3 years

22 CCR 66265.195
Satellite Accumulation Areas

- Satellite Accumulation Area requirements:
  - At or near where the waste is generated
  - Under the control of operator of the process generating waste
  - Only containers can be used
  - One container per waste stream (unless generator determines using one container is not practical or safe – subject to DTSC review and approval)
  - [Continued…]
Satellite Accumulation Areas

- Limit of 55 gallons per waste stream
- Must meet all container management standards (weekly inspections not required)
- Container can be stored on-site for up to one year
- Container must be dated within three days of when it reaches capacity

![Workplace Accumulation Container Image]
General Housekeeping Practices

- Poor housekeeping can result in an increase in the amount of hazardous waste generated
  - Closure – protects workers from the waste and the waste from the elements
  - Spillage – must be cleaned up in a timely manner
  - Labeling – must be legible and visible
  - Inventory – do not exceed allowances
Potential Compliance Issue

Hazardous waste containers not labeled
Potential Compliance Issue

Hazardous waste container not closed
Potential Compliance Issue

Facility not operated/maintained to prevent a release
Miscellaneous Requirements

- Contaminated containers
- Spent lead-acid storage batteries
- Used oil filters
- Recyclable latex paint
- Universal wastes
Contaminated Containers

- Containers must be:
  - Empty – no continuous stream for liquids
  - Marked “EMPTY” (BMP)
  - Marked with the date they became empty
  - Stored on-site no more than one year (365 days)
  - Recycled
  - Recycle records are to be kept for 3 years

22 CCR 66261.7
• Containers that are 5 gallons or less and empty can be managed as municipal waste (trash)

• **Do not** dry containers; this may be considered treatment
Spent Lead-Acid Storage Batteries

- Management of batteries:
  - Stored upright on a pallet on a sealed surface
  - Stored to prevent the terminals from short circuiting
  - Stored on-site no more than one year (365 days – 180 days for more than a ton) and marked with out-of-service date
  - Recycle records are to be kept for 3 years
Drained Used Oil Filters

- Oil filters must be:
  - Drained (no free-flowing liquid)
  - Stored in a rainproof and closed container
  - Labeled “Drained Used Oil Filters” with an accumulation start date
  - Stored on-site no more than one year (365 days – 180 days for more than a ton)
  - Recycle records are to be kept for 3 years

22 CCR 66266.130
Recyclable Latex Paint

- Recyclable latex paint is any water-based latex paint, still in liquid form, that is transferred for the purposes of being recycled
- Liquid latex paint cannot be disposed of in the land or waters of the state
Recyclable latex paint can be sent to a facility that manages used paint as long as:

- Paint is managed in accordance with all applicable latex paint procedures
- Paint is in liquid form and in its original packaging (or in a closed, labeled container)

[Continued…]
Recyclable Latex Paint

- If the facility accepts latex paint that is not recyclable, the paint is managed as a hazardous waste.
- If the paint is not excluded, the disposal of the paint is done so in a way that meets applicable federal requirements.

www.paintcare.org
Universal Waste

• Examples of universal waste:
  ▪ Batteries
  ▪ Spent lamps
  ▪ Electronic devices (e-waste)
  ▪ Mercury-containing devices
  ▪ Aerosol cans (non-empty)
• Universal waste:
  ▪ Must be kept in a closed container that is compatible with the waste
  ▪ Labeled with:
    ◦ “Universal Waste”
    ◦ Type of waste (e.g., Waste Lamps, Used Batteries, Waste Aerosols)
    ◦ Accumulation start date
  ▪ Stored on-site for no more than one year (365 days)
  ▪ Tracking records maintained for 3 years
Shipping Requirements

• Hazardous waste must be profiled for disposal and transported:
  ▪ By a registered hazardous waste transporter
  ▪ Using a Uniform Hazardous Waste Manifest
  ▪ To a permitted facility

• RCRA hazardous wastes are subject to DOT regulations
Shipping Requirements

• Exceptions:
  ▪ VSQGs can self-transport hazardous waste to permitted HHW facility
  ▪ Used oil transported to recycling facility (55-gallon limit)
  ▪ Used oil generated during maintenance activities (55-gallon limit)
• These shipments do not require a hazardous waste transporter or Uniform Hazardous Waste Manifest
Shipping Requirements

- EPA form 8700-22 is the only manifest form that can be used.
- Federal instructions included on the back of the manifest form.
Shipping Requirements

- California has supplemental manifest instructions that include:
  - Submittal requirements
  - California waste codes
  - Hazardous waste management method codes
Shipping Requirements

- Generator is responsible for information in boxes 1 – 15
- Box 16 is for international shipments
- Box 17 is for transporter’s acknowledgement of receipt
- Boxes 18 – 20 are to be completed by designated facility (TSDF)
Shipping Requirements

- Manifest consists of 5 parts:
  - Page 1 – TSDF to EPA’s e-Manifest system
  - Page 2 – TSDF to Generator
  - Page 3 – TSDF Copy
  - Page 4 – Transporter Copy
  - Page 5 – Generator Initial Copy (legible copy must be mailed to DTSC within 30 days of shipment)
Shipping Requirements

The generator must submit a legible manifest copy to DTSC within 30 days from the date of shipment to:

DTSC Generator Manifests
P.O. Box 400
Sacramento, CA 95812-0400
• The TSDF must submit a manifest to EPA’s e-Manifest system

• Fees:

<table>
<thead>
<tr>
<th>Manifest Submission Type</th>
<th>Year 1 Fee (Estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mailed Paper</td>
<td>$20.00</td>
</tr>
<tr>
<td>Image Uploads</td>
<td>$13.00</td>
</tr>
<tr>
<td>Data File Uploads</td>
<td>$7.00</td>
</tr>
<tr>
<td>Electronic Manifests (includes hybrid)</td>
<td>$4.00</td>
</tr>
</tbody>
</table>
Shipping Requirements

• Generators must receive a signed copy of the manifest from the TSDF within 35 days from the date of shipment.

• The generator is responsible to contact transporter and TSDF if copy is not received by the 35th day.
• If the signed manifest copy is not received, the generator must submit an exception report to DTSC within:
  - 45 days for LQGs
  - 60 days for SQGs
Shipping Requirements

- Exception report must include a legible copy of the manifest and efforts generator made to locate hazardous waste
- Exception reports sent to:
  
  DTSC Report Repository
  Generator Information Services Section
  P.O. Box 806
  Sacramento, CA 95812-0806
Consolidated shipments:

- Authorized hazardous waste streams consolidated into a single shipment from multiple generators
- Transported by a consolidated transporter
- Generator and transporter section of manifest completed by transporter
- Generator provided a receipt (signed by transporter and generator) for shipment
- Receipt retained by generated for 3 years from date of shipment
Shipping Requirements

- Used oil
- Contents of an oil/water separator
- Solids contaminated with used oil
- Brake fluid
- Antifreeze
- Antifreeze sludge
- Parts-cleaning solvents
- Asbestos and asbestos-containing materials
- Inks from the printing industry
- Chemicals and laboratory packs collected from K-12 school
- Filters from dispensing pumps for diesel and gasoline fuels
- Hydroxide sludge (contaminated solely with metal from a wastewater treatment process)
- Paint-related wastes including paints, thinners, filters, and sludge
- Spent photographic solution
- Dry cleaning solvents including perchloroethylene, naphtha, and silicone-based solvents
- Filters, lint, and sludge contaminated with dry cleaning solvent
Thank You

Questions? Contact us at:
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1141 Sibley Street
Folsom, CA 95630
NESglobal.net
916-353-2360
800-637-2384