

Ionie Wallace
Cherri Taylor

HOUSEHOLD HAZARDOUS WASTE REGULATORY BASICS

Objective

- Introduce HHW staff to the world of applicable regulatory requirements
- Understand HHW facility operations

Class Highlights

- What is HHW?
- Why collect HHW?
- Laws versus regulations
- Agencies
- Types of programs
- Specific waste reqts.
- Permitting/Approvals
- Regulatory requirements
- Best practices
- Training Requirements
- Reporting
- Exercises

What is HHW?

- ⦿ What is hazardous waste?
 - Federal
 - California
- ⦿ What is HHW (California)?
- ⦿ "Household hazardous waste" means hazardous waste generated incidental to owning or maintaining a place of residence. Household hazardous waste does not include waste generated in the course of operating a business concern at a residence.
- ⦿ (Health and Safety Code, Section 25218.1. (e))

Hazardous Waste - Federal

- ① Solid waste, first
- ① Hazardous waste
 - Listed
 - Characteristics
- ① Universal wastes

What is Listed Hazardous Waste?

Meets environmental regulatory definition for listed specific substances that are either:

- ⦿ Discarded chemical products
 - Pentachlorophenol, hydrogen cyanide
- ⦿ Waste from certain sources
 - Nonspecific, “F” list
 - cresol and spent cyanide solution
 - Specific sources, “K” list
 - explosives, sludge's, other heavy industrial waste

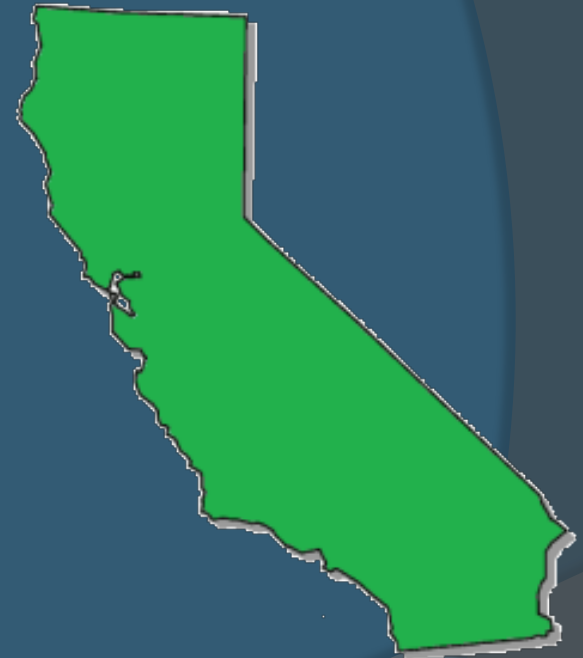
What is Listed Hazardous Waste?

Meets environmental regulatory definition for listed specific substances that are either:

- ◎ Waste from certain sources
 - Nonspecific, “F” list
 - Spent solvents, dioxin, wood preserving
 - Specific sources, “K” list
 - Manufacturing, sludge's, other industrial waste
- ◎ Pure & commercial grades
 - Discarded chemicals “P” & “U” list

Hazardous Waste – California

- Listed
- Characteristics
- Generator knowledge



Hazardous Waste – California

- ① Listed

- Appendix X

California Characteristic HW

Flammable

- Propane
- Gasoline
- Solvents



Poison/Toxic

- Pesticide
- Weed killer



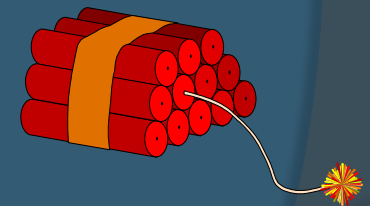
Corrosive

- Car batteries (acid)
- Muriatic acid
- Alkaline batteries
- Drain cleaner



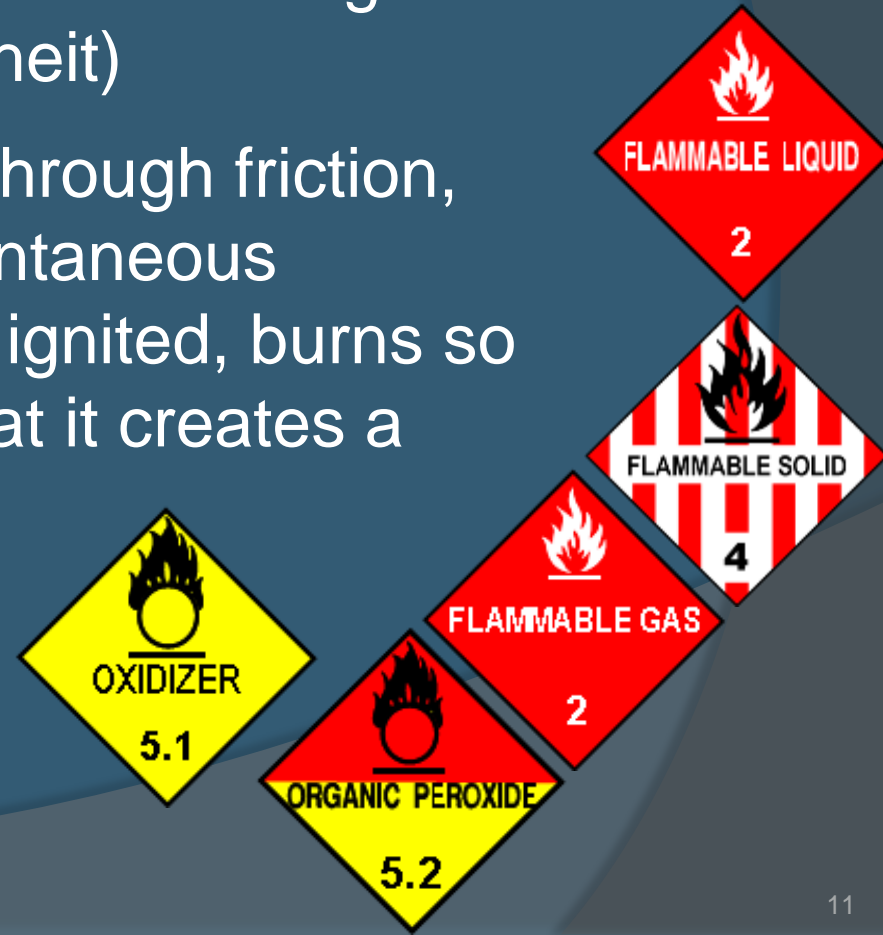
Reactive

- Ammunition
- Flares
- Magnesium Metal



Characteristics of an Ignitable Hazardous Waste

- A liquid with a flash point less than 60 degrees Celsius (140 degrees Fahrenheit)
- Solid capable of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard;
- Compressed ignitable gas
- Oxidizer



Characteristics of a Toxic Hazardous Waste



- The waste contains chemicals which exceed the concentration levels of the
 - Federal - Toxicity Characteristic Leaching Procedure (TCLP), or
 - Some states have there own tests
 - California - Waste Extraction Test (WET)
 - TTLC – Total Threshold Limit Conc.
 - STLC – Soluble Threshold Limit Conc.



HW - Toxic

- Acute Oral Toxicity Criterion
 - $LD_{50} < 2,500$ mg/kg body weight
 - Acute Dermal Toxicity
 - $LD_{50} < 4,300$ mg/kg body weight
 - Acute Inhalation Toxicity
 - $LD_{50} < 10,000$ ppm gas/vapor
 - Acute Fish Toxicity
 - 96 hour $LC_{50} < 500$ mg/l of water
 - Carcinogens
 - Specific Compounds greater than limit
- CCR, Title 22 § 66261.24





Characteristics of a Corrosive Hazardous Waste

- A liquid with a **pH** of less than or equal to 2 or greater than or equal to 12.5
- Solid that, when mixed with an equivalent weight of water, produces a solution having a pH less than or equal to 2 or greater than or equal to 12.5



Characteristics of a Reactive Hazardous Waste

Reactivity:

- Unstable and readily undergoes violent change
- Potentially explosive mixtures and toxic gases when water is added
- Cyanide or sulfide bearing waste that generates toxic gases when in contact with noncorrosive liquids
- Explosives or rapid decomposition when heated



Hazardous Waste – California

- ⦿ Generator knowledge
 - Critical for HHW not clearly identified

Why Collect?

- ① Safety
- ① Solid waste disposal prohibited
- ① AB 939 mandates local government program
 - Liability exemption

HHW Statistics

- *LARRY WILL INSERT FORM 303, numbers of programs, etc.*

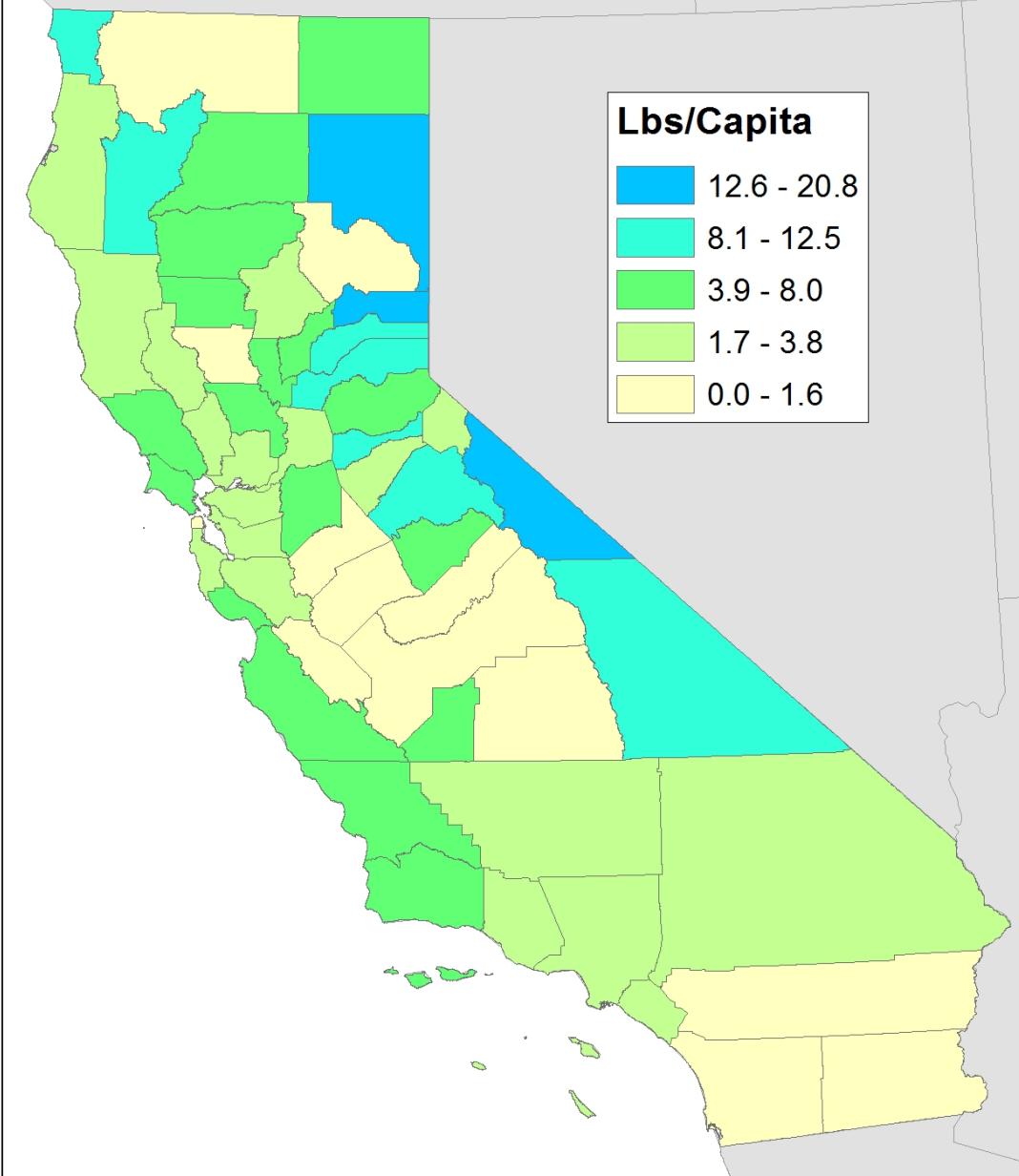
Number of HHW Programs

Facility Type	Calif.	Rural
Permanent, ALL	149-169*	50
Co-located SWF	68	43
Recycle-Only, ALL	97	44
Co-located SWF	44	36
Door-to-Door	~49	0

**Exact numbers of each facility type is not certain. Different lists, some permitted and not used ...*

California Household Hazardous Waste Program

Pounds Collected Per Capita (FY 2013/2014)



Laws versus regulations

- Federal
 - State
 - Local
-
- Hierarchy

FEDERAL

- ⦿ EPA
 - RCRA
 - CERCLA
- ⦿ DOT
- ⦿ OSHA

CERCLA (1980, “Superfund”)

- ⦿ **C**omprehensive
- ⦿ **E**nvironmental
- ⦿ **R**esponse,
- ⦿ **C**ompensation, and
- ⦿ **L**iability
- ⦿ **A**ct

CERCLA (1980) - continued

- Enacted in 1980 in the wake of Love Canal
- Fund cleanup & emergency response
- Many old solid waste landfills on National Priorities List (NPL)
- Covers beyond “grave” – Joint & Several
- Reauthorized in 1986 (Bhopal 1984)
 - Superfund Amendments & Reauthorization Act (SARA of 1986)
- NO ONE exempt

SARA of 1986

Superfund Amendments and Reauthorization Act

- Passed in response to Bhopal, India disaster
- Reauthorized CERCLA (Superfund)
- Included new Community and Worker's Right-to-Know laws
- Worker protection training
- Requires Material Safety Data Sheets (SDS)

STATE

- ⦿ DTSC/CUPA
- ⦿ CalRecycle
- ⦿ OSHA
- ⦿ Others
 - DPH,
 - CHP

LOCAL

- Fire
- Planning
- Building
- Wastewater

Program Types

**HHW Exempt
Federal
Hazardous Waste**

- Permanent facilities
- Temporary facilities
 - Recycle only (ABOP)
- Curbside
- Door-to-door (2 types)
- Mobile
- CESQG
- Limited waste types
 - Universal waste
 - Latex paint, only
 - Home Generated Sharps
- Product Stewardship
 - Paint
 - E-waste
 - Mercury Thermostats
- Other
 - Load checking
 - Illegal dumping
 - Co-collection
 - Foreclosed homes

Permanent facilities

- ⦿ A permanent or semipermanent structure at a fixed location that meets both of the following conditions:
 - (1) The facility is operated at the same location on a continuous, regular schedule
 - (2) The hazardous waste stored at the facility is removed within one year after collection.



Paint, Oil & Household Chemicals

**HOUSEHOLD
HAZARDOUS
WASTE FACILITY**



Safe Use of Containers

1. Do not use containers for anything other than the original purpose. Do not use containers for food, drink, or other household items. Do not use containers for storage of other hazardous materials. Do not use containers for disposal of hazardous materials. Do not use containers for anything else.

Hazardous Waste Facility

Do not use containers for anything other than the original purpose.





10.30.2008 16:26



Temporary facilities

- A household hazardous waste collection facility that meets both of the following conditions:
 - (1) The facility is operated not more than once for a period of not more than two days in any one month at the same location
 - (2) Upon termination of operations, all equipment, materials, and waste are removed from the site within 144 hours







Recycle Only (ABOP)

- A facility that accepts for recycling only recyclable household hazardous waste materials including:
 - Latex paint
 - Used oil
 - Used oil filters
 - Antifreeze
 - Spent lead-acid batteries
 - Universal waste including
 - Intact spent fluorescent lamps
 - Intact spent high intensity discharge (HID) lamps
 - Household batteries
 - Electronic wastes



Recycle Only (ABOP) (con.)

- No hazardous wastes or other materials are handled at the facility other than the materials specified in paragraph (1) [electronics not listed]
- The materials are transported to the collection facility by either of the following:
 - The person who generated the material
 - The authorized curbside household hazardous waste collection program
- The materials transported to the facility are transported in accordance with Section 25218.5 (5 gallon/50 pound or 15 gallons/125 pounds)

Recycle Only (ABOP) (con.)

- ***The materials collected are not stored at the facility for more than 180 days,*** except that less than one ton of spent lead-acid batteries may be stored at the facility for up to one year. More than one ton of spent lead-acid batteries shall not be stored at the facility for more than 180 days.
- The materials collected are managed in accordance with the hazardous waste labeling, containerization, emergency response, and personnel training requirements of this chapter
- Notification sent to CUPA

ABOP – Household Batteries

- *Health and Safety Code 25216.1. (a)*
- Sent to authorized facility and all of the following conditions are met:
 - (1) The collection location is either of the following:
 - (A) ***Location does not store more than 600 pounds of batteries at any one time and no batteries are stored for longer than 180 days.***
 - (B) A curbside collection program, no batteries are stored for longer than 180 days, and the public agency has considered appropriate volume limits and other necessary precautions to protect the public health, safety, and the environment.
 - (2) The batteries are stored and transferred in a manner which minimizes the possibility of fire, explosion, or any release of hazardous substances or hazardous waste constituents.

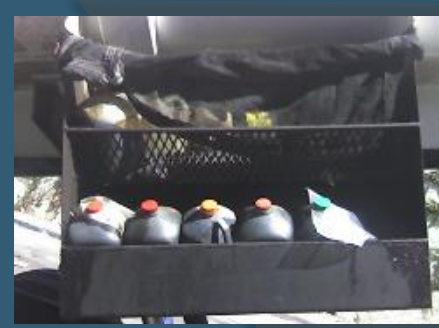
ABOP – Household Batteries

- *Health and Safety Code 25216.1. (a)*
 - (3) The collection location, transporter, and receiving facility retains a copy of the hazardous waste manifest or bill of lading used during transportation for a period of three years.
 - Bill of lading shall have, at a minimum, all of the following information:
 - The name, address, and telephone number of the collection location, transporter, and receiving facility.
 - A general description and quantity of batteries.
 - Date of the transfer.
 - Signatures of the transporter and the collection location representative.

ABOP – Household Batteries (con.)

- ⦿ The batteries are not treated or reclaimed at any location exempted from the requirements of this chapter by this article.
- ⦿ Transferred to a permitted recycling facility or to a disposal facility authorized to accept such batteries
- ⦿ THE HHW facility may refuse to accept spent batteries if the volume of spent batteries delivered for receipt exceeds the facility's storage capabilities.
- ⦿ A facility may charge a fee to recover the handling, storage, and disposal costs of those spent batteries, which shall not exceed the facility's handling, storage, and disposal costs.

Curbside



- A collection service authorized by a public agency with a registered hazardous waste transporter
- Collects one or more of the following types of HHW:
 - Latex paint (5 gallon limit/residence)
 - Used oil (5 gallon limit/residence)
 - Used oil filters (10 pound limit/residence)
 - Universal wastes
 - Fluorescent lamps less than 4 feet in length
 - No mercury containing unless the waste is contained in secure packaging that prevents breakage and spillage.
 - NO CAR BATTERIES
- Shall be transported in closed containers and packed in a manner that prevents the containers from tipping, spilling, or breaking during transport.
- Different household hazardous wastes shall not be mixed within a container before or during transport

Door-to-Door Program

- “A program operated by a public agency, or its contractor, that collects HHW from individual residences, and transports that waste in an inspected and certified hazardous waste transport vehicle to an authorized HHW collection facility “
- Also called "household hazardous waste residential pickup service"
- “Traditional” & “Non-Traditional”

Door-to-Door Program

- ⦿ Accept all HHW
- ⦿ No CESQG waste allowed
- ⦿ Meets all of the following conditions:
 - The transported HHW shall be in closed containers
 - Packed in a manner that prevents the containers from tipping, spilling, or breaking during transport.
 - Different household hazardous wastes shall not be mixed within a container before or during transport.
- ⦿ Hazardous waste transporter



Door-to-Door – Two Types

- Hauled to Permanent HHWCF
- Notify CUPA
- Use Receipt to resident
 - Exempt from manifest
 - Retain at least three years
- Combine with facility HHW
- Haul to TSDF usually via HW transfer station
- Permit-by-Rule filed
- Can consolidate on truck
 - antifreeze, used oil and filters, and latex paint,
- Quarterly reports to DTSC

Traditional

Non-Traditional

Mobile

- ⦿ A portable structure within which a household hazardous waste collection facility is operated and that meets all of the following conditions:
 - (1) The facility is operated not more than four times in any one calendar year at the same location
 - (2) The facility is operated not more than three consecutive weeks within a two-month period at the same location
 - (3) Upon the termination of operations, all equipment, materials, and waste are removed from the site within 144 hours
- ⦿ Not common in California
- ⦿ Need variance from DTSC since no permit process

CESQG

- "Conditionally exempt small quantity generator" or "CESQG" means a business concern which meets the criteria specified in Section 261.5 of Title 40 of the Code of Federal Regulations (federal)
- **Includes government agencies and non-profits**
- HHW Facility authorized by DTSC to accept HW from CESQGs
 - Limited to accepting, per calendar month, no more than
 - 100 kilograms (220 pounds) of HW, or
 - 1 kilogram of extremely or an acutely hazardous waste HW
 - **Does not include UW**
- *Not your job to verify status – only limit acceptance*
- 40 CFR 261.5 & Health and Safety Code 25218.3. (b)

CESQG Responsibilities

- EPA ID Number Required
- CESQG contacts HHW Facility prior to each delivery to confirm waste acceptable
- Vehicle owned and operated by the CESQG
- transported in “closed containers and packed in a manner that prevents the containers from tipping, spilling, or breaking during transport”
- Different wastes shall not be mixed within a container before or during transport

CESQG – HHW Facility Role

- Provide
 - oral, written, or electronic instructions to the CESQG prior to each delivery
 - on proper packing for the safe transportation of the specific HW being transported
- Track name, address, and EPA ID Number
- Track type and quantity of wastes
- Track fee, if any
- Refuse amounts over the limit

Universal Waste

- ⦿ Facility that accepts only:
 - Household batteries
 - Fluorescent lamps
 - Electronic devices
 - CRTs
 - CRT glass
 - Mercury-containing equipment
 - Non-empty, hazardous waste aerosol cans

Latex Paint, Only

- ⦿ Acceptable at any location, e.g. retailers
- ⦿ Managed according to all regulations
- ⦿ Non-latex paint collected considered generated at facility
- ⦿ Hazardous Materials Business Plan (maybe)
- ⦿ Transportable with bill of lading not manifest
- ⦿ DTSC authorization not required
- ⦿ Includes PaintCare sites
- ⦿ Health & Safety Code, Section 25217 et.al.

Home Generated Sharps Consolidation Point

- Submit application for approval by Medical Waste Local Enforcement Agency – *No SQG fee*
- HGS are prohibited from solid waste disposal
- HGS are not regulated as medical waste but after collection, shall be transported and treated as medical waste
- Must comply with all of the following:
 - All sharps waste shall be placed in sharps containers,
 - Sharps containers ready for disposal shall not be held for more than seven days without the written approval of the enforcement agency.

Product Stewardship

- ⦿ HHW accepted by retail stores, solid waste or HHW collection programs and costs are paid by stewardship organization such as:
 - Cell phones
 - Batteries
 - Paint
 - Thermostats
 - Sharps
 - Pharmaceuticals

Load Checking

- HHW programs can accept wastes from solid waste facility load checking programs
- Typically considered “Household Like”
- Separate EPA ID Number
- Form 303 tracking separately
 - Even if located on same facility

Illegal Dumping

- Abandoned roadside hazardous wastes can be accepted
- Often collected by public works departments
- HHW or CESQG?



Co-collection, Solid Waste Company

- Some solid waste companies accept recyclable and universal hazardous wastes
- Franchised solid waste collectors offer or are required to provide certain HHW services; such as:
 - Used oil and filter collection
 - Universal wastes
 - Sharps
 - Door-to-Door (jurisdiction must be generator)

Foreclosed homes

- HHW or business?
- Clues?
- DTSC Guidance



Reuse/Material Exchange

- ⦿ The public agency operating a HHW program shall
 - Determine which reusable household hazardous products or materials are suitable and acceptable for distribution to the public in accordance with a quality assurance plan prepared by the public agency.
 - Instruct the recipient to use the product in a manner consistent with the instructions on the label.
- ⦿ Business or employer recipient shall be responsible for obtaining SDS
- ⦿ HSC 25218.12.

Waste Reuse/Exchange

- ⦿ No recalled, canceled or suspended materials
- ⦿ Inspect containers for integrity and contents
- ⦿ Sign form/liability
- ⦿ May charge fee
- ⦿ Track amounts
- ⦿ Limit access?



Pool Chemicals for Reuse



Specific Waste Requirements

- Acceptable/Unacceptable waste
 - Explosives, cylinders, medical waste, radioactives
- Home-Generated Sharps
- Pharmaceuticals
- E-waste
- Treated wood waste
- Asbestos
- Appliances – materials requiring special handling – DIFFERENT CLASS
- “Unknowns” – Waste Analysis Plan
- Reuse

Permitting/Approvals

- Local Government Sponsor
- Hazardous Waste ID Number (California)
- PBR (Permanent & Temporary)
- Notification (Recycle-only)
- Hazardous Materials Business Plan (CERS)
 - Financial assurance (Annual)
- Universal waste
 - E-waste – Universal Waste Handler Notification
- Phase one environmental assessment

Permit-by-Rule

- ⦿ Permanent Authorization
 - Letter to operate, (provided by DTSC or CUPA)
- ⦿ Temporary Notification

Regulatory Requirements

- ⦿ Title 22 – California Hazardous Wastes
 - Health & Safety Code
- ⦿ Title 8 – Cal/OSHA
- ⦿ 49 CFR – HazMat Transportation
- ⦿ Other – Medical Waste
- ⦿ Permits and approvals

- ⦿ HHW exempt from federal standards

Regulatory Requirements

Title 22 = Hazardous

- PBR
- Waste classifications
- Operating standards
- Transportation
- Universal waste
- Latex paint

Title 8 = Safety

- HAZWOPER Training
- Safety and Health Program
- Hazard Communication
- Medical Surveillance
- Personal Protection Equipment

49 CFR – HazMat Transportation

- ⦿ Regulates transportation of hazardous materials and hazardous wastes
- ⦿ Lists hazardous materials shipping names
- ⦿ Enforced by California Highway Patrol
- ⦿ *Note: public agencies using public vehicles exempt from DOT Hazardous Materials Rule but not California (Driver endorsement >1,001 lbs, placard).*

Other

- ⦿ Medical Waste – Dept. of Public Health
 - Sharps
 - Medical wastes
 - Pharmaceuticals (?)
 - Radioactives
- ⦿ Department Food & Ag
 - Hauling of grease

Permits/Approvals

- ⦿ EPA ID number
- ⦿ Permit-by-Rule (PBR)
 - Permanent
 - Temporary
 - Recycle-Only (ABOP)
- ⦿ Universal Waste Handler Registration
 - Cut cords or physical alterations = treatment
- ⦿ Phase 1 Environmental Assessment
- ⦿ Engineer Certification – Tanks, Lockers
- ⦿ Financial assurance
- ⦿ Home-generated Sharp Consolidation Point
- ⦿ Hazardous Materials Business Plan
- ⦿ *Do not forget CEQA and Land Use*

EPA ID number

- ⦿ DTSC form to obtain CAH number.
- ⦿ CAH flags wastes an exempt from taxes
- ⦿ Not typically issued to householder
- ⦿ Required on Uniform Hazardous Waste Manifest

Permit-by-Rule (PBR)

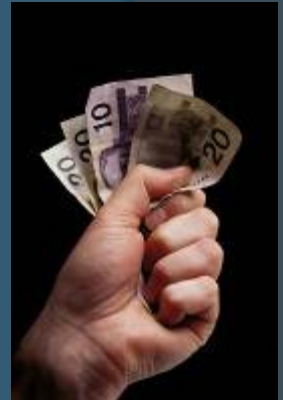
- ⦿ Operator must be Public Agency
- ⦿ PBR submitted to CUPA with Copy to DTSC
- ⦿ Submitted in person or by certified mail with return receipt requested a minimum of 45 days in advance of the event
 - Temporary PBR (DTSC Form 8464)
 - Permanent PBR (DTSC Form 1094B)

Permanent PBR Form

- ⦿ ID Operator & Contractor
- ⦿ List permits
- ⦿ Identify property ownership
- ⦿ List waste types
 - Accepted
 - Not accepted
- ⦿ Identify consolidated wastes
- ⦿ Waste volume
 - Average total per month
 - Container capacity
- ⦿ Days/hours of operation
- ⦿ Facility description
- ⦿ Attach
 - Plot plan with wind rose
 - Closure financial responsibility
 - Written agreement
- ⦿ Signed by principal executive officer or ranking elected official
- ⦿ Operations Plan
 - Required, available, not filed

Closure Financial Responsibility

- Typically Certificate of Self-Insurance
 - Form 1220
 - Signed by Public Agency Official
- Also allowed:
 - closure trust fund;
 - surety bond guaranteeing payment into a closure trust fund;
 - closure letter of credit;
 - closure insurance;
 - financial test and corporate guarantee for closure;
 - multiple financial mechanisms;
 - alternate financial mechanism approved by DTSC; or
- Adjusted annually for inflation or within 30 days after a change in the closure plan increases the cost of closure.



Temporary PBR

- ⦿ ID Operator & Contractor
- ⦿ Will CESQG be accepted
- ⦿ Agency notifications
- ⦿ List permits
- ⦿ Identify property ownership
- ⦿ Days/hours of operation
- ⦿ Operator certification signed by principal executive officer or ranking elected official

Universal Waste Handler

- ① A universal waste handler is a generator of universal waste or the owner or operator of a facility that receives universal waste from another universal waste handler, accumulates universal waste, and sends universal waste to another universal waste handler, a facility that accepts hazardous waste, or a foreign country

Universal Waste Handler

- ◎ A universal waste handler may be:
 - A person (e.g., a household or business) who generates universal waste but does not accept universal waste from others
 - A person who accepts and accumulates universal waste generated by others at his or her facility
 - A person who accepts universal waste generated by others and conducts certain treatment and recycling activities allowed by the universal waste handler regulations
- ◎ File Notice of Intent online

Treatment

- Dismantling and/or physical processes such as shredding, grinding, sawing, cutting, compacting etc.
- Separation based upon physical properties and/or
- Screening to separate components based upon size

Notice of Intent - Recycler

DESCRIPTION OF TREATMENT/RECYCLING PROCESSES

ELECTRONIC DEVICES

1. Dismantle electronic devices into their respective components using manual methods and hand tools or mechanical separation of parts. (The only treatment residuals will be components of the electronic device - e.g., plastic, circuit boards, integrated circuits, metals, wiring, UW batteries and lamps, etc.)
2. Process electronic devices by methods that do not generate residual materials exhibiting any hazardous waste characteristics and do not use heat, chemicals or water. (e.g. treatment methods that generate dust and require a baghouse do not qualify.)
- Size reduction, crushing, cutting, sawing, compacting, shredding, etc after removing batteries, lamps, and other universal wastes
 - Separation technology
- Other treatment method that does not generate residuals exhibiting a hazardous waste characteristic and is not scrap metal or a universal waste. Please describe:
3. Electronic devices and/or residual printed circuit boards that are not scrap metal and do not qualify for management as universal waste product hazardous waste residuals because of any of the following treatment methods: §
- Size reduction, crushing, cutting, sawing, compacting, shredding, etc after removing batteries, lamps, and other universal wastes
 - Separation technology
 - Sampling, burning, or ball-milling of samples of electronic devices and/or treatment residues
 - Other treatment method that does not generate residuals exhibiting a hazardous waste characteristic and is not scrap metal or a universal waste. Please describe:

Phase 1 Environmental Assessment

- Required within one year of starting operations and includes:
 - Facility information
 - Facility history
 - Facility Walk-through inspection
 - Areas of concern
 - Assessment checklist
- Signature and certification
 - owner, operator, or independent professional engineer, geologist, or an environmental assessor

State of California-California Environmental Protection Agency		Department of Toxic Substances Control	
TIERED PERMITTING PHASE I ENVIRONMENTAL ASSESSMENT CHECKLIST			
SECTION I: FACILITY INFORMATION			
<small>Instructions: Complete the following descriptive information about your facility. This information accurately describes the location of your facility and establishes mailing and phone contacts. If facility location and mailing address are identical, you may put "same" into facility mailing address spaces.</small>			
Type of Permit: Permit by Rule _____ Conditional Authorization _____			
1. CURRENT FACILITY NAME:			
PAST NAMES (Attach additional pages if necessary):			
2. EPA I.D. NUMBER:			
3. NAME OF FACILITY OWNER (see definition of owner):			
4. NAME OF FACILITY OPERATOR:			
5. NAME OF PROPERTY OWNER:			
6. FACILITY LOCATION ADDRESS:			
STREET:			
CITY:			
COUNTY:			
STATE: ZIP CODE:			

Engineer Certification – Lockers

- ① Certify containment system
 - A base under the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;
 - The base shall be sloped or the containment system shall be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids;
 - The containment system shall have sufficient capacity to contain precipitation from at least a 24-hour, 25-year storm plus 10 % of the aggregate volume of all containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination;

Engineer Certification – Lockers

- ⦿ Certify containment system (con.)
 - Run-on into the containment system shall be prevented unless the collection system has sufficient excess capacity in addition to that required in subsection (b)(3) of this section to contain any run-on which might enter the system; and
 - Spilled or leaked waste and accumulated precipitation shall be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system. If the collected material is a hazardous waste under chapter 11 of this division, it shall be managed as a hazardous waste in accordance with all applicable requirements

Engineer Certification – Lockers

- ⦿ Engineering certification provided by:
 - a manufacturer,
 - **an independent professional engineer registered in the State of California** or
 - a professional engineer employed by the local government entity and from a different division or agency than the operator.

Engineer Certification - Tanks

- ⦿ Independent, qualified, California-registered professional engineer certifies:
 - Design/configuration
 - Secondary containment
 - External corrosion protection
 - Spill prevention or overfill equipment.
- ⦿ Used oil and antifreeze tanks can be exempted for three years if Fire Marshall agrees
 - See CalCUPA Guidance

Hazardous Materials Business Plan

- ⦿ Required for any facility *handling, at any time, any individual hazardous material in an aggregate amount equal to or greater than 55 gallons (liquids), 500 pounds (solids), or 200 cubic feet (gases).*
- ⦿ Submittal to CUPA (Fee?)
 - <http://www.calcupa.net/>
 - <http://www.unidocs.org/hazmat/business-plan/index.html>

CEQA and Land Use

- ⦿ May contain restrictions on use of hazardous materials or hazardous wastes
- ⦿ Verify zoning is appropriate
- ⦿ Contact local planning agency
- ⦿ Owner notice

Regulatory requirements

Regulatory requirements

- ⦿ Operations plan
- ⦿ Signage
- ⦿ Labeling
- ⦿ Shipping records

Operations Plan

- ⦿ Required by Title 22
- ⦿ Foundation of operations
- ⦿ Enforceable
- ⦿ No set format
- ⦿ Available for review by any agency with jurisdiction
- ⦿ Handout

Operations Plan

- Facility information
- Operational procedures
- “Waste Analysis Plan”
- Material Exchange Program Quality Assurance Plan
- Personal Protective Equipment
- Training
- Use and management of containers
- Personnel
- Inclement weather
- CESQG management

Operations Plan (con.)

- ⦿ Bulking protocol approved by local fire and air agency
- ⦿ Agreement with property owner
- ⦿ Agreement between operator and contractor
- ⦿ Procedures whenever facility exceeds maximum storage
- ⦿ Emergency Response Plan
- ⦿ Record Keeping
- ⦿ “Closure Plan”
- ⦿ Copy CUPA Notification and Authorization
- ⦿ Copy Financial Assurances

Cal/OSHA Requirements – Title 8

- Safety and Health Plan
- Hazard Communication Program
- Medical Surveillance Program
- Decontamination Program
- New Technology Program
- Material Handling Program
- Training Program
- Emergency Response Plan

Operations Plan

Permanent vs. Temporary

Permanent

- Continuous base, free of cracks and sufficiently impervious
- *(Plastic not required)*
- Not required to have a separate area for wastes to be transported off-site

Temporary

- All waste handling areas (with exception of traffic areas) must be covered with continuous plastic sheeting of at least 6 mil thickness
- Punctured or torn plastic must be repaired immediately

Eating, Drinking, & Smoking

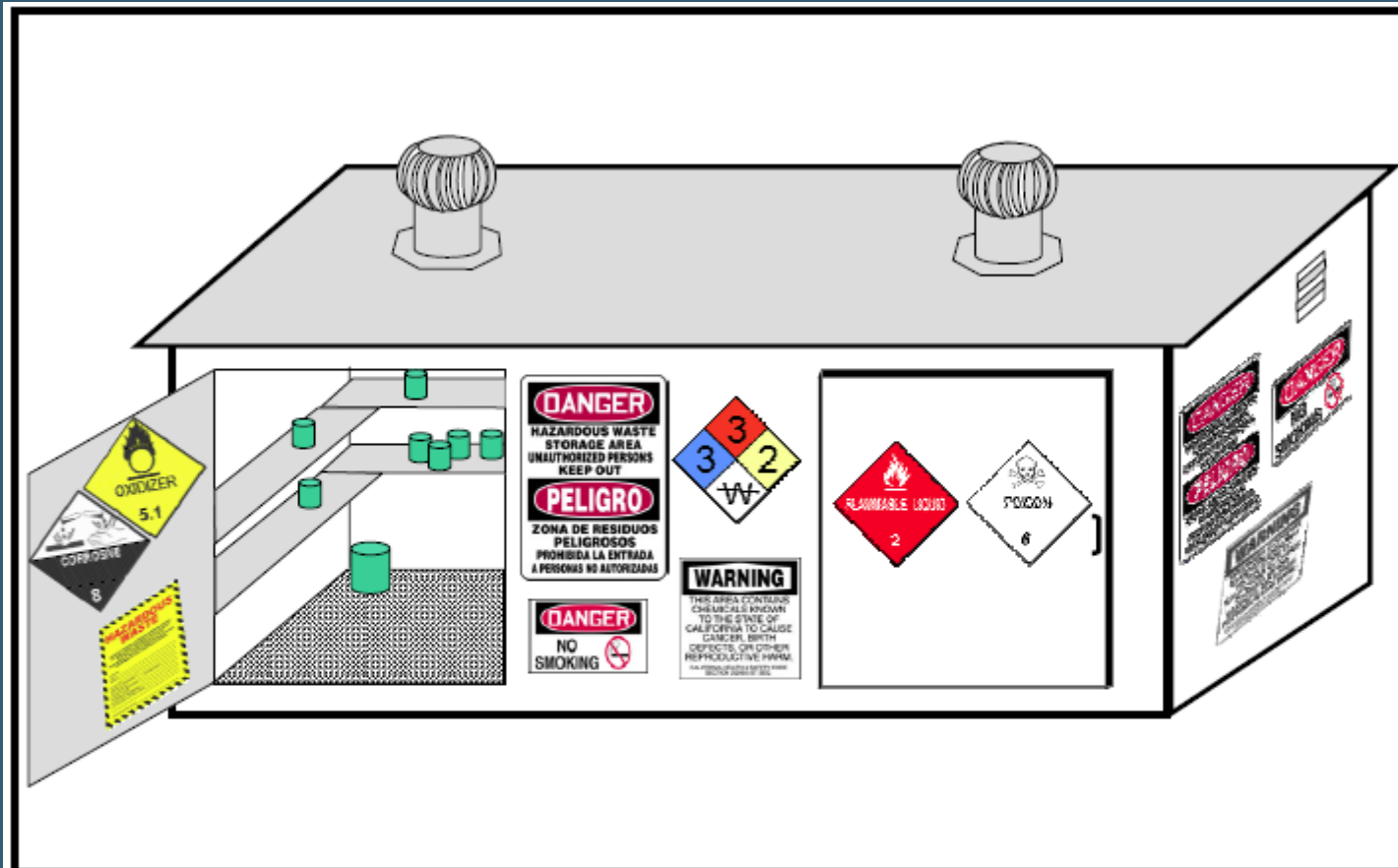
- ⦿ Eating and Drinking areas – 29 CFR 1910.120 (g)(2)
 - No employee shall be allowed to consume food or beverage in a toilet room nor in any area exposed to toxic material.
- ⦿ Smoking at HHW's
 - Don't do it!

Signage

- Visible from all approaches
- Legible from a distance of at least 25 feet.
- Language on the signs will be in English, Spanish and in any other language predominant in the area surrounding the facility



Facility Signage



Household Hazardous Waste Locker Signage Locations

Side signs should be repeated on both sides and back of locker to be visible from all directions.

Door DOT hazard class signs need to also be visible when doors are open.

Best practices

- ⦿ Advertise vs exceptions certain wastes
- ⦿ CESQG or not
- ⦿ Jurisdiction staff or Contractor
 - combination pros/cons
- ⦿ Transportation limits
- ⦿ MORE ???
- ⦿ Audience Share

Public Education

- ◎ Provide safety instructions to public
 - Legal transport amount
 - 5 gallons or 50 pounds
 - Agency can increase to 15 gallons and/or 125 lbs. with adequate public education programs to inform the public on proper techniques for packaging and transporting
 - Store in trunk
 - What about unknowns?
 - What's unacceptable?
 - Still need contingency

This is why HHW goes in the trunk

Facility Inspection

Temporary

**PERMIT BY RULE
TEMPORARY HOUSEHOLD HAZARDOUS WASTE COLLECTION FACILITY
INSPECTION CHECKLIST**

Collection Facility Name: _____ EPA ID No.: CAH _____
Collection Address: _____
City: _____ Zip Code: _____
Sponsor Agency: _____
Sponsor Agency Contact Person: _____ Phone: _____
Contractor Name: _____
Contractor Contact Person: _____ Phone: _____
Date Inspected: _____ Inspection Agency: _____
Lead Inspector: _____ Phone: _____

INDEX

	Page
A. SUBMITTAL	2
B. DOCUMENTATION REQUIREMENTS	2
C. CESQG WASTE ACCEPTED AT FACILITY	4
D. WALKTHROUGH OBSERVATIONS	4

Permanent

**PERMIT BY RULE
PERMANENT HOUSEHOLD HAZARDOUS WASTE COLLECTION FACILITY
INSPECTION CHECKLIST**

Collection Facility Name: _____ EPA ID#: CAH _____
Collection Facility Address: _____
City: _____ Zip Code: _____
Sponsor Agency: _____
Sponsor Agency Contact Person: _____ Phone: _____
Contractor Name: _____
Contractor Contact Person: _____ Phone: _____
Date Inspected: _____ Inspection Agency: _____
Lead Inspector: _____ Phone: _____

INDEX

	PAGE
A. SUBMITTALS	2
B. CONTAINMENT	2
C. DOCUMENTATION REQUIREMENTS	3
D. CESQG WASTES ACCEPTED	6
E. WALK THROUGH OBSERVATIONS	7

Inspection

- ⦿ Inspect area and drums weekly
- ⦿ Maintain written inspection log
 - Name of the inspector.
 - Date of the inspection.
 - Condition of all waste containers.
 - Description of any problem noted during the inspection and action taken to fix it.



Facility Inspections



Safety shower inspection frequency - OSHA , ANSI weekly
Fire extinguisher monthly

Containers, Drums

- Containers must have tight-fitting lids that are
- Kept closed except when wastes are being added or removed.
 - Funnel must be removed or be equipped with a valve or cover to prevent leakage if drum turned over.
- DOT Certified for Hazardous Wastes
- Inspected weekly

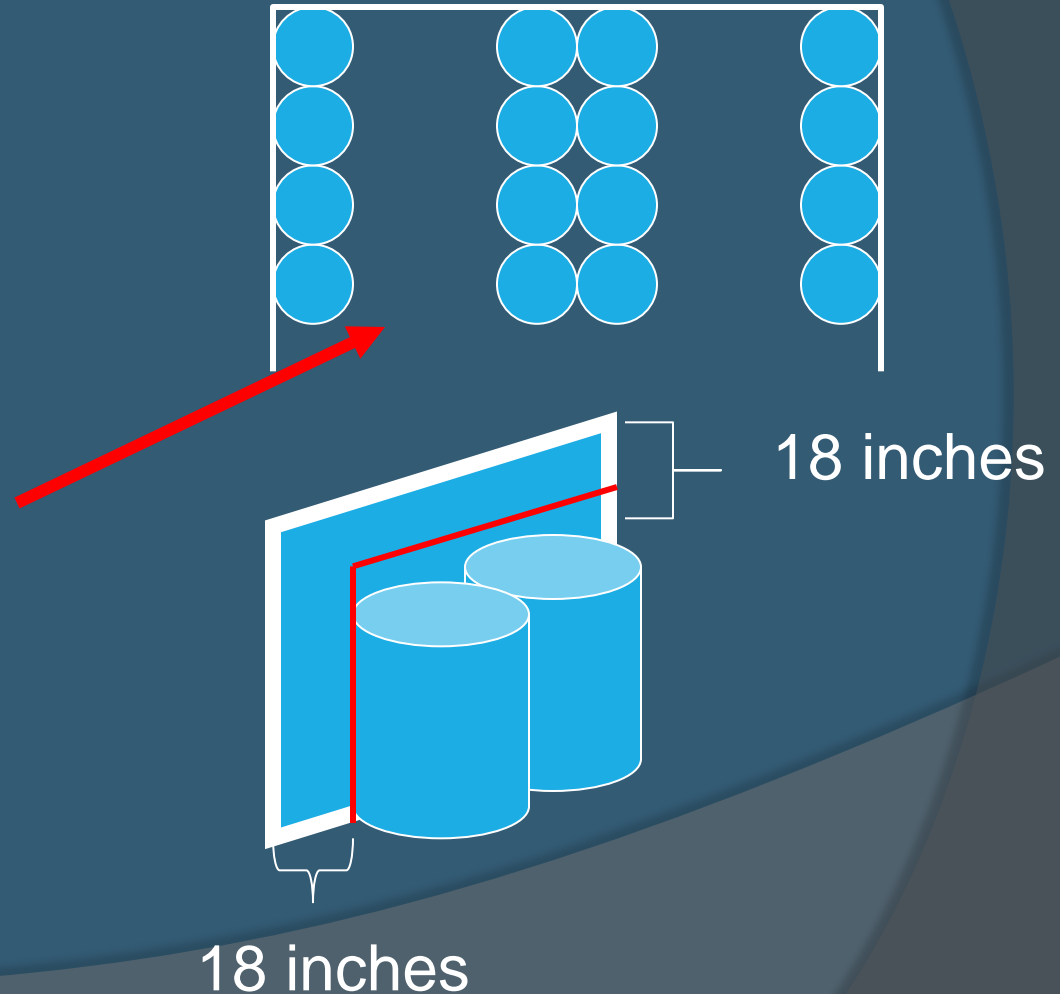


Container Storage

- ⦿ Containers closed when not in use
- ⦿ Container compatible with waste liner allowed
 - e.g. plastic liner with alkaline batteries
- ⦿ Containers holding ignitable or reactive waste shall be located at least 15 meters (50 feet) from the facility's property line

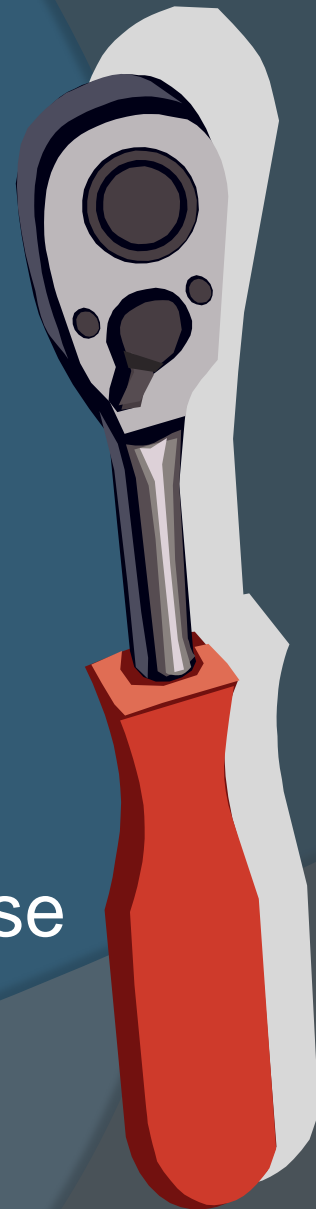
Container Storage

- Aisle space not specified
- Labels must be visible
- Able to inspect container for leakage
 - Typically 24 to 48 inches
- Separation wall
 - 18 inches top
 - 18 inches front



Drum Closure

- Close drum using torque wrench
 - Rings bolt and bungs
- Performance test to prevent leakage
- Drum supplier provides instructions
- Train workers on use
- Use calibrated torque wrench
- Get updates instructions annually
- Reject containers that do not properly close
- 49 CFR §178.2 (c)



Aboveground Storage Tanks

- ⦿ Inspect daily
 - No apparent structural defects, or deterioration
 - No severe rusting,
 - No leaking
 - Correct label
- ⦿ Certification (5 years)
- ⦿ Inspection under CUPA Authority



Inspection – How Many Issues?



Signage

- Visible from all approaches
- Legible from a distance of at least 25 feet.
- Language on the signs will be in English, Spanish and in any other language predominant in the area surrounding the facility



Uniform Hazardous Waste Manifest

- Cradle-to-Grave Tracking
- U.S. DOT Shipping Paper
- Emergency Usage
- Tracking/Revenue
- Enforcement/Compliance
- Liability

Please print or type. (Form designed for use on elite (12-pitch) typewriter)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number 000754004 JJK			
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)						
Generator's Phone:								
6. Transporter 1 Company Name		U.S. EPA ID Number						
7. Transporter 2 Company Name		U.S. EPA ID Number						
8. Designated Facility Name and Site Address		U.S. EPA ID Number						
Facility's Phone:								
8a. HM	8b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
		No.	Type					
1.								
2.								
3.								
4.								
14. Special Handling Instructions and Additional Information								
15. GENERATOR/SOFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/ placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.								
Generator's/Officer's Printed/Typed Name		Signature		Month		Day		Year
16. International Shipments		<input type="checkbox"/> Import to U.S.		<input type="checkbox"/> Export from U.S.		Port of entry/exit: _____		
Transporter signature (for exports only):				Date leaving U.S.:				
17. Transporter Acknowledgment of Receipt of Materials								
Transporter 1 Printed/Typed Name		Signature		Month		Day		Year
Transporter 2 Printed/Typed Name		Signature		Month		Day		Year
18. Discrepancy								
18a. Discrepancy Indication Space		<input type="checkbox"/> Quantity		<input type="checkbox"/> Type		<input type="checkbox"/> Residue		<input type="checkbox"/> Partial Rejection
								<input type="checkbox"/> Full Rejection
18b. Alternate Facility (or Generator)		U.S. EPA ID Number						
Facility's Phone:								
18c. Signature of Alternate Facility (or Generator)		Signature		Month		Day		Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								
1.		2.		3.		4.		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a								
Printed/Typed Name		Signature		Month		Day		Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Generator Certification

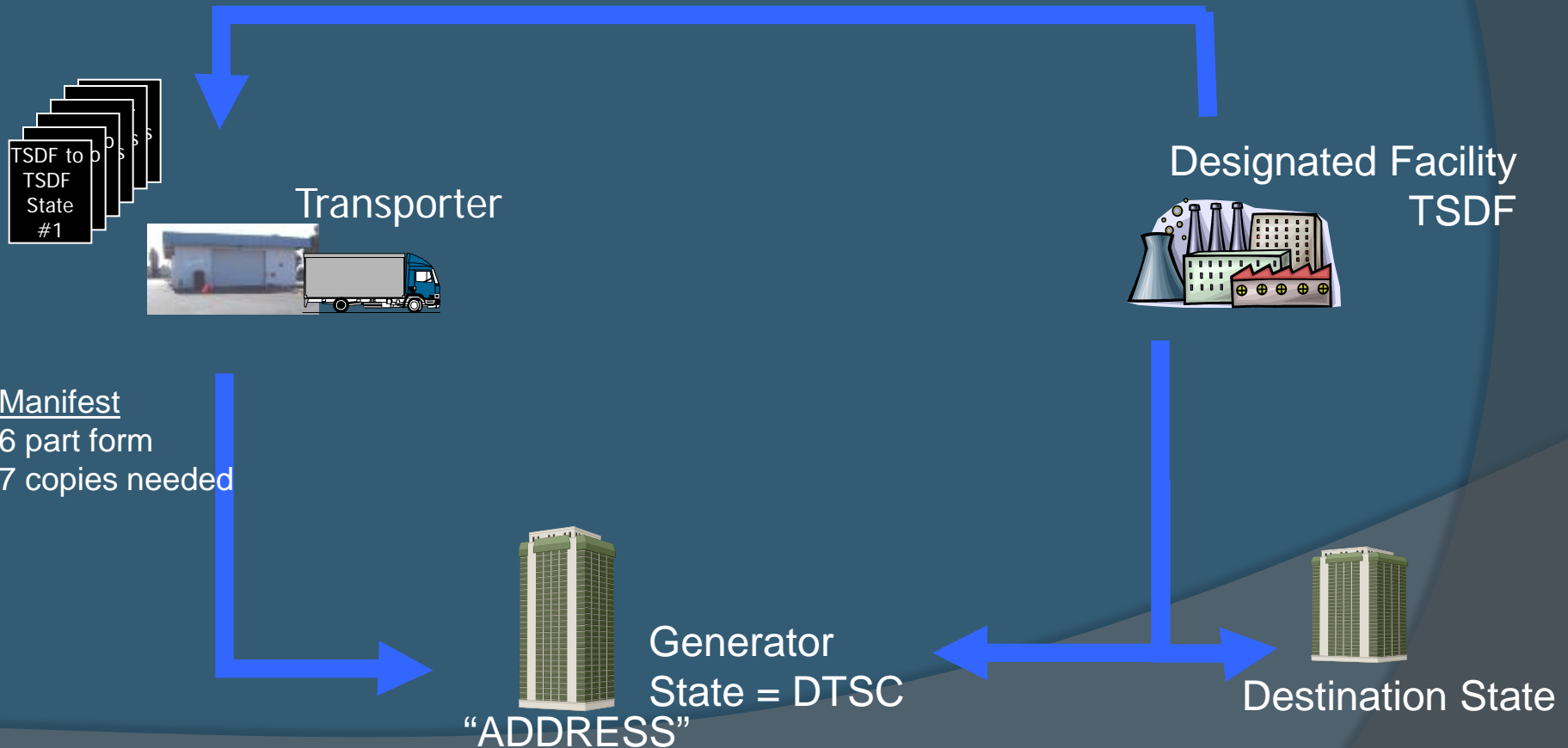
- ① “I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled , and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.”

...

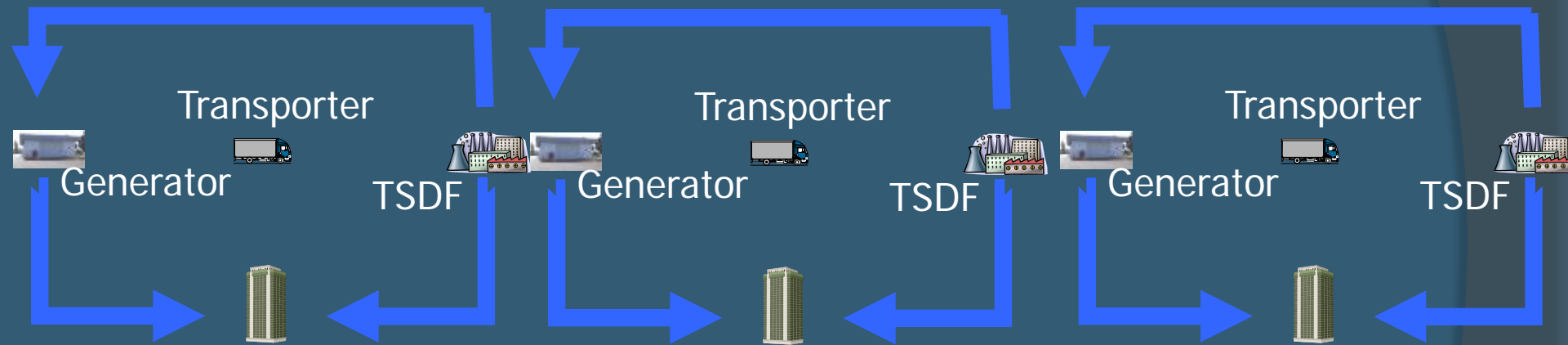
Manifest Tracking Flow

Gen
Copy
#6 for
DTSC

If not received in 35 days,
10 days before discrepancy letter needed



Multiple Facility



NOTE: Generator retains liability for final disposal or treatment even if original manifest does not identify site.

HW REPORT MANAGEMENT METHOD CODES

Code	Description
Reclamation and Recovery	
H010	Metals recovery including retorting, smelting, chemicals, etc.
H020	Solvents recovery
H039	Other recovery or reclamation for reuse including acid regeneration, organics recovery, etc.
H050	Energy recovery at this site -- use as fuel (includes on-site fuel blending)
H061	Fuel blending prior to energy recovery at another site
Destruction or Treatment prior to Disposal at Another Site	
H040	Incineration--thermal destruction other than use as a fuel
H071	Chemical reduction with or without precipitation
H073	Cyanide destruction with or without precipitation
H075	Chemical oxidation
H076	Wet air oxidation
H077	Other chemical precipitation with or without pre-treatment
H081	Biological treatment with or without precipitation
H082	Adsorption
H083	Air or steam stripping
H101	Sludge treatment and/or dewatering
H103	Absorption
H111	Stabilization or chemical fixation prior to disposal at another site
H112	Macro-encapsulation prior to disposal at another site
H121	Neutralization only
H122	Evaporation
H123	Settling or clarification
H124	Phase separation
H129	Other treatment
• Disposal	
H131	Land treatment or application (to include on-site treatment and/or stabilization)
H132	Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)
H134	Deepwell or underground injection (with or without treatment)
H135	Discharge to sewer/POTW or NPDES (with prior storage--with or without treatment)
Storage and Transfer	
H141	Storage, bulking, and/or transfer off site--no treatment/recovery (H010-H129), fuel blending (H061), or disposal (H131-H135) at this site

Bill of Lading

Common for lower hazard “materials” or wastes

- E-waste
- Propane

Similar generator (shipper) certification

ATTENTION SHIPPERS! FREIGHT CHARGES ARE PREPAID ON THIS BILL OF LADING UNLESS MARKED COLLECT.

STRAIGHT BILL OF LADING
ORIGINAL NOT NEGOTIABLE

Shipper No. _____
Carrier No. _____
Date _____

Page _____ of _____ (Name of carrier) (SCAC)

TO:
Consignee
Street
City State Zip Code

FROM Shipper
Street
City State Zip Code

Route

No. of Units & Container Type	HM	BASIC DESCRIPTION Proper Shipping Name, Hazard Class, Identification Number (UN or NA), Packing Group, per 172.101, 172.202, 172.203	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Contract)	RMS	CHARGES (For Carrier Use Only)

PLACARDS TENDERED: YES NO

RFSEET C.O.D. NO. ADDRESS
COD Amt: \$ _____

USED FOR: PREPAID COLLECT

TOTAL CHARGES: \$ _____

FREIGHT CHARGES
(Prepaid collect) (Check box if collect) (Prepaid collect) (Check box if collect)

SHIPPER _____ **CARRIER** _____

PER _____ **PER** _____

DATE _____

Permanent post office address of shipper _____

STYLE F 801-B LABELMASTER® (800) 521-0800 www.labelmaster.com

Hazardous Waste Treatment, Storage, and Disposal Sites

▲ Your waste goes here

Your
Facility



Training Requirements

Training Frequency

- Initial
- Refresher/Annual
- Periodic
 - Change in process or new chemicals
 - In response to incidents
 - New requirements
 - Interest



Training Methods

- Annual Refresher
- Tailgate Safety
- On-the-job training
- On-line Courses
- Site Specific Requirements
- Equivalent documentation or certification of work experience or training



Training Requirements

- HAZWOPER
- Universal Waste
- DOT Hazardous Materials Transportation
- Personal Protective Equipment
- Bloodborne pathogens
- Others

HAZWOPER

- ⦿ **Hazardous Waste Operations and Emergency Response**
- ⦿ Federal 29 CFR §1910.120
- ⦿ California Code of Regulations §5192
 - (D) HHW Operations
 - (E) Emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard.

HHW Facility Personnel Training

- Initial training is 24 hours
- Annual refresher training is 8 hours
- Written certificate attesting that they have successfully completed the necessary training.
- Title 8, Section 5192, (p)(7)
- *Temporary workers also need appropriate training*

Household Hazardous Waste Training Matrix



Topic/Job Function-Activity	Hours	Frequency	Harry Hazard	Roberto Gomez	Luke Skywalker	J.J. Blinks	B. Rabbit	R.J. Funnelhead	E. Fudd	W.E. Coyote	Jerry Thomas	Sue Storm	B. Grimm	B. Wayne	Danvers
40-hour (Title 8, Section 5192)	40 (R)	I & A													
24-hour (Title 8, Section 5192)	24 (R)	I & A													
8-hour (Title 8, Section 5192)	8 (R)	I & A													
DOT 49CFR 172.704	3	I +3 years													
Respiratory Protection	1	I & A													
Hearing Conservation	1	A													
First aid	2	P													
CPR	2	P													
Fire Extinguisher	1	I & A													
PPE	1	I & A													
ER awareness	2	I & A													
ER Level 1	8	A													
ER level 2	8	A													
SPCC (>1,320 gal)	1	I & A													
Lead	1	I & A													
CRT	0.5	I & A													
Bloodborne Pathogen	1	I & A													
Forklift	4	I & A													
Hazcom	1	I & A													
Asbestos	1	I & A													
IIPP	2	I & A													
Lock-out/Tag-out	0.5	I & A													
Ergonomics	1	P													

Sample

A =Annual and Initial
I = Initial
P = Periodic, as needed

Other Potential Trainings:
Accident investigation; electrical safety; emergency action/response plans; lab safety; bonding and grounding; tool safety; machine guard training; fall protection; safety inspections.

HHW Reports & Due Dates

Report	Period	Due
Form 303	7/1 – 6/30	10/1
Universal Waste (e-waste)	1/1 – 12/31	2/1
Covered E-waste, Net Cost	1/1 – 12/31	3/1
Used Oil Annual Report	7/1 – 6/30	8/15
Used Oil Annual (collection)	1/1 – 12/31	8/15
Electronic Annual Report AB 939	1/1 – 12/31	8/1
CERS	1/1 – 12/31	3/1 *
Treated Wood Waste	1/1-6/30 & 7/1-12/31	7/30 & 1/30

* Maybe anniversary date of initial filing

Resources

- HHWIE
- DTSC
- CalRecycle
- NAHMMA
- Web Sites