

RCRA INSPECTIONS



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EPA REGION 7 – IOWA*



AGENDA

- **What to Expect During a RCRA Inspection?**
 - What is RCRA
 - Generator Size and its Relation to Regulations
 - HW Regulations / Universal Waste / Used Oil
 - Hazardous Waste Determinations
 - Inspection Process
 - How to Prepare for an Inspection
 - Top Ten Inspection Violations [NOPF]
- **What is Small Quantity Generator Re-Notification?**
 - **WHAT? WHO? WHEN?**

What is RCRA?

- **Resource Conservation and Recovery Act (RCRA)**
 - Authority to control **hazardous waste** from the "cradle-to-grave."
 - This includes the:
 - ✓ generation,
 - ✓ transportation,
 - ✓ treatment,
 - ✓ storage and disposal of hazardous waste.
 - To achieve this, EPA develops regulations, guidance and policies that ensure the safe management and cleanup of solid and hazardous waste, and programs that encourage source reduction and beneficial reuse.

Generator Size and its Relation to Regulations

Requirement	Very Small Quantity Generators (VSQG) (CE)	Small Quantity Generators (SQG)	Large Quantity Generators (LQG)
<p>Quantity Limits The amount of hazardous waste generated per month determines <u>how a generator is categorized</u> and what regulations must be complied with.</p>	<p>≤100 kg/month, and ≤1 kg/month of acute hazardous waste</p> <p>≤220 lbs/month</p>	<p>>100 and <1,000 kg/month</p> <p>220 lbs - 2200 lbs</p>	<p>≥1,000 kg/month, or >1 kg/month</p> <p>≥2200 lbs/month</p>

Generator Size and its Relation to Regulations

Requirement	Very Small Quantity Generators (VSQG) (CE)	Small Quantity Generators (SQG)	Large Quantity Generators (LQG)
<u>Accumulation Requirements</u> Manage hazardous waste in compliance with certain technical standards.	None Maximum of 1000 kg onsite	Basic requirements with technical standards for containers, tanks, drip pads or containment buildings. Maximum of 6000 kg	Full compliance for management of containers, tanks, drip pads or containment buildings
<u>Accumulation Time Limits</u> Determine amount of time hazardous waste is allowed to accumulate on site.	None	≤180 days or ≤270 days (if transporting greater than 200 miles)	≤90 days

Generator Size and its Relation to Regulations

Requirement	Very Small Quantity Generators (VSQG) (CE)	Small Quantity Generators (SQG)	Large Quantity Generators (LQG)
<u>Personnel Training</u> Ensure appropriate personnel classroom or on-the-job training to be familiar with proper hazardous waste management and emergency procedures.	Not required Required for Universal Waste	Basic training required	Required Job Descriptions, documentation, certificates
<u>Contingency Plan and Emergency Procedures</u> Develop procedures to follow during an unplanned major event.	Not required	Basic planning required FD	Full plan required Part 262 subpart M Quick Reference Guide (QRG)- FD/Police/EMS/Hospital
<u>Preparedness and Prevention</u> Develop procedures to follow in the event of an emergency.	Not required	Required	Required - more extensive

Generator Size and its Relation to Regulations

Requirement	Very Small Quantity Generators (VSQG) (CE)	Small Quantity Generators (SQG)	Large Quantity Generators (LQG)
<u>Manifest</u> Tracking hazardous waste shipments using the <u>multiple-copy manifest</u> - required by the Department of Transportation (DOT) and EPA	Not required	Required Part 262 subpart	Required Part 262 subpart B
<u>Biennial Report</u> Report data from off-site shipments of waste during the previous calendar year	Not required	Required (4 Years) Re-Notify	Required
<u>Recordkeeping</u> Maintain records of waste testing, <u>manifests</u> , <u>biennial reports</u> and exception reports	Not required	Required (except biennial reports)	Required

Universal Waste

- EPA's universal waste regulations streamline the hazardous waste management standards for certain categories of hazardous waste that are commonly generated by a wide variety of establishments.
- The streamlined regulations – **waste is not included in typical monthly HW generator amounts**
- Promote the collection and recycling of universal waste
- **Includes VSQG!!!!**
 - Batteries (not lead-acid)
 - Pesticides
 - Mercury-Containing Equipment
 - Lamps
 - Aerosol Cans
- **Labeled as "Universal Waste", maximum one year onsite (dated), closed box**

Used Oil / Lead-Acid Batteries

- **Lead-Acid Batteries** – promotes recycling
 - Part 266 Sub Part G
 - Weigh not included in the generator size calculation
- **Used Oil and Filters**
 - Not included in generator size calculation
 - Label “Used Oil”
 - Container regulations, even for VSQG
 - Puncture and hot drain oil filters – oil filters -> scrap metal
- **Includes VSQG!!!!**

Hazardous Waste Determinations

- Hazardous waste determinations can be complicated and must be done for every waste stream generated at a facility. At the **point of generation**
- Options:
 - **Product Knowledge**
 - SDS (safety data sheets)
 - MSDS
 - Product contents label
 - **Process Knowledge**
 - Process flow diagrams
 - **Analytical Testing**
 - TCLP Test
 - **Toxicity Characteristic Leaching Procedure** is a chemical analysis process used to determine whether there are hazardous elements present in a waste. The test involves a simulation of leaching through a landfill

Characteristic Hazardous Wastes

- **Ignitable** (D001) $FP \leq 140$ deg F
- **Corrosive** (D002) $pH \leq 2$ or ≥ 12.5
- **Reactive** (D003)
- **Toxic** (D004 – D043)



RCRA TCLP Metals – Allowable Limits

Arsenic	5.0 ppm (mg/L)
Barium	100.0 ppm (mg/L)
Cadmium	1.0 ppm (mg/L)
Chromium	5.0 ppm (mg/L)
Lead	5.0 ppm (mg/L)
Mercury	0.2 ppm (mg/L)
Selenium	1.0 ppm (mg/L)
Silver	5.0 ppm (mg/L)

TCLP

EPA Hazardous Waste Number	Contaminant	Regulatory Level (mg/L)
D004	Arsenic	5.0
D005	Barium	100.0
D018	Benzene	0.5
D006	Cadmium	1.0
D019	Carbon tetrachloride	0.5
D020	Chlordane	0.03
D021	Chlorobenzene	100.0
D022	Chloroform	6.0
D007	Chromium	5.0
D023	Cresol, o-	200.0
D024	Cresol, m-	200.0
D025	Cresol, p-	200.0
D026	Cresol	200.0
D016	2,4-D	10.0
D027	Dichlorobenzene, 1,4-	7.5
D028	Dichloroethane, 1,2-	0.5
D029	Dichloroethylene, 1,1-	0.7
D030	Dinitrotoluene, 2,4-	0.13
D012	Endrin	0.02
D031	Heptachlor (and its epoxide)	0.008

EPA Hazardous Waste Number	Contaminant	Regulatory Level (mg/L)
D032	Hexachlorobenzene	0.13
D033	Hexachlorobutadiene	0.5
D034	Hexachloroethane	3.0
D008	Lead	5.0
D013	Lindane	0.4
D009	Mercury	0.2
D014	Methoxychlor	10.0
D035	Methyl ethyl ketone	200.0
D036	Nitrobenzene	2.0
D037	Pentachlorophenol	100.0
D038	Pyridine	5.0
D010	Selenium	1.0
D011	Silver	5.0
D039	Tetrachloroethylene	0.7
D015	Toxaphene	0.5
D040	Trichloroethylene	0.5
D041	2,4,5-Trichlorophenol	400.0
D042	2,4,6-Trichlorophenol	2.0
D017	2,4,5-TP (Silvex)	1.0
D043	Vinyl chloride	0.2

Listed Hazardous Wastes

- Hazardous wastes from non-specific and specific sources
 - “F” listed hazardous wastes (solvents)
 - “K” listed hazardous wastes
 - Sources may include wood treatment, inorganic pigments, organic chemicals, explosives, petroleum refining, iron and steel, primary aluminum, secondary steel, vet pharmaceuticals, ink formulation, or coking
- Discarded commercial chemical products, off-specification, container residues, and spill residues thereof (40 CFR 261.33)
 - “U” and “P” listed hazardous wastes (**Acutely Hazardous – max 1.0 Kg/Month**)
 - Can include residues, containers, container liners, rinsates, mixtures with other wastes, spill cleanup materials, contaminated soils, etc.

Waste Stream Table – Info Needed

1. Waste Stream Name
2. Generation Process
3. Waste Determination/ Waste Codes
4. Generation Rate (monthly)
5. Onsite Management
6. Off-site Management

Waste Stream Examples

- Used Oil and Oil Filters*
- Lead-Acid Batteries*
- Spent Fluorescent Lamps*
- Parts Washer Solvent (FP \leq 140 deg F)
- Waste Acid / Base NaOH – D002
- Waste Paint & Paint Related Materials (Thinner)
- Spent Tires*
- Wash Bay Pit Sludge*
- Cloth rags and paper wipes (wipes rule)*
- Anti-Freeze (<1995 lead)*
- General Trash*
- Cardboard for Recycling*
- Scrap Metal*
- Paint Booth Air Filters
- Spent Gasoline

* Generally, does not count towards monthly HW totals

Pre-Inspection Process

- **Report Generation & Review**
 - Site Verification Report / Form
 - E-Manifest Report (last 3 years)
 - Review waste streams
 - Estimated Amounts per month
 - Outlier months (episodic events?)
- **Records Center Index and Review**
 - Previous Inspections
 - Previous Findings
 - Response to Findings
- **Google Maps**
 - Aerial Views
 - Ground Views

RCRA Inspection Process

- The CEI was conducted under the authority of Section 3007(a) of RCRA, as amended.
- During the inspection, I collect the information and data necessary to determine compliance with the applicable regulatory and statutory requirements.
- **Discussion** - compliance evaluation inspection (CEI) consists of a discussion of
 - facility operations
 - waste generation
 - waste management
- **Visual Inspection**
 - active waste generation and management areas, SAA, CAA
- **Record Review**
 - Manifests
 - Invoices
 - Training

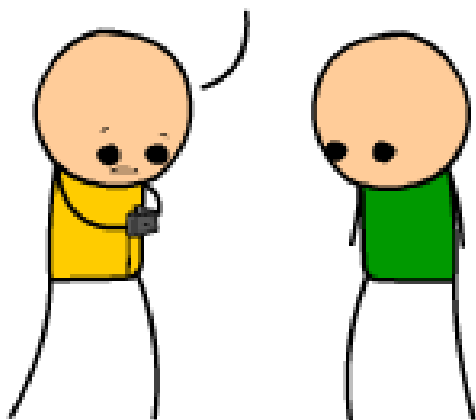
Top Ten RCRA Violations (Preliminary Finding)

1. Hazardous Waste Determinations
2. Container Labeling
3. Training
4. Contingency Plans
5. Open Containers
6. Satellite Accumulation (SAA) Requirements
7. Weekly Container Inspections (CAA)
8. Universal Waste Requirements
9. Used Oil
10. Recordkeeping

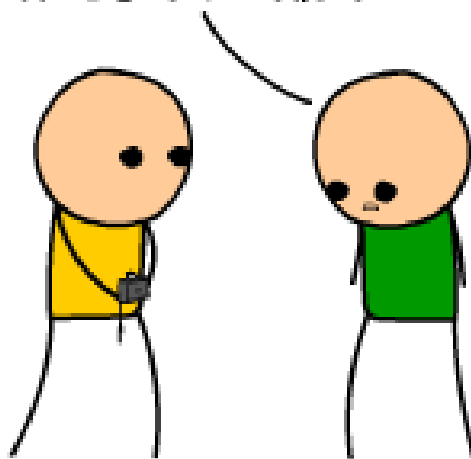
What is Small Quantity Generator Re-Notification?

- SQGs in Iowa are now required to re-notify every four years
- To remain in compliance with the re-notification requirement, you need to update your notification by completing and submitting the Notification of RCRA Subtitle C Activities (Site Identification Form), also known as **EPA Form 8700-12**
- The first re-notification is due by September 1, 2021

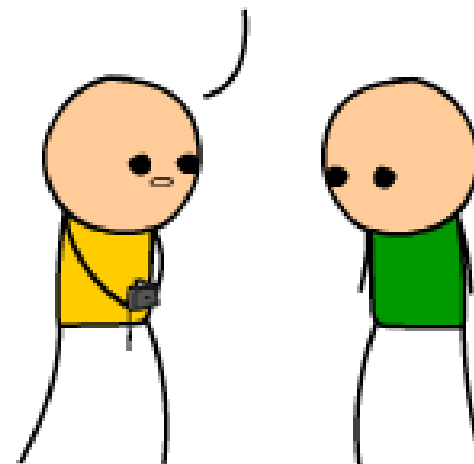
OH NUTS, I NEED NEW
BATTERIES FOR MY CAMERA.



WHAT DOES IT TAKE?



PICTURES.



Cyanide and Happiness © Explosm.net

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Auto Service Center
250-gal Used Oil
VSQG



08.30.2022 10:38

Auto Service Ctr
55-Gal Used Oil Drum
VSOQ



08.30.2022 10:41

Auto Service Ctr
250,000 BTU Used-Oil
Burner
VSOQ
Max 0.5M BTU



08.30.2022 10:40



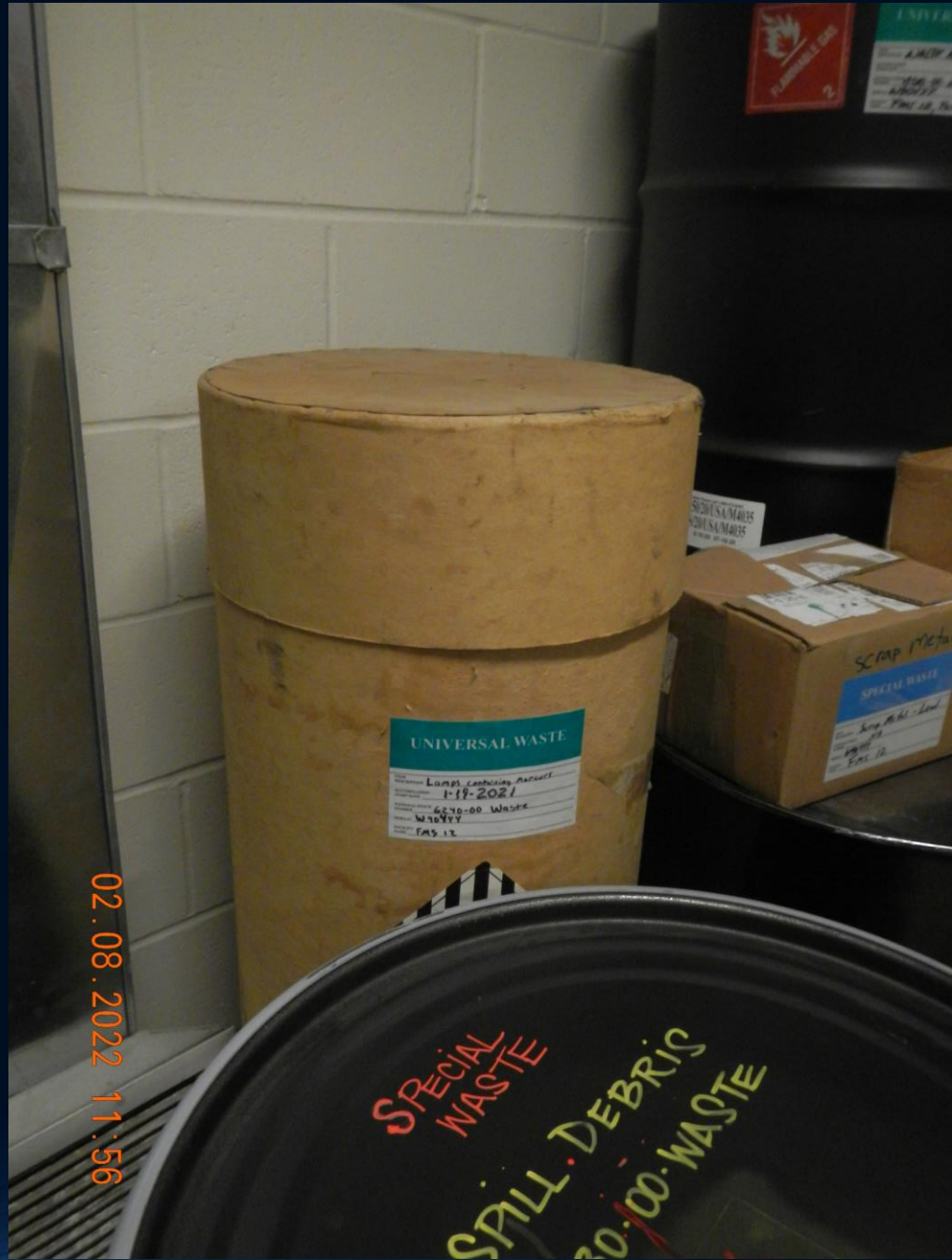
**UNIVERSAL
WASTE**

SHIPPER: Emerson
ADDRESS: 3rd South 1st Ave
CITY STATE: Seattle
CONTENTS: E. Ballast
ACCUMULATION START DATE: 7/15/21

Ballasts (No PCBs)

08.09.2022 13:52

US Army NG
UW-Lamps
SOG



02.08.2022 11:56

Poultry Processor
LOG/VSQG



Con Tecnología
Fluorescent Alto II
Análisis con el método analítico
en un proceso más rápido

USED
2-16-23

USED Bulbs
2-20-23

USED BULBS
ACCUMULATION START DATE :
1-30-23

USED
12-1-22
© 2021 Signify Holding
3235 832380

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North America Corporation
400 Crossing Blvd, Suite 600
Bridgewater, NJ 08807, USA
Questions or comments:
1-800-555-0050
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La Herradura Hixtquilcan
Pte. de México, C.P. 52784 - R.F.C.
Centro de Contacto 01-800-508-9000

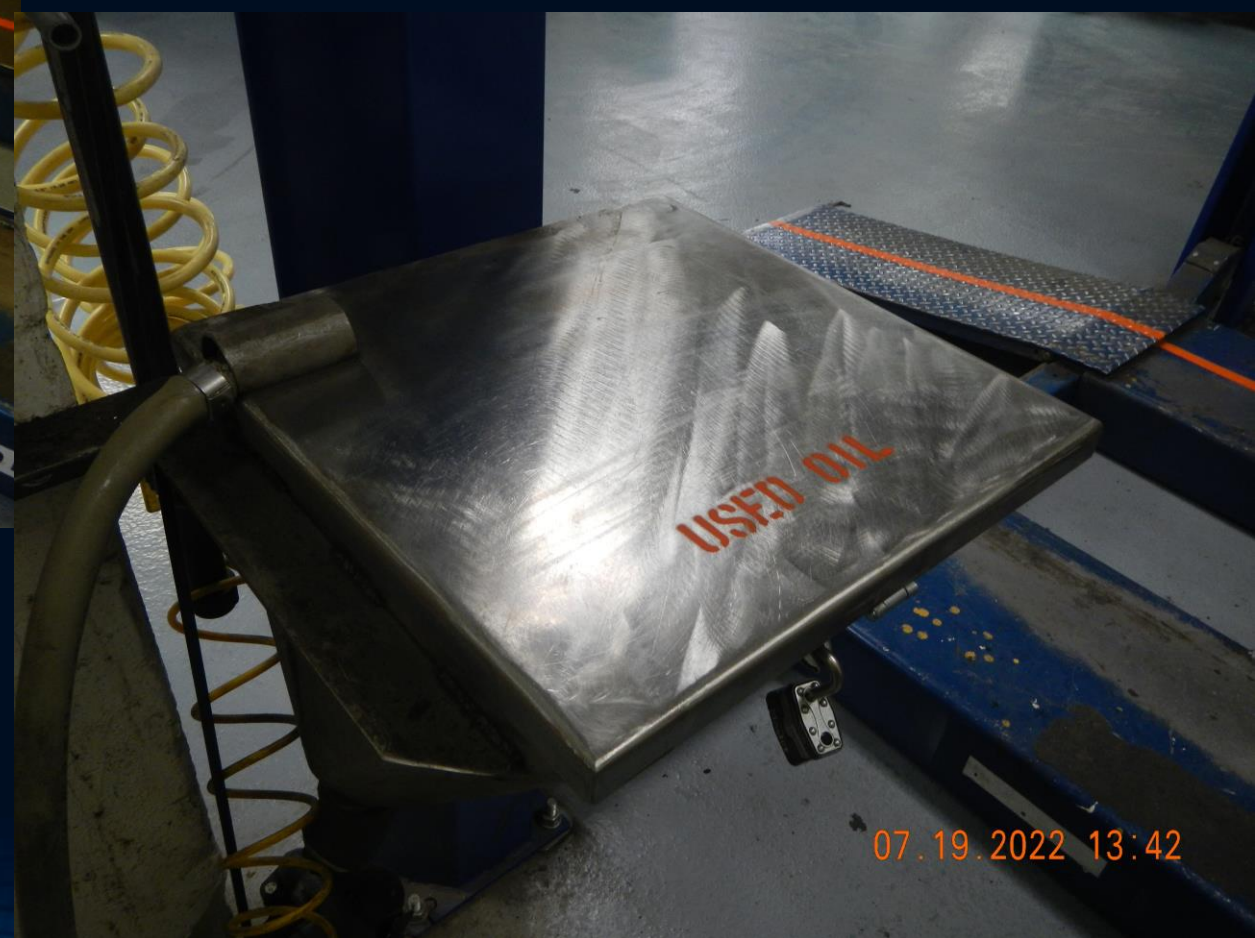
03.07.2023 12:46

Lab
TCE
Open Container
LQG





07.19.2022 13:38



07.19.2022 13:42

Pet Food
Used Oil
SQG

Al Anodizer
NaOH
Poly Drum
VSQG



03.08.2023 14:49

Al Anodizer
Used Oil
VSOQ



03.08.2023 14:56

Body Shop
UW-Lamps
VSQG



02.08.2023 11:28

Tire Mfg
Heptane SAA
LQG



03.29.2022 13:53

How to Prepare for an Inspection

- **Waste Stream List / Table – Know your generator size!!**
- **Hazardous Waste Determinations**
- **Container Labeling / Closed – (Best Management Practices)**
 1. *“Hazardous Waste”*
 2. **Nature of hazard: Flammable / Caustic / Toxic**
 3. **Accumulation start date**
- **Documentation**
 - **Staff Training**
 - **Manifests**
 - **SDS**
 - **Contingency Plan – FD**
 - **Inspections**



QUESTIONS?

