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Managing Hazardous & Regulated Wastes

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Why Are We Here?



RCRA









Managing Hazardous & Regulated Wastes

- **Hazardous Waste Identification**
- **Generator Status**
- **Container Management**
- **Training/Recordkeeping**
- **Universal Waste**
- **Used Oil & Other Specific Wastes**

Environmental Rules

- Clean Air Act (CAA) - 1970
- Clean Water Act (CWA) - 1972
- Safe Drinking Water Act (SDWA) - 1974
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) - 1975
- Toxic Substances Control Act (TSCA) - 1976
- **Resource Conservation and Recovery Act (RCRA) - 1976/1984**
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - 1980
- SARA/EPCRA - 1986 *“Community Right to Know”*

All are Environmental Laws under the jurisdiction of the Federal Environmental Protection Agency

Hierarchy

Federal



State

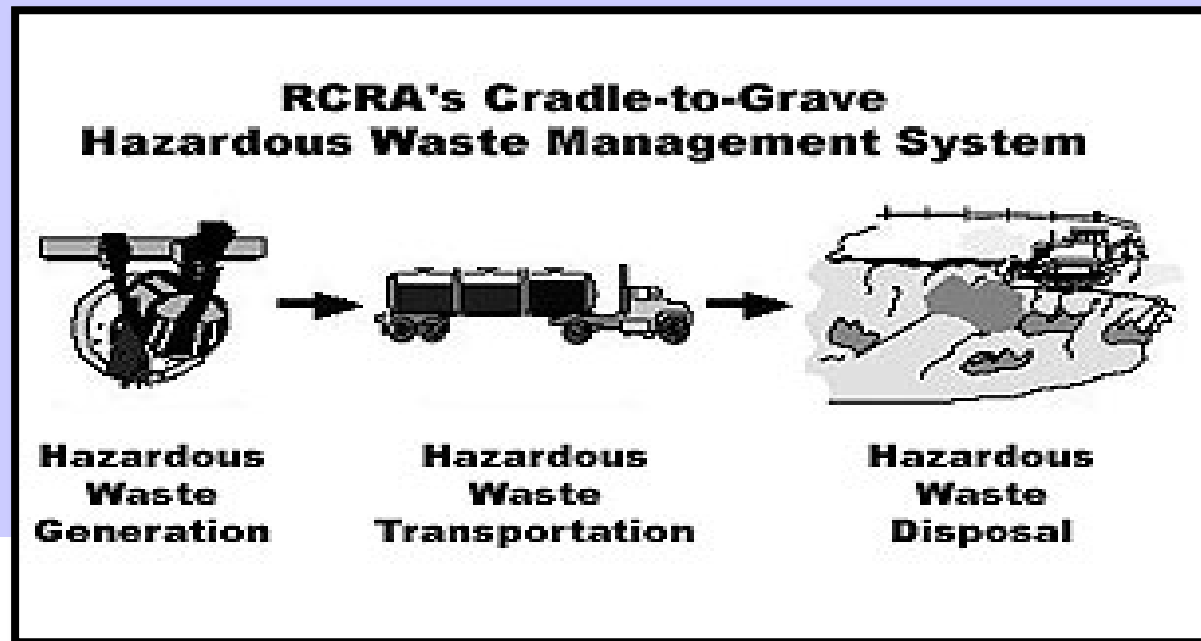


Local



RCRA

- Resource Conservation and Recovery Act - 1976
- “Cradle to Grave” liability



Florida's Hazardous Waste Laws

1. Florida Resource and Recovery Management Act-1980
2. Chapter 403, Florida Statutes (F.S.) - 1980
3. Rule 62-730 Florida Administrative Code (F.A.C.)-1982



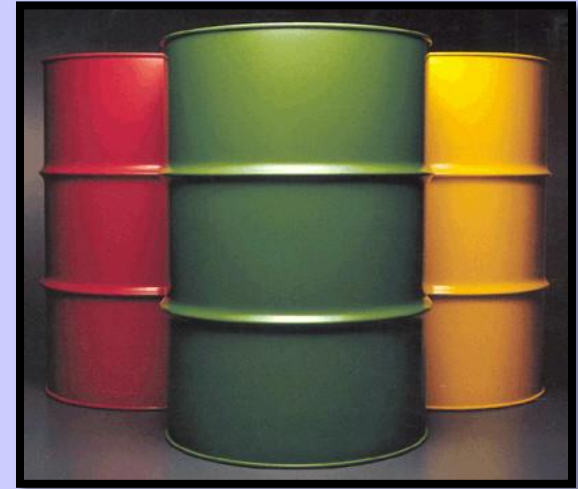
Solid Waste

IS A SOLID WASTE SOLID?

Liquids



Solids



Gases



Types of Waste



Regulated Non-Hazardous Wastes



Industrial Wastewater

Concrete
washout

Regulated Non-Hazardous Wastes



Waste Tires

Solid Wastes that are not classified as Hazardous Wastes

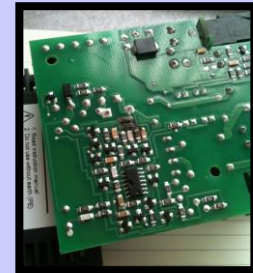


Household Waste

**Biomedical
Waste**



**Shredded Circuit
Boards**



**Laboratory Samples
(until testing complete)**



Hazardous Wastes Can Be Recycled /Reclaimed



What is a Hazardous Waste?



What is a Hazardous Waste?

- **Must be a solid waste (40 CFR 261.2)**
- **Not excluded from regulation (40 CFR 261.4)**

Is it Excluded from RCRA?

Examples:

- **Used Oil Filters**
- **Used Oil**
- **Lead Acid Batteries**
- **Household Waste**



So, What are “Hazardous Wastes”?

Does My Business Generate Hazardous Waste?

Must Do A Waste Determination!

- **Label**
- **Safety Data Sheets (SDS)**
- **Process Knowledge**
- **Laboratory Analysis**

Example

- “Non-Hazardous”
parts washer solvent
- Shipped waste off as
“Non-Hazardous”
- Hazardous for D040
Trichloroethylene



“Listed” Hazardous Wastes?

Listed Hazardous Waste

- **F List – F001-F028:**
**Wastes from non-specific sources;
e.g., spent solvents.**



Listed Hazardous Waste

- **K List – K001-K172:**
Wastes from specific sources; e.g., K032 – Wastewater treatment sludge from chlordane production

Listed Hazardous Waste

- P (acutely toxic) or U (toxic) List:

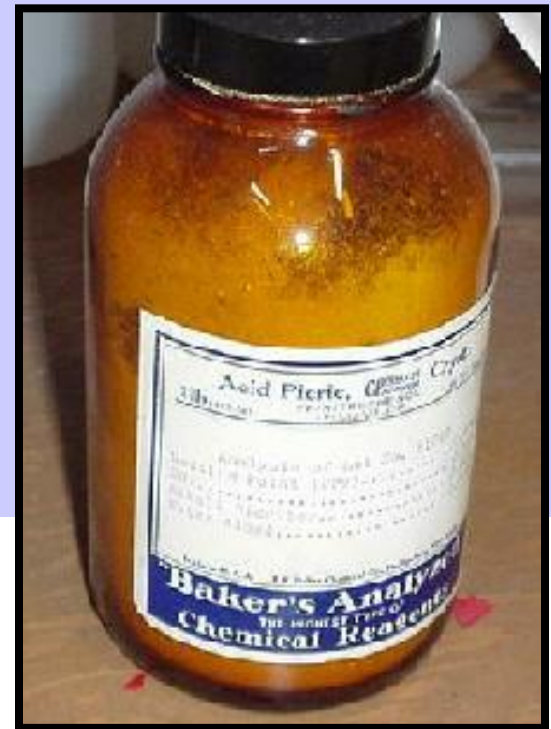
Pure chemical that is discarded, spilled, off specification or container residue.



Hazardous Wastes

Common Listed Wastes:

- Paint related wastes (F001-F005)
- Spent solvents (F001-F005)
- Off-spec chemicals (laboratory) (P & U list)
- Rags contaminated with listed solvents (F001-F005)
- Plating sludges (F006, F019)



Characteristic Hazardous Waste

Characteristic Wastes

- **Characteristic**

- **Ignitability - 261.21**

- **Corrosivity - 261.22**

- **Reactive – 261.23**

- **Toxicity (TCLP Analysis) – 261.24**

- **May be knowledge-based or analysis may be required**

Ignitability

D001

- **Liquids, Flash Point less than 140° F**
- **Non liquid capable of causing fire (Aluminum Dust)**
- **Ignitable compressed gas (Propane)**
- **Oxidizers (Potassium Permanganate)**

D001 Waste Paint

And the SDS says:

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT(Deg F): 1

METHOD USED: TOC

FLAMMABLE LIMITS IN AIR BY % VOLUME- LOWER: .9 UPPER: 36



Corrosivity

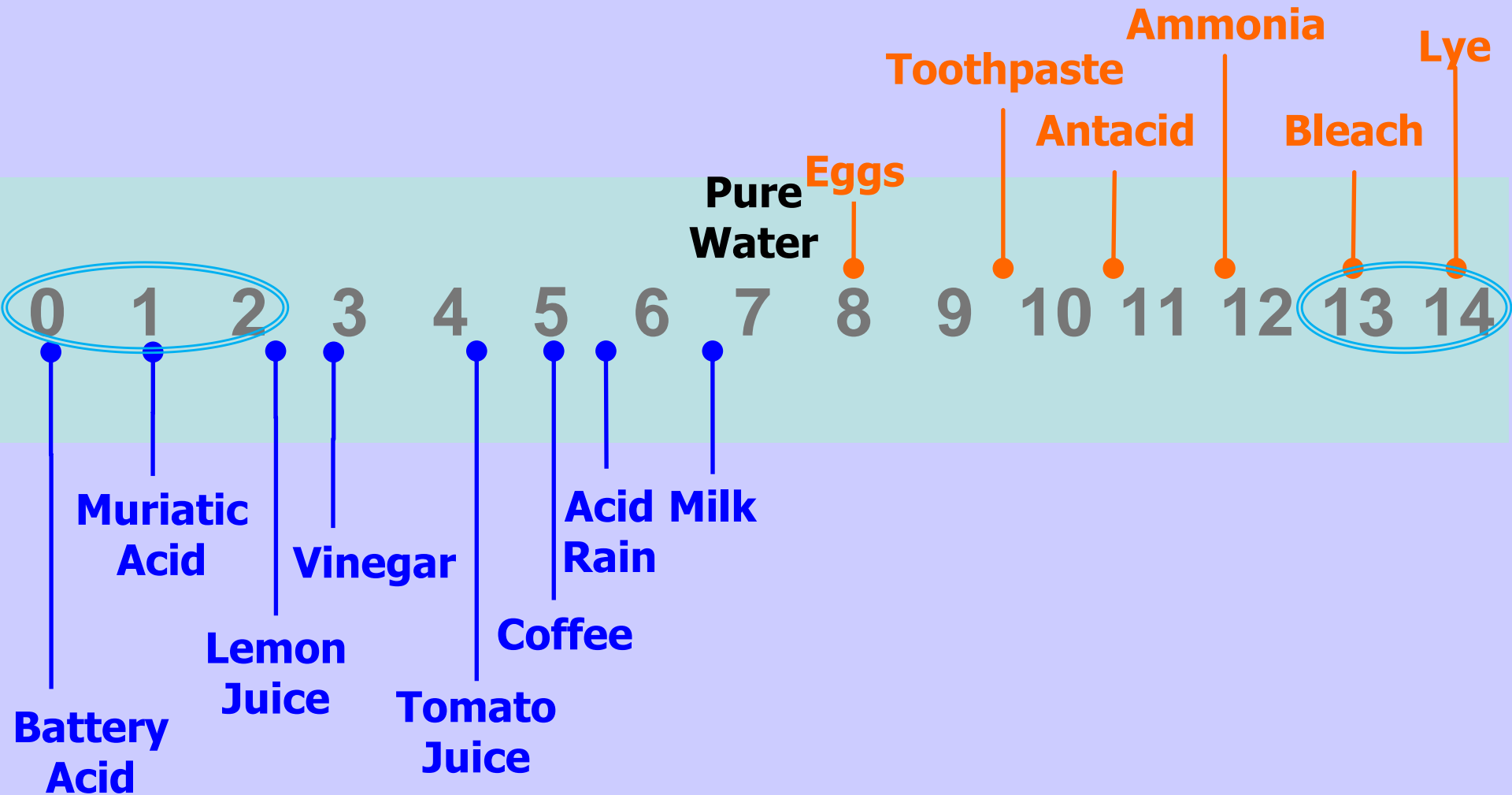
D002

Aqueous and has a pH of less than or equal to 2 or greater than or equal to 12.5

Liquid and corrodes steel at a rate greater than 1/4 inch per year



Corrosives and pH



Reactivity

D003

- Normally unstable and readily undergoes violent change without detonating
- Reacts violently with water
- Forms potentially explosive mixtures with water
- When mixed with water, generates toxic gases, vapors or fumes

Reactivity

D003

- Cyanide or sulfide bearing waste
- Capable of detonation or explosive reaction if subjected to a strong initiating source or if heated under confinement
- It is readily capable of detonation or explosive decomposition or reaction at STP
- It is a forbidden explosive or is a Division 1.1, 1.2, or 1.3 explosive

Managing Reactive Waste



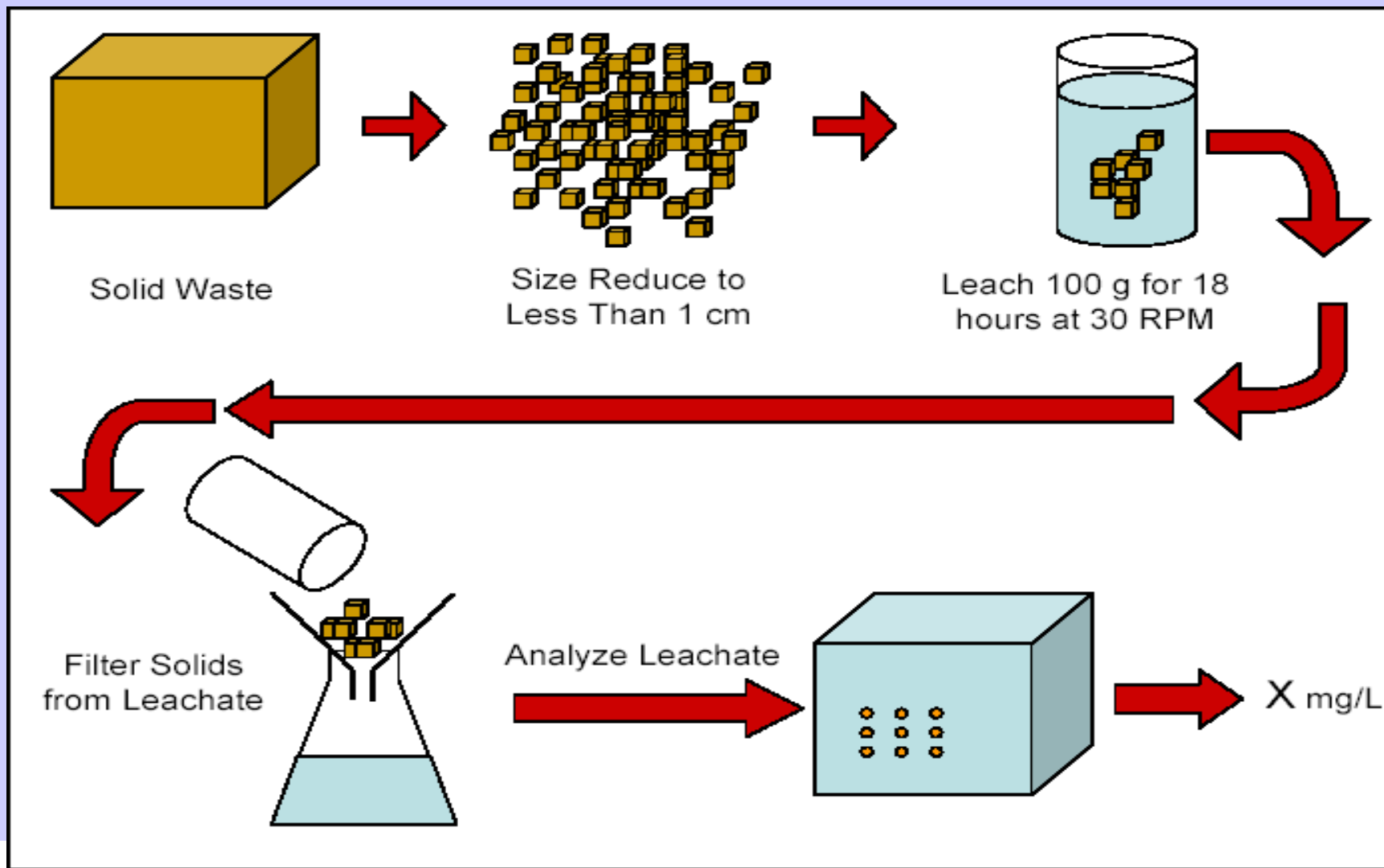
Toxicity Characteristic D004-D043

- Toxicity Characteristic Leaching Procedure (TCLP)
- SW-846 Test Method 1311
- If waste constituents meets or exceeds regulatory threshold it is hazardous waste
- 40 Toxic constituents
 - 8 heavy metals
 - Pesticides
 - Other organics



Basic TCLP

(Toxicity Characteristic Leaching Procedure)



From – Tim Townsend, Ph.D., P.E., University of Florida

TOXICITY

D004 - D043

NO.	CONTAMINANT	CAS NO.	REGULATORY LEVEL (Mg/L)
D004	Arsenic	7440-38-2	5
D005	Barium	7440-39-3	100
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1
D019	Carbon tetrachloride	56-23-5	0.5
D020	Clordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100
D022	Chloroform	67-66-3	6
D007	Chromium	7440-47-3	5
D023	o-Cresol	95-48-74	200
D024	m-Cresol	108-39-44	200
D025	p-Cresol	106-44-54	200
D026	Cresol	4	200
D016	2, 4-D	94-75-7	10
D027	1, 4-Dichlorobenzene	106-46-7	7.5
D028	1, 2-Dichloroethane	107-06-2	0.5
D029	1,1 Dichloroethylene	75-35-4	0.7
D030	2, 4-Dinitotoluene	121-14-23	0.13
D012	Endrin	72-20-8	0.02
D031	Heptachlor	76-44-8	0.008

NO.	CONTAMINANT	CAS NO.	REGULATORY LEVEL (Mg/L)
D032	Hexachlorobenzene	118-74-1	0.13
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3
D008	Lead	7439-92-1	5
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10
D035	Methyl ethyl ketone	78-93-3	200
D036	Nitrobenzene	98-95-3	2
D037	Pentachlorophenol	87-86-5	100
D038	Pyridine	110-86-13	5
D010	Selenium	7782-49-2	1
D011	Silver	7440-22-4	5
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2, 4, 5-Trichlorophenol	95-95-4	400
D042	2, 4, 6-Trichlorophenol	88-06-2	2
D017	2, 4, 5-TP (Silvex)	93-72-1	1
D043	Vinyl Chloride	75-01-4	0.2



Rainbow Springs
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Generator Status

Generator Status



- **Non-Handler**
- **Conditionally Exempt Small Quantity Generator (CESQG)**

Generator Status

- Small Quantity Generator (SQG)
- Large Quantity Generator (LQG)

The more HazWaste
you Generate –
The more you are
Regulated



Determine Generator Status

- Hazardous waste generated for the calendar month
- **CANNOT BE AVERAGED**
- Must meet standards of generator status for that month



Some Items DO NOT Affect Generator Status if RECYCLED

- Used oil
- Used oil filters
- Waste fuel
- Universal waste
- Used rags
- Used absorbent
- Petroleum Contact Water
- Used Coolant



Conditionally Exempt Small Quantity Generator (CESQG)

≤ 100 kg / 220 lbs. in any one month



Or ≤ 1 kg / 2.2 lbs. of acutely hazardous waste
(e.g. arsenic, cyanide, and warfarin compounds)

NO time limit, BUT

never more than 2,200 lbs. or 2.2 lbs. of acutely hazardous waste at any time

CESQG

Must...

- **Perform hazardous waste determination**
- **Ensure delivery of hazardous waste to a proper disposal facility**
- **Keep records for 3 years**

Small Quantity Generator (SQG)

In any one month,

Greater than 100 kg / 220 lbs.

Less than 1,000 kg / 2,200 lbs.

- Never more than 6,000 kg / 13,200 lbs. on-site at any time
- Cannot store hazardous waste for longer than

180 days

SQG

Must...

- Perform hazardous waste determination
- Ensure delivery of hazardous waste to a proper disposal facility
- Keep records for three years
 - recommend forever
- Manage HW properly
- **Obtain EPA ID Number**
- **Use HW manifest system**

SQG

Must

- **Weekly HW inspections**
- **Modified contingency plan**
- **HW Training**
- **180 day limit**

FACILITY EMERGENCY CONTACT LIST

WORKSHEET 1 FILL IN AND POST THIS INFORMATION NEXT TO YOUR TELEPHONE.

EMERGENCY RESPONSE INFORMATION

Emergency Coordinator

Name: _____

Telephone: _____

Fire Extinguisher

Location(s): _____

Spill Control Materials

Location(s): _____

Fire Alarm (If present)

Location(s): _____

Fire Department

Telephone: _____



WORKSHEET 2 FILL IN AND POST THIS INFORMATION NEXT TO YOUR TELEPHONE. MAKE SURE ALL EMPLOYEES READ AND ARE FAMILIAR WITH ITS CONTENTS.

EMERGENCY RESPONSE PROCEDURES

In the event of a spill:

Contain the flow of hazardous waste to the extent possible, and as soon as is possible, clean up the hazardous waste and any contaminated materials or soil.

In the event of a fire:

Call the fire department and, if safe, attempt to extinguish the fire using a fire extinguisher.

In the event of a fire, explosion, or other release that could threaten human health outside the facility, or if you know that the spill has reached surface water:

Call the National Response Center at its 24-hour number (800-424-8802).

Provide the following information:

Our Company name: _____

Our address: _____

Our U.S. EPA identification number: _____

Date of accident _____

Time of accident _____

Type of accident (e.g., spill or fire) _____

Quantity of hazardous waste involved _____

Extent of injuries, if any _____

Estimated quantity and disposition of recovered materials, if any _____





FIRE ALARMS



SPILL KITS



FIRE EXTINGUISHERS



FIRST AID KIT



EXIT ROUTES



Emergency Coordinator:

Phone: _____

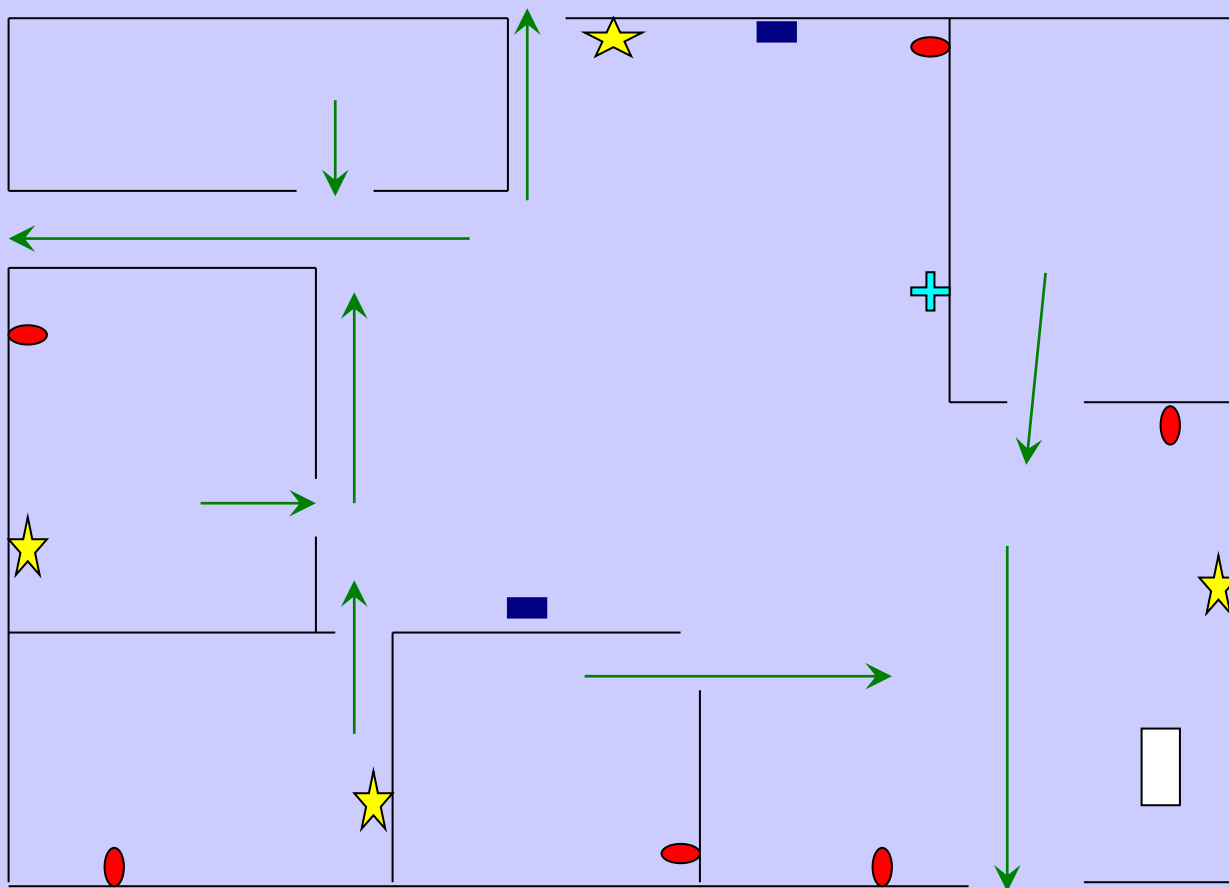
Fire Dept: _____

Police: _____

Hospital: _____

CHEMTREC: 800-424-9300

Emergency Response:



Large Quantity Generator (LQG)

- In any one month,
- Greater than 1,000 kg / 2,200 lbs. HW
- Greater than 1 kg / 2.2 lbs. of acute hazardous waste
- Cannot store hazardous waste for more than 90 days

LQG

Must

- Meet all SQG requirements, and
- **Additional Training**
- **Contingency plan**
- **Biennial Report**
- **Written job title & descriptions**

What Is Required Of Generators?

	<u>LQG</u>	<u>SQG</u>	<u>CESQG</u>
• Waste ID	X	X	X
• Ensure delivery of HW to approved facility	X	X	X
• Accumulation limit (kg)	No Limit	6,000	1,000
• Obtain EPA ID No.	X	X	Good idea!

What Is Required Of Generators?

	<u>LQG</u>	<u>SQG</u>	<u>CESQG</u>
• Use manifest	X	X	Good idea!
• Land Disposal	X	X	Good idea!
• Restriction			
• Emergency planning & Personnel training	X	X	Good idea!
• Weekly container inspections	X	X	Good idea!

What Is Required Of Generators?

	<u>LQG</u>	<u>SQG</u>	<u>CESQG</u>
• Notify Local Authorities	X	X	
• Contingency Plan	X	X	Good idea!
• Emergency Equipment	X	X	Good idea!
• Disposal records	X	X	REQUIRED in FL

Due Diligence

When selecting a transporter:

- Ask for references
- Check status online
- Call your regulatory agency
- Documentation
 - Registration and EPA ID number





Rainbow Springs
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Container Management





Container Management

**MAX
LIQUID
LEVEL** →



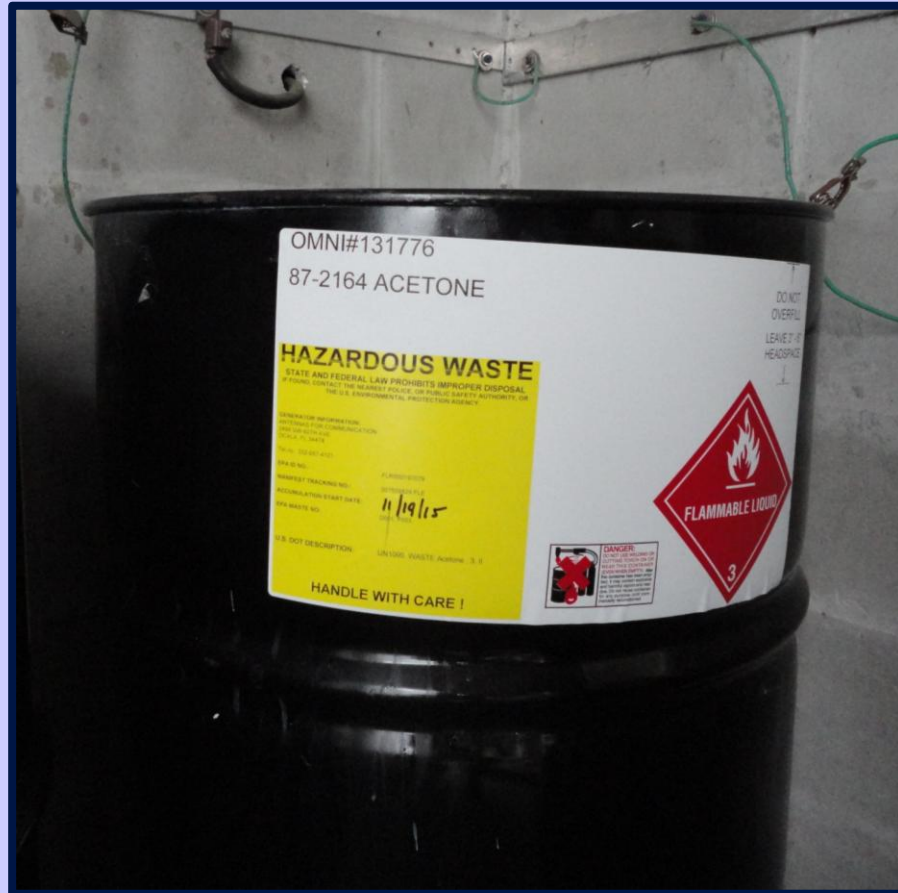
Container Management

Closed





Container Management



Labeled and Dated

Be Specific!

HAZARDOUS WASTE

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND CONTACT THE NEAREST POLICE OR PUBLIC SAFETY
AUTHORITY OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERATOR INFORMATION:

NAME Joe's Garage

ADDRESS _____ PHONE _____

CITY _____ STATE _____ ZIP _____

EPA / MANIFEST
ID NO. / DOCUMENT NO. _____

ACCUMULATION START DATE 9/29/16 EPA WASTE NO. D001

Waste Paint Solvents

D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX

HANDLE WITH CARE!

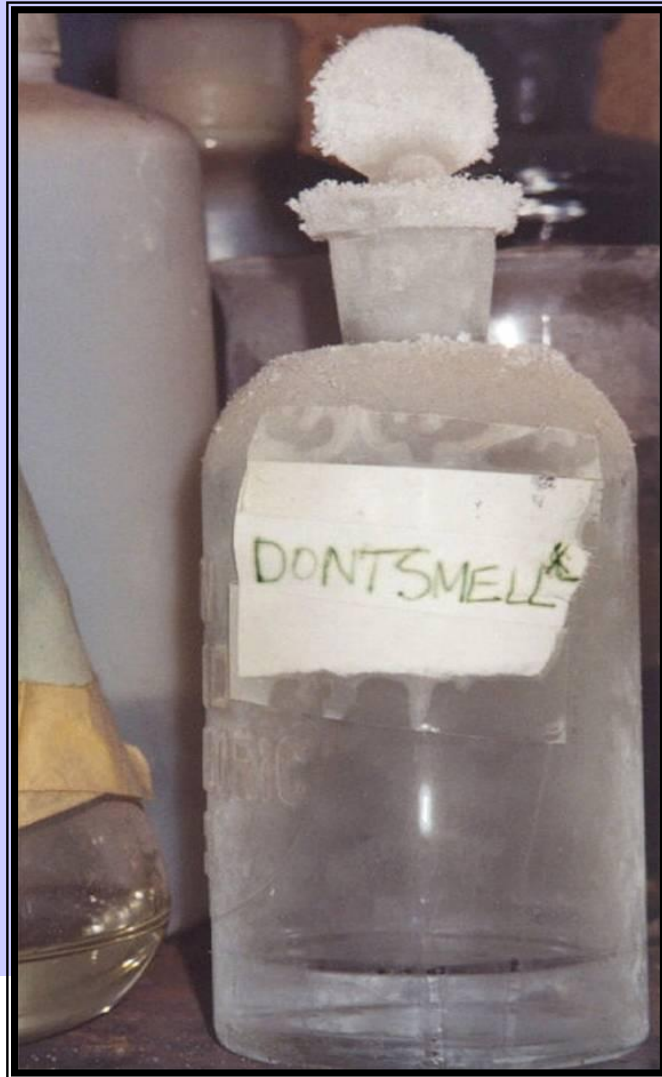
S-369, ULINE, 1-800-295-5510

6-14-9

ICKY
ACETONE



Container Management



Storage Area Management

Suggestions to Protect Containers



- Store inside
- Covered area
- Secondary Containment
- Protect from damage and vandalism

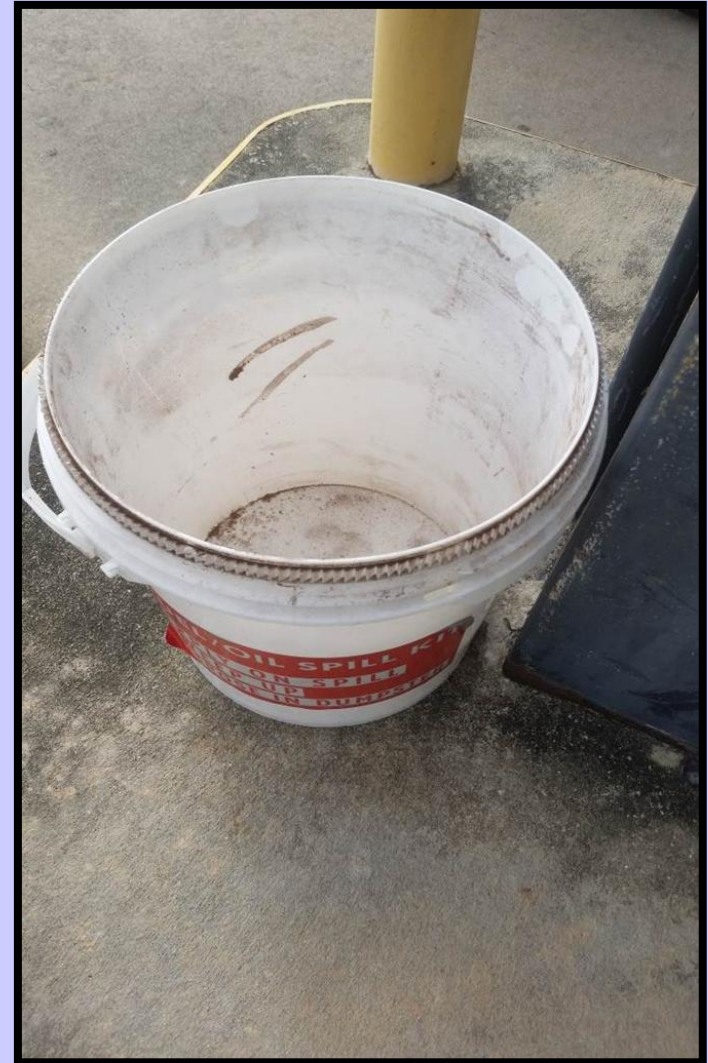
Grounding
Cables

Neat & Tidy

Labels are
clearly
readable

Not leaking





**Check Spill
Kits!**

Weekly Inspections



Weekly Inspections

WEEKLY INSPECTION LOG

Inspector: _____ Date: _____ Time: _____

Clearly Print Name

Accumulation Area Inspected: _____ Number of Containers: _____

Are all containers in good condition?	Yes _____	No _____
Is there any evidence of leaks or spills?	Yes _____	No _____
Are all containers labeled "Hazardous Waste"?	Yes _____	No _____
Are all containers marked with an accumulation start date?	Yes _____	No _____
Are all containers closed?	Yes _____	No _____
Is there adequate aisle space between rows of drums?	Yes _____	No _____
Is spill control equipment available?	Yes _____	No _____

Observations: _____

(If containers in poor condition or leaks/spills were found, please note action taken in area below)

Repairs or Remedial Action

Date

DANGER
NO SMOKING

DANGER
HAZARDOUS WASTE

DANGER
NO SMOKING





Satellite Accumulation



Paint Spray
Booth



Paint Mixing
Area



Used only by "Immediate Work Area"



Bench top
Booth

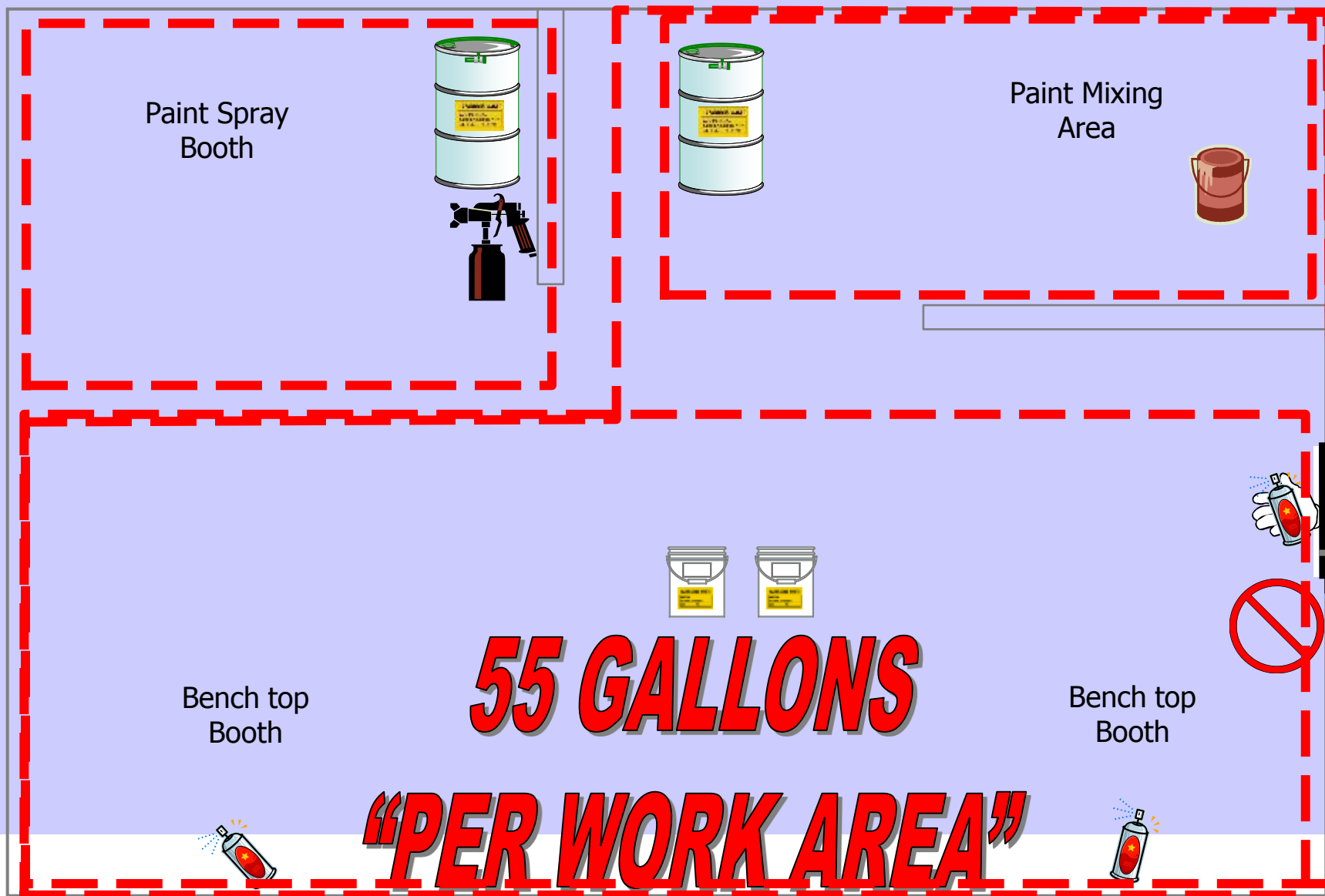


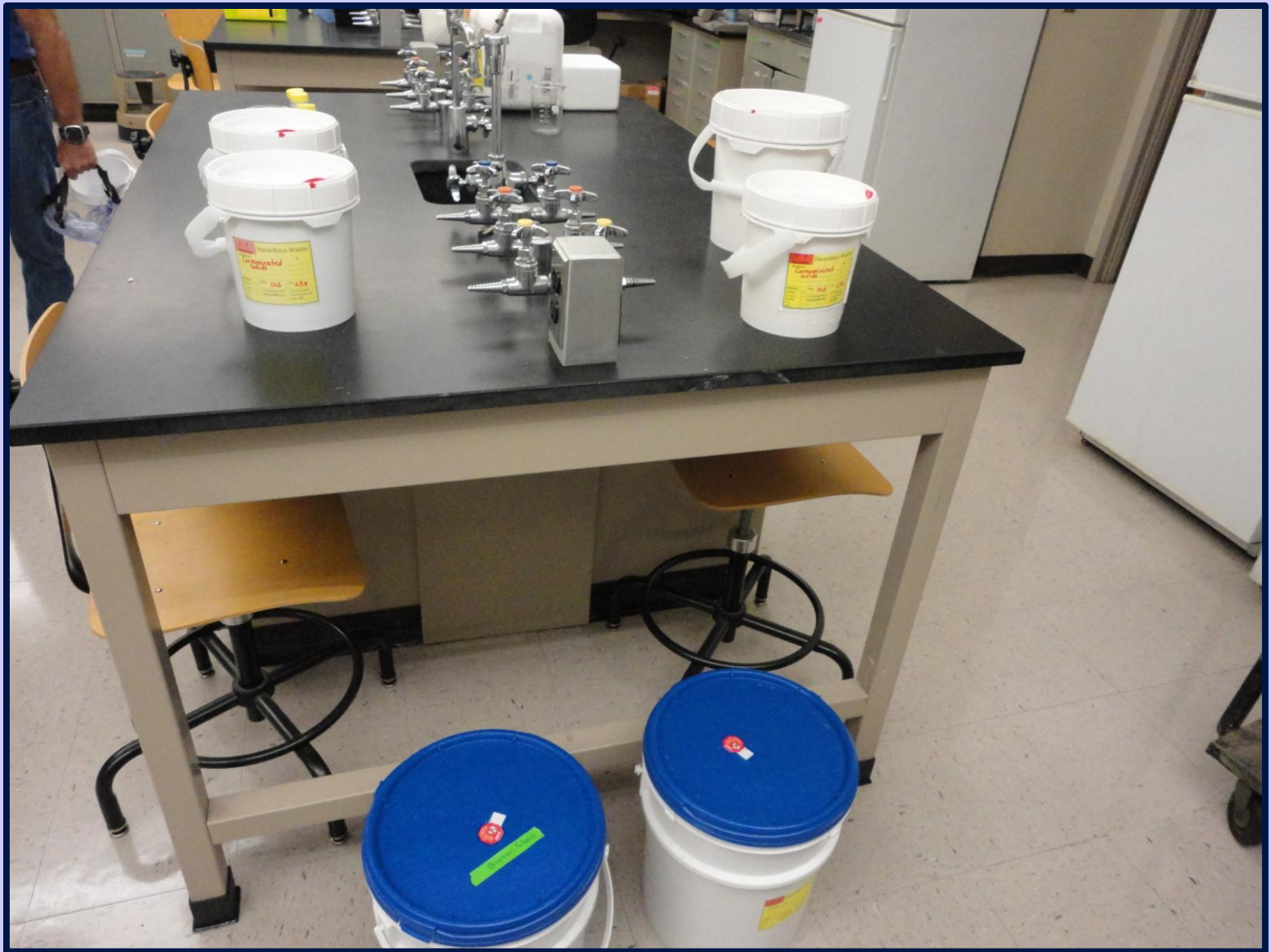
Bench top
Booth



55 GALLONS

"Point of Generation"



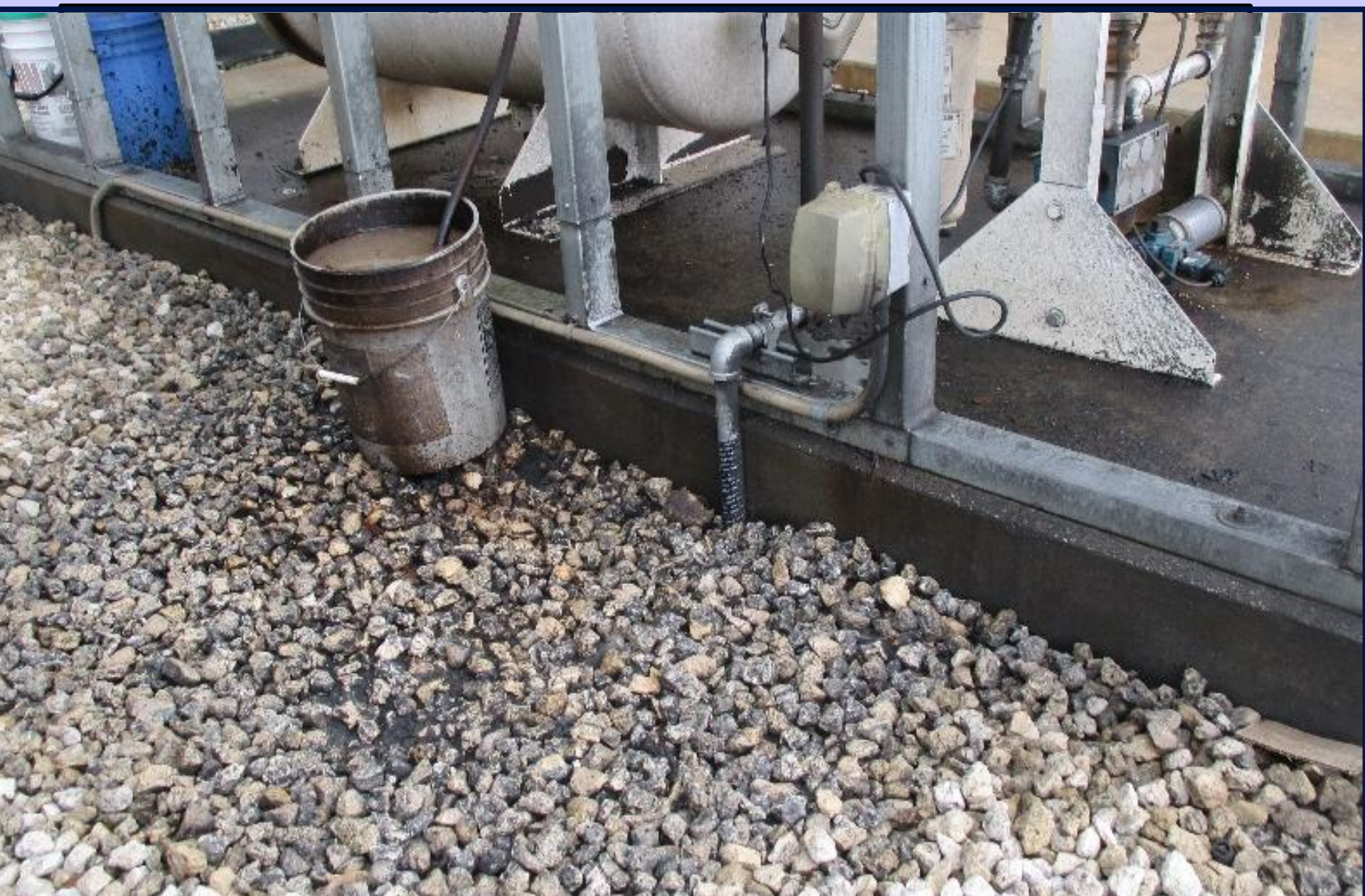




Rainbow Springs
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Preparedness and Prevention

Training



What Training is Required?

- **RCRA** (*Resource Conservation & Recovery Act*)
 - Hazardous Waste
- **CWA** (*Clean Water Act*)
 - Stormwater
- **DOT** (*Department of Transportation*)
 - Transportation
- **OSHA** (*Occupational Safety & Health Admin.*)
 - Worker Safety

RCRA Training

Two basic areas:

- **Hazardous Waste Management**
- **Emergency Response**

**SQGs and LQGs must
designate an
*Emergency Coordinator***



Contingency Plan (SQG/LQG)

- Available in case of emergencies
- Copies to local authorities
- Keep current
- Keep at facility



Contingency Plan Contents (LQG)

- **Evacuation Plan**
- **Describe emergency actions (can copy from other emergency plan)**
- **List emergency equipment**
 - Spill kits
 - Heavy equipment
- **Emergency Coordinator name, home address, and telephone number**

Contingency Plan Contents (SQG)

- **Post the following next to the telephone:**
 - **Emergency Coordinator**
 - Name
 - Phone #
 - Location of fire extinguishers
 - Location of spill control material
 - Location of fire alarm, if present
 - Telephone number of Fire Department (911)

Emergency Coordinator

Qualifications:

- Respond in a short period of time
- Coordinate Emergency Response measures
- Authority to commit resources to carry out Contingency Plan



SQG Training

[40 CFR 262.34(d)(5)(iii)]

“Ensure that employees are thoroughly familiar with.....”

- Proper waste handling
- Emergency procedures



SQG Training

[40 CFR 262.34(d)(5)(iii)]

***“And that the training*”**

- Relevant to their job**
- Covers normal operations and emergencies**

Document Training in writing!

LQG Training

[40 CFR 262.34(a)(4)/265.16]

Who needs training?

- **“Facility personnel”**
 - **Employees**
 - **Supervisors**
 - **Actions/inactions may result in non-compliance**

Dependent upon employee responsibilities

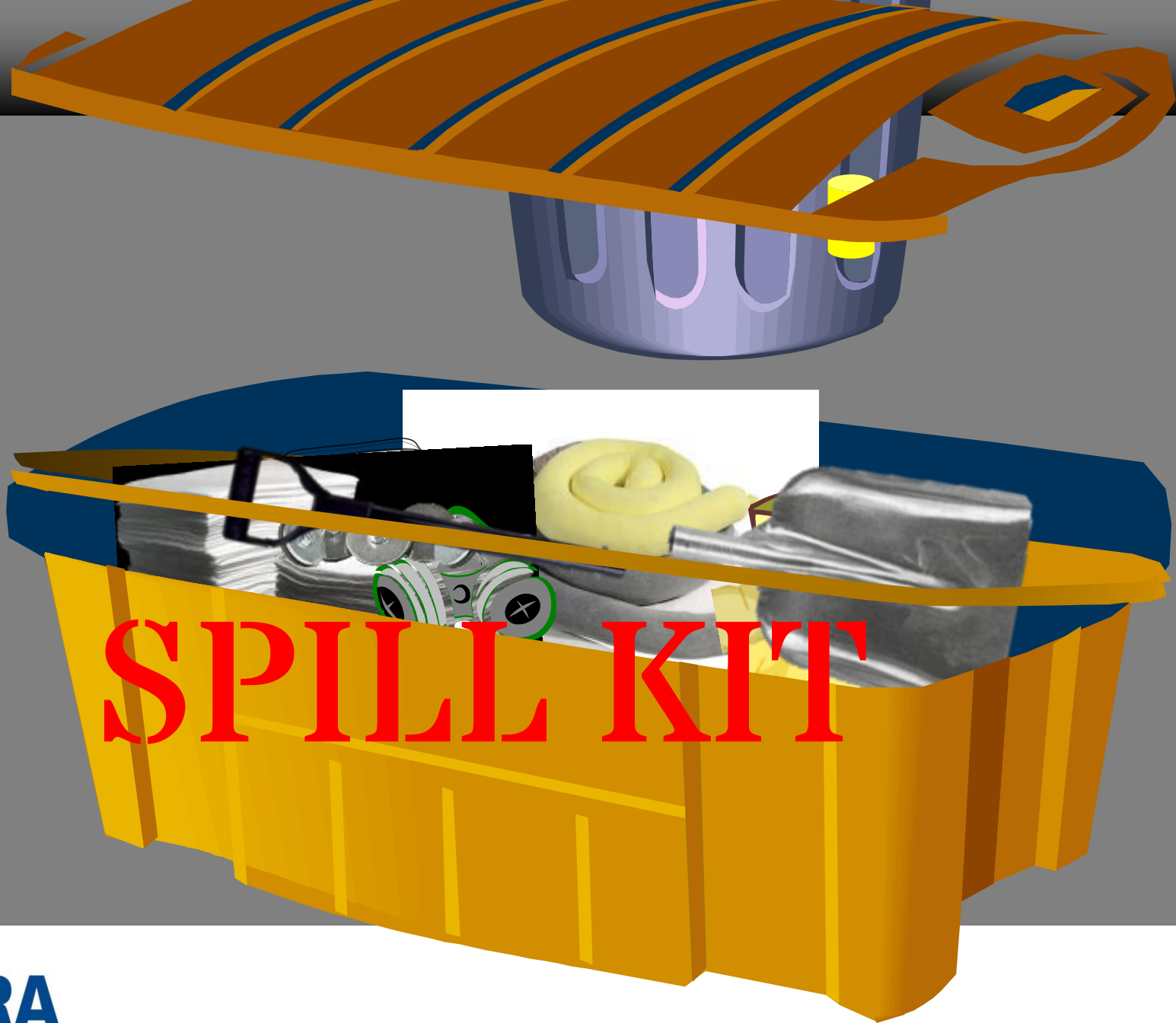
LQG Training

[40 CFR 262.34(a)(4)/265.16]

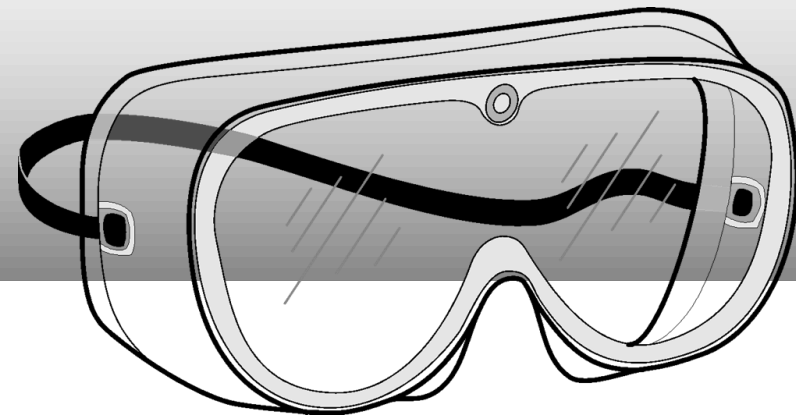
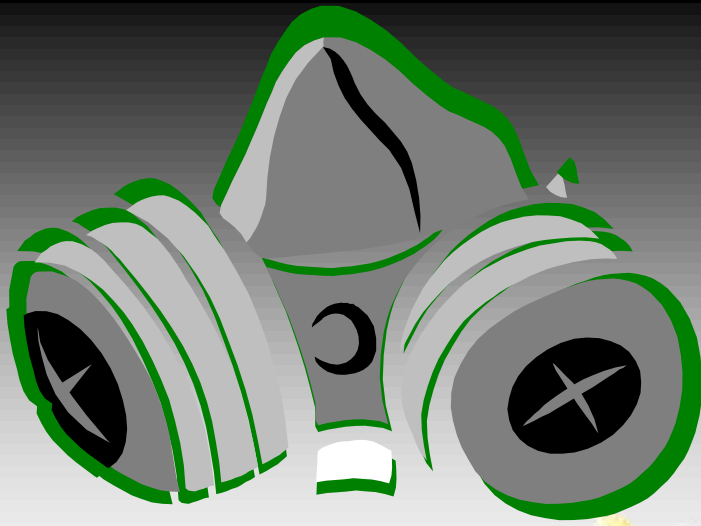
When?

- Initial- within 6 months
- New hires- supervised until training completed
- Annual training review
- Documented in writing





SPILL KIT









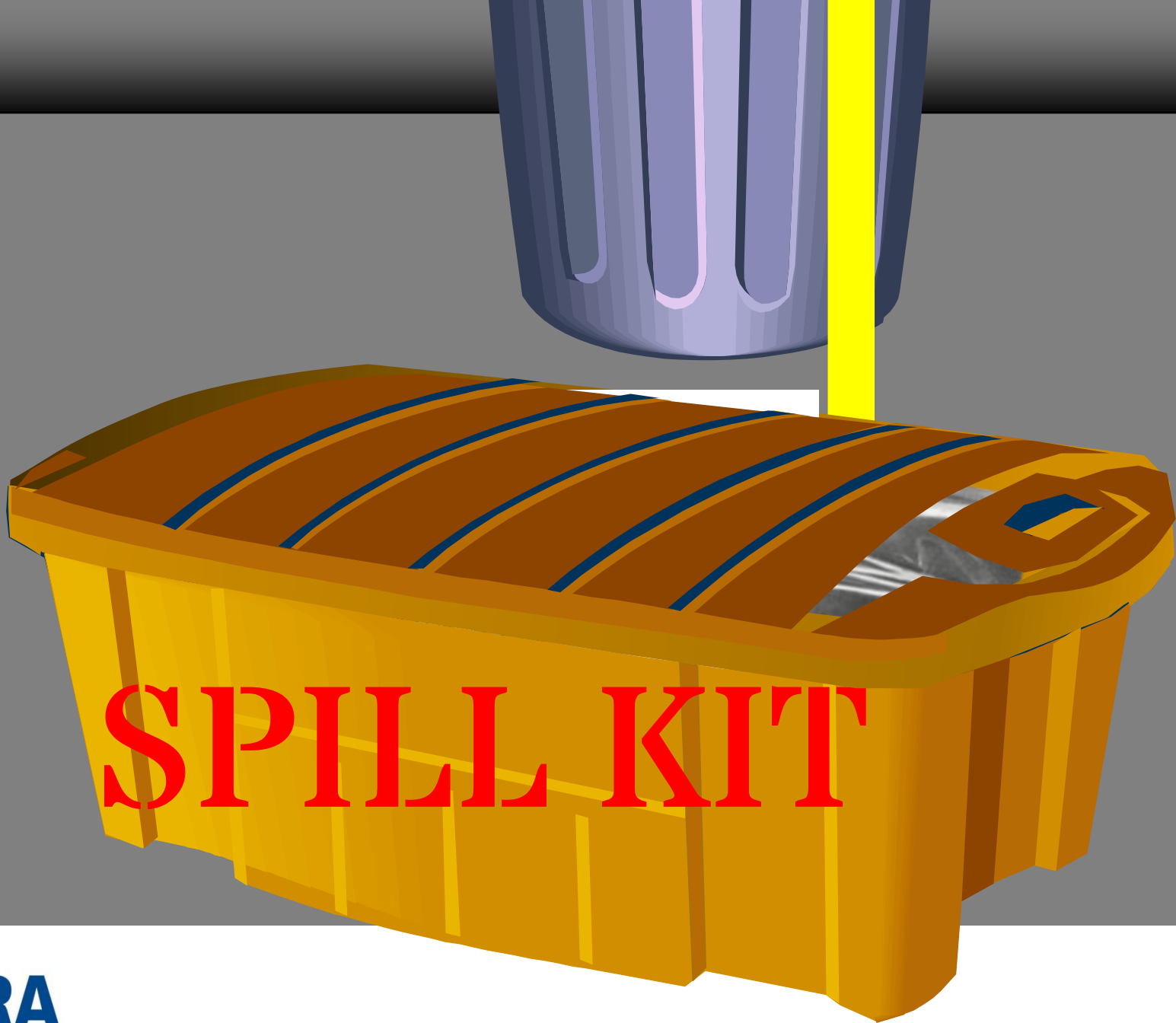


Three coiled hoses are shown against a white background. The top hose is yellow, the middle one is grey, and the bottom one is brown. They are all coiled in a similar spiral pattern. The text 'SOLID SURFACES' is overlaid in large yellow letters.

SOLID SURFACES



ON WATER



SPILL KIT



Rainbow Springs
Photo by Vic Ramey
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Recordkeeping

Manifests and Other Documentation

- Complete and retain copies for 3 years
Recommend keeping forever
- Keep records on site - NOT at main office



HW Manifests



- **KNOW WHAT YOU ARE SIGNING!!!**
- **Legal document!**
- **Attach copy of manifest returned from final destination to shipping copy.**

Please print or type. (Form designed for use on 8 1/2 x 11 (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
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:					
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.
1.					
2.					
3.					
4.					
13. Waste Codes					
14. Special Handling Instructions and Additional Information					
15. GENERATOR'S/OFFEROR'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: 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					
Manifest Reference Number: U.S. EPA ID Number					
18b. Alternate Facility (or Generator)					
Facility's Phone:					
18c. Signature of Alternate Facility (or Generator)					
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)

Portion to be completed by Generator

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

GENERATOR	UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number		2. Page 1 of	3. Emergency Response Phone		4. Manifest Tracking Number			
	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:										
	9a. HM	9b. 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.										

Individual Components of Generator Portion

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
	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:				

Individual Components of Generator Portion

9a. HM	9b. 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								

Individual Components of Generator Portion

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
	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		

15. GENERATOR'S/OFFEROR'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	1.	NO.	Type	Quantity	MATERIAL	HAZARDOUS	UNHAZARDOUS	OTHER
	2.							

I hereby declare that ...

Portion to be completed by Transporter

TRANSPORTER	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

Portion to be completed by Designated Facility

DESIGNATED FACILITY	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										
	Manifest Reference Number:										
	18b. Alternate Facility (or Generator)					U.S. EPA ID Number					
	Facility's Phone:										
	18c. Signature of Alternate Facility (or Generator)								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.

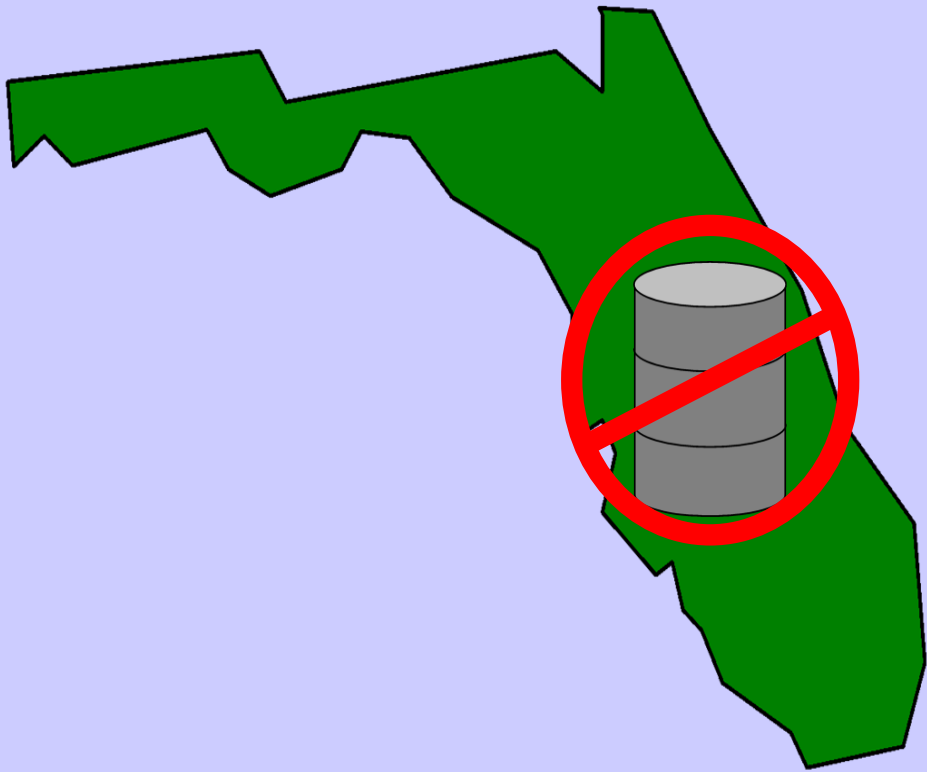
DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HW Manifests

- File exception report if final destination copy of manifest is not received within 45 days (LQG) or 60 days (SQG)
- Follow up!



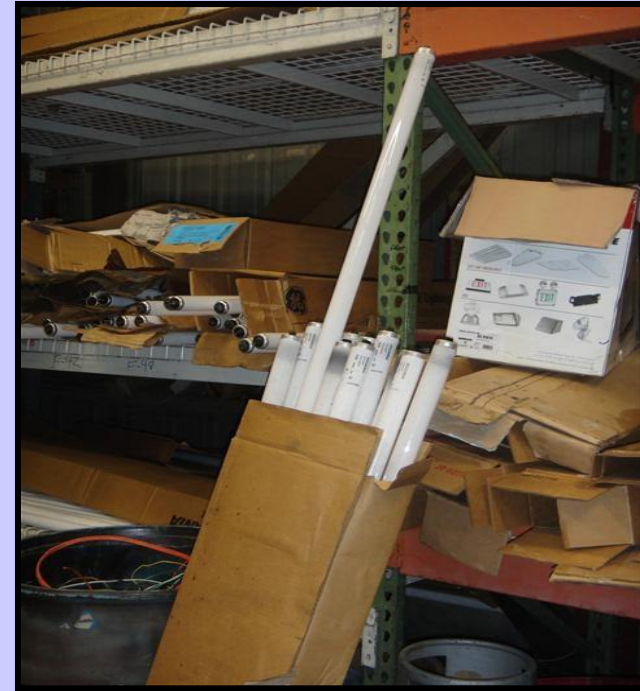
Land Disposal Restriction



- Required for first shipment of hazardous waste off-site
- Retain copies for 3 years
- All hazardous waste is **PROHIBITED** from land disposal in Florida

Other Documentation

- **Universal waste**
 - Mercury devices
 - Batteries
 - Pharmaceuticals
- **Used oil / used oil filters**
- **Other wastes**
 - Absorbents
 - Industrial wastewater



Universal Waste

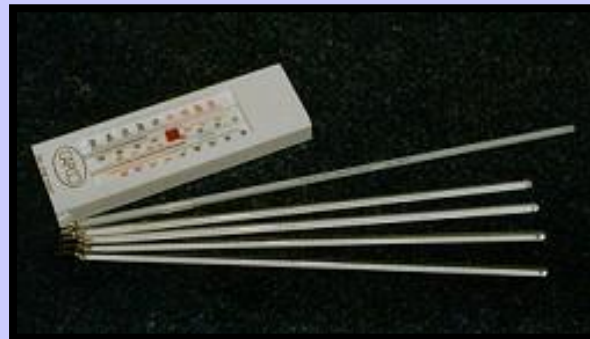
What Is 'Universal Waste'?

[40 CFR Part 273 (62-767 F.A.C.)]

- **Normally hazardous waste**
- **Found in wide variety of industries**
- **Reclaim/recycle to avoid hazardous waste requirements**

Types of Universal Waste

Fluorescent Lamps



www.metra.org

Advantages

- Reduces complexities:
Management, Accumulation, Tracking
- Alternative set of standards
- Regulatory flexibility vs. Haz Waste Rules
- Amounts are cumulative, not monthly

SMALL QUANTITY HANDLER:
 ≤ 5000 kg/mo; accumulate 1 yr

LARGE QUANTITY HANDLER:
> 5000 kg/mo; accumulate 6 mos.

Universal Waste

- **Small Quantity Handler:**
 - ≤ 5000 kg (11,000 lbs) /month
 - accumulate up to *1 year*
- **Large Quantity Handler:**
 - > 5000 kg/month
 - accumulate up to 6 months

Small Quantity Handler

- Not required to notify DEP
- Must label containers with correct wording:
 - “Universal Waste Batteries” (40 CFR 273)*
 - “Used Mercury Lamps” (62-737, FAC)*
 - “Used Mercury Devices”*
- Accumulation start date or means of tracking
- No hazardous waste manifest for shipping
- No recordkeeping requirements – But....

Universal Waste Lamps



- Fluorescent Lamps
- Sodium and Mercury Vapor Lamps
- Neon Lamps
- HID Lamps

Lamp Storage Requirements

- Proper Size Container
- Label
- Closed
- Separate Different Lamp Types
- Keep Boxes Dry
- Bag Broken Lamps
- Time limit





Universal Waste Batteries



Includes:

- Lead-acid
 - Rechargeable
Ni-Cd, Li & other
-



Non-rechargeable
Alkaline are not
regulated!



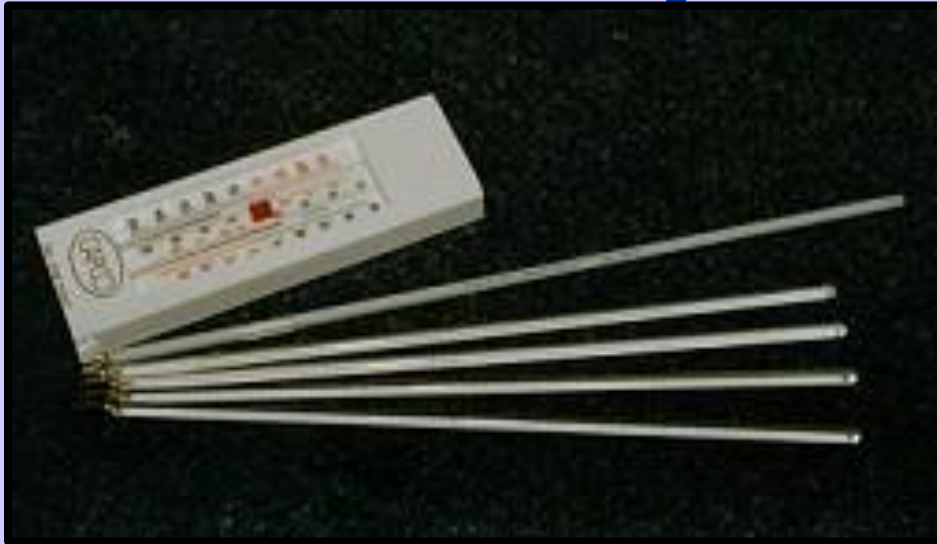
Universal Waste Batteries

- Label as “*Universal Waste Batteries*”
- One year time limit
- Keep batteries out of the rain



Universal Waste

Other Mercury Containing Devices



Thermometers



Mercury Switches



Thermostats

Used Oil

Used Oil Rule

Rule Provisions

- Labeling
- Storage requirements
- Used oil filters
- Best Management Practices



Used Oil Discussion



Used Oil – Labeling

Helps prevent cross-contamination



Used Oil - Recycling



**Can Used Oil be
Hazardous
Waste?**

Yes, if –

- **not recycled**
- **Contaminated with solvents**

Storage Requirements- single walled containers



Secondary containment capable of holding 110% of largest container - have to “calculate” capacity

Used Oil- BMPs



- Keep containers closed
- Cleanup spills immediately
- Have spill kit handy
- Use registered used oil transporter
- Retain records for 3 years - recommend forever
- Provide transporter with your EPA ID Number

Used Oil + Water



- Used oil mixed with water costs more to dispose
- Why?
 - Does not have the fuel value (BTUs).
 - Oil + Water = \$\$\$.

Used Oil Filters



- Drain for 24 hrs
- Label “Used Oil Filters”
- Use approved oil filter hauler - metal reclamation
- Retain receipts for at least 3 years

Aerosol Cans



Aerosol Can Do's

- Use entire contents of can
- Return cans that malfunction
- Use refillable cans when possible
- Consider phasing out aerosols



Aerosol Cans



- Do not use around used oil or spent antifreeze containers
- Do not use around non-hazardous solvents - you could make them **HAZARDOUS**
- Must be **COMPLETELY EMPTY** before placing in the trash or dumpster. Better yet: Recycle!

Aerosol Cans



Aerosol Cans must be completely EMPTY before putting in the trash or dumpster.



Rainbow Springs
Photo by Vic Ramey
Copyright 2002 Univ. Florida

Top 10 Most Common Non-compliance Issues at Hazardous Waste Generators



10. Biennial Report (LQG)

- **40 CFR 262.41**
 - Due by March 1 of each even numbered year
 - Covers generator activities from previous year
 - Form can be found on the FDEP website

http://www.dep.state.fl.us/waste/categories/hazardous/pages/brs_data.htm

9. Manifests

- **40 CFR 262.20**
 - **CESQG must document disposal 62-730.030(3) F.A.C.**
 - **Incorrect EPA ID No. used**
 - **Incorrect waste codes used**
 - **Untrained personnel signing (RCRA & DOT)**
 - **Receive final copy and retain for at least 3 years (forever)**

8. Position Descriptions (LQG)

- 40 CFR 265.16(d)
 - Missing training requirements
 - Missing RCRA responsibilities



7. Contingency Plan

- **40 CFR 265 Subpart D (LQG)**
 - Update emergency coordinator
 - Emergency response times
 - Emergency equipment listed
 - Update chemical inventory and locations
- **40 CFR 262.34(d)(5) (SQG)**
 - Post required information by telephone

Response to a Fire



One Spill Leads to Another



6. Training

- 40 CFR 265.16 (LQG)
 - Not annual
 - Not documented
 - “Right to Know” is NOT RCRA training
- 40 CFR 262.34(d)(5)(iii) (SQG)
 - Not conducted



5. Open Containers

- 40 CFR 265.173(a) (SQG & LQG)
- 40 CFR 261.5(g) (CESQG)
 - Open funnels
 - Unsecured bungs or rings

Open Cubic Yard Box



Open 55-Gallon Drum



Release of Used Lubricant



Failed Product Container



4. Weekly Inspections

- 40 CFR 265.174/ 62-730.160(5), F.A.C.
- Untrained inspector
- Not conducted/documentated
- Required information missing
 - Date, time
 - Printed name of inspector
 - Number and condition of containers
 - Observations
 - Repairs or remedial actions

Weekly Inspections

WEEKLY INSPECTION LOG

Inspector: _____ Date: _____ Time: _____

Clearly Print Name

Accumulation Area Inspected: _____ Number of Containers: _____

Are all containers in good condition?	Yes _____	No _____
Is there any evidence of leaks or spills?	Yes _____	No _____
Are all containers labeled "Hazardous Waste"?	Yes _____	No _____
Are all containers marked with an accumulation start date?	Yes _____	No _____
Are all containers closed?	Yes _____	No _____
Is there adequate aisle space between rows of drums?	Yes _____	No _____
Is spill control equipment available?	Yes _____	No _____

Observations: _____

(If containers in poor condition or leaks/spills were found, please note action taken in area below)

Repairs or Remedial Action

Date

3. Accumulation Start Date

- **40 CFR 262.34(a)(2)**
 - Not marked on container
 - Inappropriate satellite accumulation areas
- **Storing over 90 days or 180 days**
 - 40 CFR 262.34(b) (LQG)**
 - 40 CFR 262.34(f) (SQG)**
- **Changing date**

No Accumulation Start Date

HAZARDOUS WASTE

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY
AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY.

ACCUMULATION START DATE _____ E.P.A. WASTE NO. _____

U.S. DOT PROPER SHIPPING NAME: RQ Hazardous Waste Solid, n.o.s., 9, PG III, (Chromium/Metal Hydroxides) ERG171

AND: UN0077 11a. PREF3122

U.S. OR R.A. NO. _____

GENERATOR NAME: [REDACTED]

ADDRESS: [REDACTED]

CITY: [REDACTED]

E.P.A. U.S. NO. _____

**HAZARDOUS WASTE
HANDLE WITH CARE**

Published by J. A. KELLER & ASSOCIATES, INC., Norwalk, CT • USA • (800) 547-6881

No Accumulation Start Date



Accumulation Start Date Unreadable

HAZARDOUS WASTE

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY
AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY.

ACCUMULATION START DATE 7-13

D.O.T. PROPER SHIPPING NAME HAZARDOUS WASTE

AND U.N. OR H.A. NO. 9000

GENERATOR NAME [REDACTED]

ADDRESS [REDACTED]

CITY [REDACTED]

E.P.A. ID. NO. FLD08733243 STATE FL

HAZARDOUS WASTE
HANDLE WITH CARE

Published by J. J. LER & ASSOCIATES, INC., Norwalk, CT - USA - (800) 327-2868

2. Labeling Containers

- 40 CFR 262.34(a)(3) (SQG & LQG)
- HW containers not labeled
- Used oil and used oil filter labeling
- All containers should be labeled
 - Products
 - Working containers
 - Etc.



Unlabeled Drums



Unlabeled Mercury Bulb Crusher



Universal Waste Management



Labeled Correctly?



1. Waste Determination

- 40 CFR 262.11 (CESQG, SQG, & LQG)
- Know all your waste streams
- Generator knowledge
- Analytical testing
 - Process changes, e.g., new ingredient
 - Need additional testing

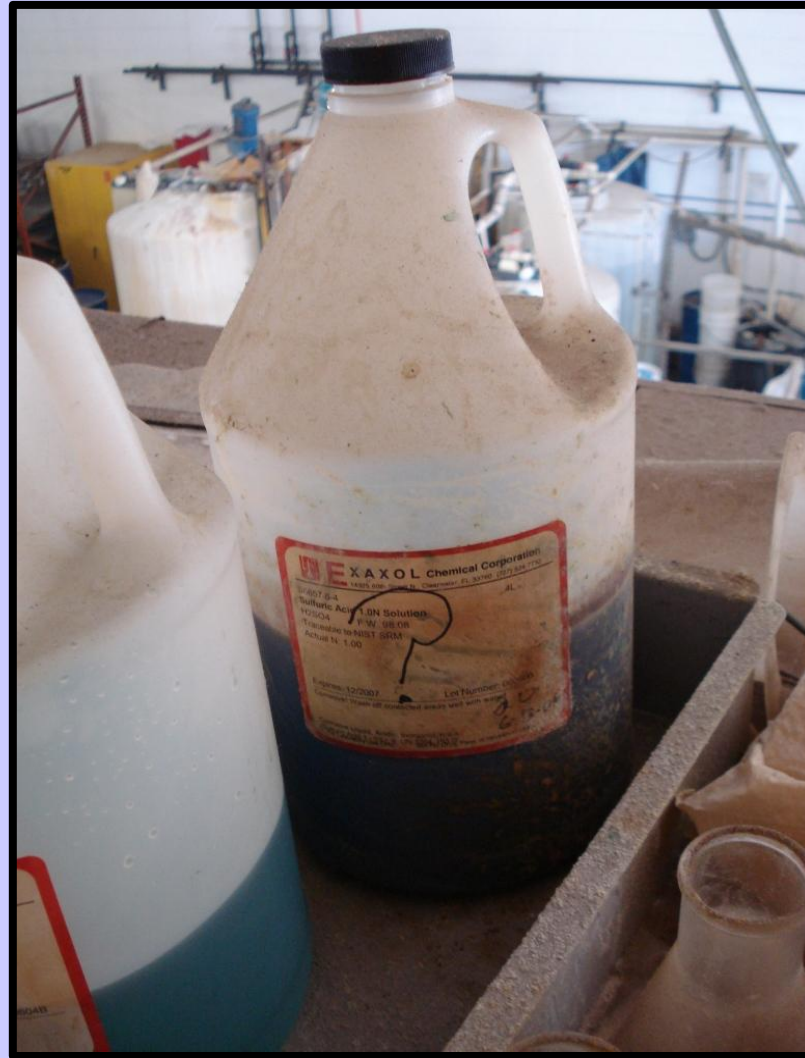
Mystery Drums



Mystery Drums



Unknown liquid



Case Studies

Get 'Em Cleaner Commercial Dry Cleaners



Get 'Em Cleaner Commercial Cleaners



Get 'Em Cleaner Commercial Cleaners



Get 'Em Cleaner Commercial Cleaners



Prints R Us



Prints R Us



Prints R Us



Prints R Us



Prints R Us



Prints R Us



Joe's Body Shop





Unknown release



Joe's Body Shop



Joe's Body Shop



Joe's Body Shop



Joe's Body Shop



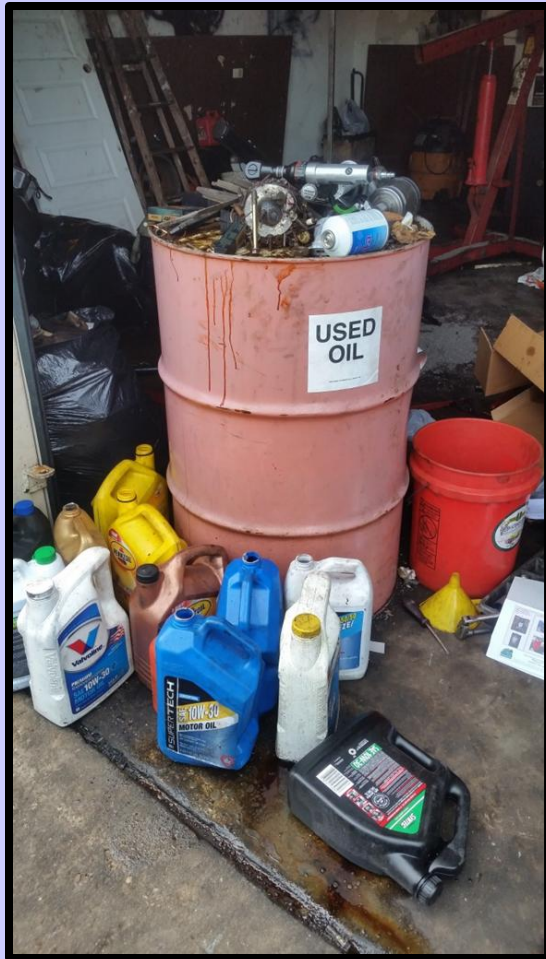
Joe's Body Shop



Joe's Body Shop



You Bring it, We Store it Self Storage



You Bring it, We Store it Self Storage



You Bring it, We Store it Self Storage

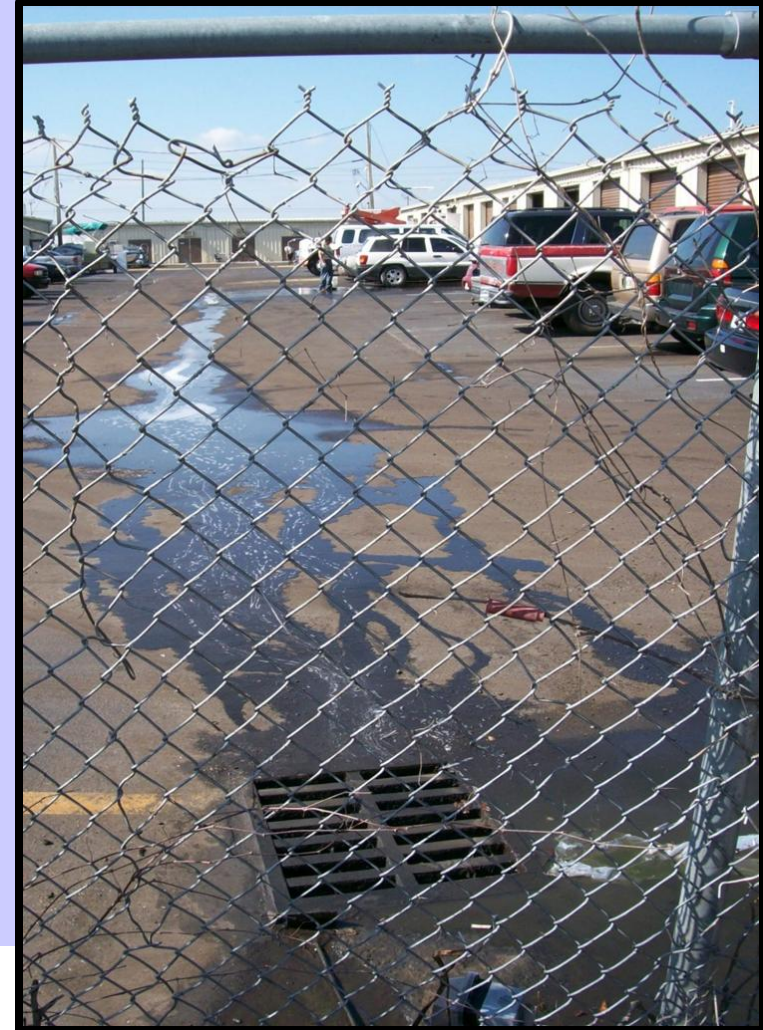


You Bring it, We Store it Self Storage



2011/01/20

You Bring it, We Store it Self Storage



THE END