

# Welcome to Understanding the Large Quantity Generator Requirements





Lion Technology provides:

- Over 25 California workshops annually
- Title 22 hazardous waste workshops
- Nationwide training: EPA, RCRA, DOT, IATA, IMDG, OSHA
- Convenient online courses
- Tailored on-site training programs





- 1. Review the storage options for large quantity generators
  - Fully regulated
  - Satellite areas
  - Special waste streams
- 2. Review emergency preparedness and release reporting requirements
- Discuss other administration, recordkeeping, and reporting responsibilities





- Cal-OES Governor's Office of Emergency Services
- CESQG Conditionally Exempt Small Quantity Generator
- **CRT** Cathode Ray Tube
- **CUPA** Certified Unified Program Agency
- HMBP Hazardous Materials Business Plan
- **LQG** Large Quantity Generator
- **SQG** Small Quantity Generator

[22 CCR 66260.10]





# **On-site Management**





## **Determining Generator Status**

- Status based on counting *all* hazardous waste
  - At the point of generation
  - Every calendar month
- Status is **not** based on:
  - The amount shipped or moved to accumulation areas
  - An average over several months



23-0320



#### **Generator Status**

- CESQG
  - Generates ≤ 100 kg (220 lbs.) per month of "regular" hazardous waste
- SQG
  - Generates > 100 kg and < 1,000 kg (2,200 lbs.) per month of "regular" hazardous waste
- LQG
  - Generates ≥ 1,000 kg (2,200 lbs.) per month of "regular" hazardous waste









### **Generator Status** Acutely and Extremely Hazardous Wastes

- Acutely and extremely hazardous wastes are counted separately from other wastes
- Generators must follow the 90-day rules for these wastes if they generate more than:
  - 1 kg of acutely hazardous waste
  - 1 kg of extremely hazardous waste



#### [22 CCR 66262.34(d)(3)]



## Features of the 90-day Rules

- No permit required
- Accumulation "anywhere" on site
- No generation limit
- No accumulation limit
- Storage ≤ 90 days





[22 CCR 66262.34(a)]



#### A container is a storage device that is \_\_\_\_\_ by definition.

#### A tank is a storage device that is \_\_\_\_\_ by definition.





# A container is a storage device that is **PORTABLE** by definition.

#### A tank is a storage device that is \_\_\_\_\_ by definition.





A container is a storage device that is **PORTABLE** by definition.

A tank is a storage device that is **STATIONARY** by definition.

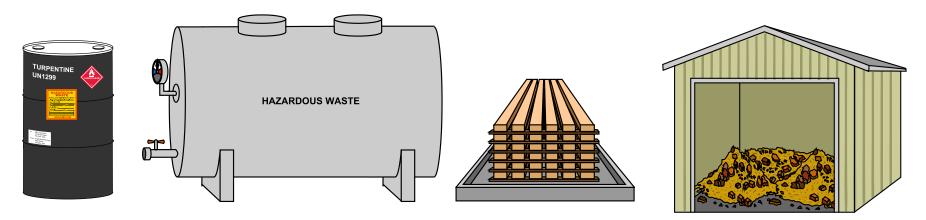


[22 CCR 66260.10]



### **90-day Accumulation Devices**

Containers Tanks Drip pads Containment buildings





# All containers and tanks must be labeled with:





All containers and tanks must be labeled with:

Accumulation start date





All containers and tanks must be labeled with:

- Accumulation start date
- "Hazardous waste"





All containers and tanks must be labeled with:

- Accumulation start date
- "Hazardous waste"
- Composition and physical state of the waste
- Statement calling out the particular hazard of the waste





All containers and tanks must be labeled with:

- Accumulation start date
- "Hazardous waste"
- Composition and physical state of the waste
- Statement calling out the particular hazard of the waste
- Name and address of the person producing the waste





Management of Containers Good Condition

# Containers holding hazardous waste must be in good condition



[22 CCR 66265.171]



Management of Containers Compatible

# Containers must be compatible with the waste they are holding











Management of Containers Closed

# Containers must remain closed unless adding or removing waste



[22 CCR 66265.173(a)]



### **Management of Containers**

A container holding hazardous waste must not be opened, handled, or stored in a manner that may rupture the container or cause it to leak





Management of Containers Inspections

#### Containers must be inspected at least weekly





Management of Containers Ignitables and Reactives

Containers holding ignitables and reactives must be kept 50 feet from the property line





[22 CCR 66265.176]



Management of Containers Incompatibles

# Containers holding incompatible materials must be managed appropriately





Management of Containers Air Emission Standards

# Generators must comply with air emission standards for devices and equipment



[22 CCR 66265.178]



### Management of Tanks

Generators managing tanks under the 90-day rules are subject to requirements for:

- Design
- Release prevention and detection
- Specific tank management standards



[CCR, Title 22, Div. 4.5, Chapter 15, Article 10]



### **Management of Drip Pads**

Generators managing drip pads under the 90-day rules are subject to requirements for:

- Design
- Release prevention and detection
- Weekly inspection and documentation



[CCR, Title 22, Div. 4.5, Chapter 15, Article 17.5]



Generators managing containment buildings under the 90-day rules are subject to requirements for:

- Design
- Release prevention and detection
- Collection system and waste removal
- Inspection and maintenance records
  - Inspect every seven days

[CCR, Title 22, Div. 4.5, Chapter 15, Article 29]





**90-day Accumulation** Training – Basic Requirements

- Employers are required to train all their "personnel"
- Personnel are defined as all persons who work at, or oversee the operations of, a hazardous waste facility, and whose actions or failure to act could cause non-compliance with the regulations



[22 CCR 66260.10 and 66265.16]





#### **90-day Accumulation** Training – Basic Requirements

90-day personnel must:

- Be trained by someone who has been trained in hazardous waste management procedures
- Receive training on specific job requirements and emergency procedures



[22 CCR 66262.34(a)(4) and 66265.16]



#### **90-day Accumulation** Training – Time Frame and Frequency

The regulations require:

- Initial training within six months of becoming personnel
- Direct supervision for untrained employees
- An annual review of initial training



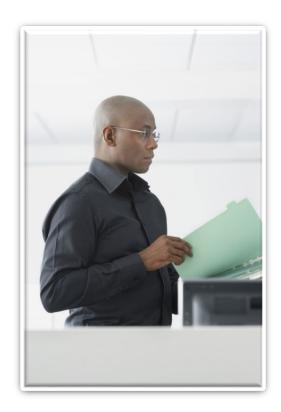
[22 CCR 66262.34(a)(4) and 66265.16]



### **90-day Accumulation** Training – Documentation and Retention

Training documents containing the following must be kept:

- Job title
- Job description
- Name of employee
- Type and amount of training
- Proof of training



[22 CCR 66262.34(a)(4) and 66265.16]



# How long must a generator maintain personnel training records on site?





[22 CCR 66265.16(d) and (e)]



How long must a generator maintain personnel training records on site?

Current personnel = until facility closure

Former personnel = 3 years from last date worked

[22 CCR 66265.16(d) and (e)]

•



### **Other Management Options**















# **Basics of the Satellite Accumulation Rules**

- Accumulate up to 55 gallons or 1 quart of acutely/extremely hazardous waste
- Store at or near point of generation, where waste initially accumulates, under control of operator
- Use containers only



[22 CCR 66262.34(e)]



# **Markings for Satellite Accumulation**

All containers and tanks must be labeled or marked with:

- Accumulation start date
- "Hazardous waste"
- Composition and physical state of waste
- Statement of hazards
- Name and address of person producing the waste



[22 CCR 66262.34(e)(1)(C) and (f)(3)]



## **Management of Containers**

The same three container rules that applied to containers in a 90-day area apply to containers in the satellite area:

- 1. Good condition
- 2. Compatible with the waste
- 3. Closed





Satellite Accumulation Quantity Limits

A process or group of processes in the same physical area has a SINGLE 55-gallon or 1-quart limit, EXCEPT:

- If waste streams are incompatible
- If the generator determines it's impractical or unsafe





[22 CCR 66262.34(e)(2)]



## **Satellite Accumulation** Management of Containers After Reaching Limits

Upon reaching the 55-gallon or 1-quart limit:

- Mark the container with the date
- Ship the container off site or manage it under the 90- or 180-day accumulation requirements within *three days*



[22 CCR 66262.34(e)(2)]



Waste managed under the satellite option cannot be held on site for more than one year from the initial accumulation start date













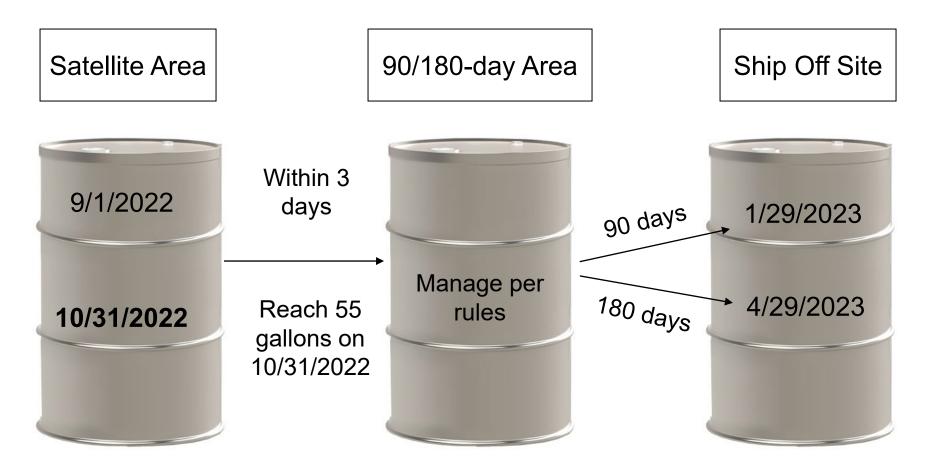


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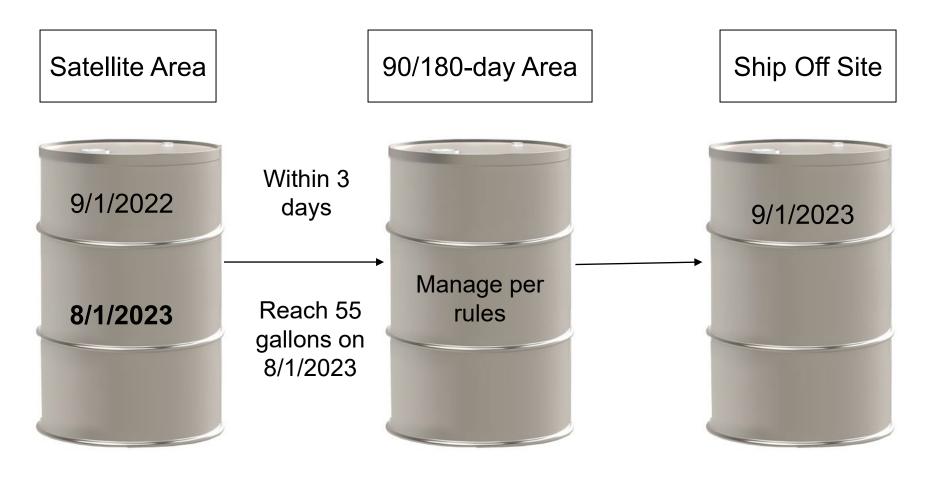


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Cal/EPA does not require written training plans or formal documentation

- Generators need only assure that each person doing accumulation work knows their responsibilities
- Satellite personnel who move the satellite waste to the 90-/180-day accumulation areas are subject to those training requirements



[49 FR 49570, December 20, 1984 and 22 CCR 66262.34(e)]



## Hazardous Materials Business Plan (HMBP) Training

- Employees who do not require training under the satellite accumulation option may still need training under the HMBP rules
- The HMBP requires training in safety procedures and contingency plans







Hazardous Materials Business Plan (HMBP) Training

- The HMBP requires training for new employees and annual retraining
- Training under the HMBP must be documented and kept for at least *three years*





[HSC §25505]



## **Laboratory Satellite Accumulation**

Generators may accumulate up to 55 gallons of hazardous waste (or 1 quart of acutely or extremely hazardous waste) in a laboratory accumulation area that is located *as close as is practical* to the point of generation



[HSC §25200.3.1]



## Laboratory Satellite Accumulation Conditions

In addition to all the other satellite accumulation rules:

- Accumulation area must be managed under the control of personnel who have been trained
- Unsupervised access to the area is limited to trained personnel
- Incompatible wastes are managed properly
- Amount of waste in the area must be appropriate for the space





#### **Universal Waste** Types of Universal Waste in California

- Batteries
- Mercury-containing devices
- Lamps
- Electronic devices
- Cathode ray tubes
- Cathode ray tube glass
- Photovoltaic modules
- Aerosol cans [HSC §25201.16]

[CCR, Title 22, Div. 4.5, Chapter 23]





Batteries, thermostats, mercury-added novelties containing no liquid mercury, and mercury-containing flooring wastes may be sent to a destination facility for disposal



All other types of universal wastes must be recycled

[22 CCR 66273.31]



## **Accumulating Universal Waste Batteries**

- Batteries are not required to be placed in containers UNLESS they show evidence of leakage, spillage, etc.
- Containers for batteries must:
  - Be closed
  - Be structurally sound
  - Be compatible
  - Lack evidence of breakage, spillage, etc.





# **Accumulating Universal Waste Lamps**

- Lamps must always be stored in closed containers
- Containers holding broken lamps must be designed to contain the mercury and other hazardous constituents





# **Accumulating Other Universal Wastes**

- Mercury-containing equipment usually needs to be placed in closed containers
- Electronic devices need to be "containerized"
- CRTs and CRT glass need to be placed in containers



[22 CCR 66273.33(c) and 66273.33.5]



**Universal Waste** Labeling and Marking

# Must be marked using the phrase "Universal Waste" and the item

"Universal waste batteries"



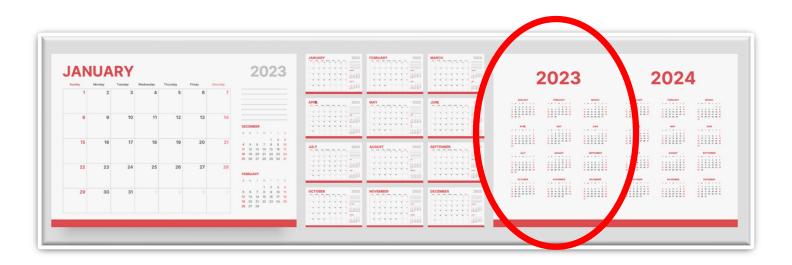
[22 CCR 66273.34]



**Universal Waste** Accumulation Time

# Universal waste may be accumulated on site for up to *one year*

• Generators must be able to prove the time period





**Universal Waste** Off-site Shipments

Universal waste is not required to be shipped on a Uniform Hazardous Waste Manifest

• The DOT may still require use of a shipping paper



[22 CCR 66273.38]



## Universal Waste Training

All personnel must be thoroughly familiar with waste management and emergency response procedures

 "Personnel" refers to anyone who consolidates, sorts, treats, recycles, packages for transport, offers for transport, or physically relocates containers of universal waste



[22 CCR 66273.36(a)]



Universal Waste Training

- Training must be provided initially and annually thereafter
- Training materials must be in the form of any written media and dated
- Written training records must be kept for *three years*



[22 CCR 66273.36]



**Universal Waste** Aerosol Cans

The rules for universal waste aerosol cans can be found in the California Health and Safety Code, including:

- Definitions regarding aerosol cans
- Management
- Allowable processing
- Training
- Notification



[HSC Div. 20, CH. 6.5, Article 9]



Automotive type lead-acid batteries may be managed under less stringent rules, which include:

- Use a manifest or bill of lading (retain for three years)
- Store in accordance with applicable DOT rules
- Protect batteries from shortcircuiting
- Label properly and meet time limits

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[22 CCR 66266.80 and 66266.81]





**Used oil** is defined as "any oil that has been refined from crude oil, or synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities"



[HSC §25250.1]



Regulation of Used Oil Under the Hazardous Waste Regulations

- Used oil is defined as a hazardous waste at HSC §25250.4(a) unless it meets a specific exclusion
- Used oil is a "recyclable hazardous waste" per 22 CCR 66266.1(a)
- Used oil must be managed in compliance with the requirements of CCR, Title 22, Div. 4.5, Chapter 12 (i.e., 90-day, 180-day, satellite accumulation rules)





Managing Used Oil Labeling

Used oil containers and tanks must be labeled with:

- "Used Oil"
- "Hazardous Waste"
- Accumulation start date
- Composition and physical state
- Statement of hazards
- Name and address of generator

Used Oil Hazardous Waste Liquid Toxicity 8/31/23 Dargo Enterprises 111 Asheford Way Springfield, CA, 07777

[22 CCR 66279.21]



### **Requirements for Used Oil Filters**

To be excluded from the hazardous waste regulations, used oil filters must:

- Be drained of free-flowing oil
- Be recycled
- Be stored and transferred properly
- Be labeled properly
- Follow storage time limits



[22 CCR 66266.130]



#### **Empty Containers**

Containers that previously held "hazardous materials" are regulated as hazardous waste UNLESS:

- 1. They are emptied, and
- 2. They are managed in specific ways



[22 CCR 66261.7]



**Empty Containers** Pourable Materials

Containers are empty when no hazardous material can be poured or drained from the container when it is held in any orientation



[22 CCR 66261.7(b)(1)]



**Empty Containers** Non-pourable Materials

Containers are empty if no hazardous material remains that can feasibly be removed by physical methods (excluding rinsing)

• A thin uniform layer of dried material or powder is acceptable



[22 CCR 66261.7(b)(2)]



#### **Empty Containers** Acutely or Extremely Hazardous Waste

Container is empty when it has been triple rinsed using a solvent capable of removing the waste and all pourable residues have been removed

Specific authorization is required from the DTSC to triple rinse



[22 CCR 66261.7(d)]





**Empty Containers** Aerosol Containers

Aerosol containers are empty when the contents and propellant are emptied to the maximum extent practical under normal use

 Acutely hazardous aerosol cans may not be exempted as empty





**Empty Containers** Compressed Gas Cylinders

# Container is empty when pressure approaches atmospheric



[22 CCR 66261.7(I)]



Management of Empty Containers Containers Five Gallons or Less in Size

Containers may be disposed of at an appropriate "solid waste facility"

 Must be packaged and transported in accordance with applicable DOT regulations





Management After Being Emptied Containers Greater Than Five Gallons in Size

To avoid regulation as hazardous waste, containers must be:

- Reclaimed for scrap value;
- Reconditioned/ remanufactured for reuse (per DOT rules); or
- Shipped to a collection location prior to being reclaimed, reconditioned, or remanufactured



[22 CCR 66261.7(e)]



Management After Being Emptied Containers Greater Than Five Gallons in Size

#### Containers must be:

- · Marked with the date emptied
- Recycled within one year







### How does the DOT's definition of *empty* differ from California?



[49 CFR 173.29]



# How does the DOT's definition of *empty* differ from California?

It must be cleaned of residue and purged of vapor such that there is NO DOT HAZARD



[49 CFR 173.29]



#### **Emergencies and Releases**





**Preparedness and Prevention** Required Equipment

In general, facilities must have the following equipment:

- Internal communication or alarm system
- Telephone or two-way radio
- Portable fire extinguishers
- Spill control equipment
- Decontamination equipment
- Adequate water for fire suppression

[22 CCR 66265.32 and 40 CFR 265.32]











**Preparedness and Prevention** Emergency Preparedness

To prepare for and prevent emergencies, generators must meet requirements for the following:

- Testing and maintenance
   of equipment
- Access to communication or alarm systems
- Required aisle space
- Arrangements with authorities



[CCR, Title 22, Div. 4.5, Ch. 15, Art.3 and 40 CFR 265, Subpart C]



Contingency Plan and Emergency Procedures 90-day/TSDF

At a minimum, the contingency plan must address specific content such as:

- Personnel specific actions
- Arrangements with authorities
- Names, addresses, and phone numbers of emergency coordinators
- Emergency equipment
- Evacuation plans





[CCR, Title 22, Div. 4.5, Ch. 15, Art.4]



Contingency Plan and Emergency Procedures 90-day/TSDF

Generators must also comply with requirements for:

- Distributing copies of the contingency plan
- Amending the plan



[CCR, Title 22, Div. 4.5, Ch. 15, Art.4]



### There must be at least one emergency coordinator either at the facility or "on call" at all times





**Responsibilities for Emergency Coordinators** 

Emergency coordinator must be familiar with:

- All aspects of the plan
- All operations and activities at the facility
- Locations and characteristics of wastes handled



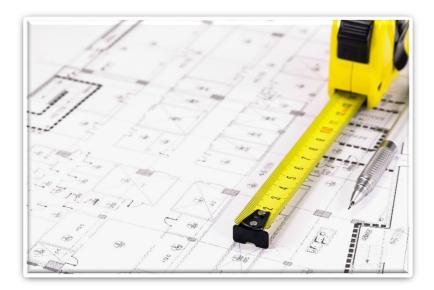
[22 CCR 66265.55]



**Responsibilities for Emergency Coordinators** 

Emergency coordinator must be familiar with:

- Locations of all records within the facility
- Layout of the facility



[22 CCR 66265.55]



### **Responsibilities for Emergency Coordinators**

Emergency coordinator must be:

- Authorized to commit necessary resources to carry out the plan
- Able to carry out emergency procedures specified in the plan





[22 CCR 66265.55]



90-day Accumulation Contingency Plan and Emergency Procedures

There are four stages of an incident, each requiring specific actions:

- 1. Imminent or actual emergency
- 2. Actual release, fire, or explosion
  - Assess the situation
  - Implement the plan
- 3. Release that is a threat to human health or the environment
- 4. Post-emergency actions





[22 CCR 66265.56]



Hazardous Waste Release Reporting 90-day/TSDF Telephone Reporting

Phone notification is required for "releases" that pose a threat to human health or environment outside the facility

- Immediately notify:
  - Cal-OES
  - Local authorities if evacuation is necessary





[22 CCR 66265.56(d)]



Hazardous Waste Release Reporting 90-day/TSDF Written Reporting

Written notification is required for releases *inside or outside* the facility:

 Notify within **15 days** to the region or State agency





Hazardous Waste Tank Release Reporting 90-day/TSDF Reporting

A report is required for any "release" from a hazardous waste storage tank (except those ≤ 1 lb. that are immediately cleaned up)

- Notify the DTSC within 24 hours
- Submit a follow-up written report within 30 days







Any release of hazardous materials to the environment must be reported immediately to:

- Local administering authority (CUPA)
- CAL-OES





Additional reporting requirements for CERCLA hazardous substances and SARA extremely hazardous substances may apply

[HSC §25510]



#### Administration, Records, and Reports







# Generally, with some exceptions, records need to be "kept" for a minimum of *three years*



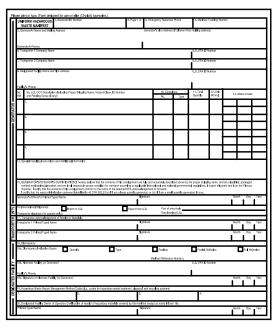


#### **The Uniform Hazardous Waste Manifest**

The manifest is used to ship and track hazardous waste shipments

- The EPA requires that **RCRA** hazardous wastes are manifested
- The DTSC requires that **non-RCRA** hazardous waste are manifested



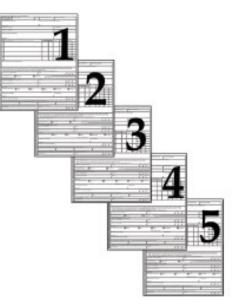




### **Copies of the Manifest**

Each manifest consists of five copies:

- Copy 5 Kept by generator
- Copy 4 Kept by transporter
- Copy 3 Kept by TSDF
- Copy 2 Sent by TSDF back to generator
- Copy 1 Inputted by TSDF into the EPAs e-Manifest system





#### **Manifest Discrepancies**

There are five different types of manifest discrepancies:

- 1. Significant discrepancies in *quantity*
- 2. Significant discrepancies in type
- 3. Container residues that exceed limits for "empty"
- 4. Partial rejections
- 5. Full rejections

ŧ	18. Discrepancy					
[	18a. Discrepancy Indication Space	Quantity	Туре	Residue	Partial Rejection	Full Rejection
۱L				Manifest Reference Numb	er:	

#### [22 CCR 66264.72 and 66265.72]



#### Significant Discrepancies: Quantity or Type Most Hazardous Wastes

- A significant discrepancy in quantity would be:
  - For bulk wastes, greater
     than 10% variation in weight
  - For batch wastes, any variation in piece count
- A significant discrepancy in *type* would be:
  - An obvious difference upon inspection or analysis



[22 CCR 66264.72(a) and 66265.72(a)]



Required Actions for Discrepancies Most Hazardous Wastes

If a TSDF discovers a manifest discrepancy, the facility must:

- Attempt to reconcile the discrepancy with the generator
- Note the discrepancy in Item 18 of the manifest

If there's no reconciliation after **15 days**, the TSDF must notify the DTSC in writing



Significant Discrepancies: Quantity or Type Hazardous Wastes of Concern Definition

A hazardous waste of concern is a hazardous waste that meets any of the following DOT hazard divisions:

- Explosive Hazard Divisions 1.1, 1.2, or 1.3
- Poisonous liquid or solid Hazard Division 6.1, Packing Groups I or II
- Poisonous gas Hazard Division 2.3

Subject to special reporting requirements





[22 CCR 66261.111]



### Significant Discrepancies: Quantity or Type Hazardous Wastes of Concern Definition

- A reportable *quantity* would be:
  - For bulk wastes, variations greater than 3% in weight
  - For containerized wastes, any variation in piece count
- A reportable difference in *type* would be:
  - An obvious difference upon inspection or analysis



[22 CCR 66261.111]



Required Actions for Discrepancies Hazardous Wastes of Concern

If there is no reconciliation after 24 hours:

- TSDF must notify the DTSC immediately
- TSDF must report the discrepancy in writing to the DTSC within *five days*





**Rejected Shipments** TSDFs Rejecting Shipments

If a facility rejects a shipment of hazardous waste, then the facility may forward the waste to another TSDF or return it to the generator

- TSDF amends or executes a new manifest for rejected shipment
- Manifests must be resubmitted to the state within 30 days



[22 CCR 66264.72(e)-(g)]



## Generators Receiving Returned Hazardous Waste

Generators who receive a rejected shipment of hazardous waste must:

- Manage the waste under applicable 90-day requirements
- Label the waste in a manner that indicates the waste is rejected
- Mark the waste with the date it was received



[22 CCR 66262.34(g) and (h)]



Generators receiving their own rejected waste must:

- Sign in Box 18c or 20 as the Designated Facility
- Provide copies to the state(s), transporter, and TSDF, as necessary

	18. Discrepancy				
	18a. Discrepancy Indication Space Quantity	Туре	Residue	Partial Rejection	Full Rejection
			Manifest Reference Numb	er:	
Ľ	18b. Alternate Facility (or Generator)			U.S. EPA ID Number	
FACILITY				I	
<b>.</b>	18c. Signature of Alternate Facility (or Generator)				Month Day Year
SIGNAT					
18	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)				
B	1. 2.		3.	4.	
	20. Designated Facility Owner or Operator: Certification or receipt of hazardous materials covered by the manifest except as noted in Item 18a				
	Printed/Typed Name		Signature		Month Day Year
΄Ε	PA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.		DESIGNAT	ED FACILITY TO DESTINATIO	ON STATE (IF REQUIRED)



An exception report is executed when the generator does not receive a signed copy of the manifest back from the TSDF:

- Call or contact after 35 days
- Report to the DTSC after 45 days



[22 CCR 66262.42]

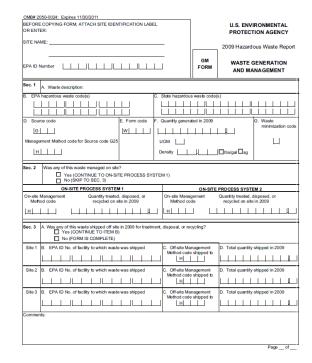


## **Generator Biennial Reporting**

Required for anyone who during a single month:

- Generated ≥ 1,000 kg (2,200 lbs.) of RCRA hazardous waste;
- Generated or accumulated ≥ 1 kg (2.2 lbs.) of RCRA acute hazardous waste; or
- Generated or accumulated
   ≥ 100 kg (220 lbs.) of spill cleanup
   material contaminated with RCRA
   acute hazardous waste

[Biennial Report Instructions]





Reports must be postmarked by March 1 of even-numbered years and report on odd-numbered years' activity



[22 CCR 66262.41]



Excluded Recyclable Materials Biennial Report

Required for any facility that recycles more than 100 kg/mo. (220 lbs.) of excluded recyclable materials and that either:

- Recycles at the same location where the material is generated; OR
- Accepts and recycles materials generated at off-site locations



[HSC §25143.10]



Required from anyone who intends to accept and accumulate, from *off-site sources*, universal waste:

- Electronic devices
- CRTs
- CRT glass



# Must be submitted at least **30 days** prior to accepting waste

[22 CCR 66273.32(c)]



Universal Waste Annual Report Requirements

Required for anyone who in a calendar year either:

- Accepts > 100 kg (220 lbs.) of electronic devices, CRTs, or CRT glass from off site; OR
- Generates ≥ 5,000 kg (~ 200 CRTs) of electronic devices, CRTs, or CRT glass



Must be submitted by February 1

[22 CCR 66273.32(d)]



## **Waste Minimization Reports**

Required for generators who in a calendar year "routinely generate, through ongoing processes and operations,":

- More than 12,000 kg of "regular" hazardous waste; OR
- More than 12 kg of extremely hazardous waste





- LDR documentation must be created for any waste that had LDRs attached to it at the point of generation
  - There are many different types of LDR documentation
- LDR records must be kept for *three years* after the last time the waste was sent off site



[40 CFR 268.7(a)]



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