

LEPC Mont. Co. 2021 – Hazardous Waste



Introduction

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- *Hazardous Waste Overview*
- *EcoWise – Mont. Co. Program*
- *E-Manifest vs. Paper Manifests*



10.20.2021

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Hazardous Waste



- WHAT - Hazardous Waste Definition
- HOW - Handle at your site
- WHO – Types of generator - sizes



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Hazardous Waste?



Hazardous wastes are **wastes** with properties that make them dangerous or potentially harmful to human health or the environment. They could be solids, gases, liquids, or semi-liquids.



- The treatment, storage, and disposal of **hazardous waste** are regulated under the Resource Conservation and Recovery Act (RCRA) 1976.
- **Hazardous wastes** are divided into two major categories:
 - **Characteristic wastes**
 - **Listed wastes**

Source: <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>

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The TWO major categories:

• **Characteristic wastes:**

Wastes that exhibit one or more of the following

characteristic properties:

Ignitability, Corrosivity, Reactivity or Toxicity

- D codes (D001)



• **Listed wastes:**

Wastes from common manufacturing and industrial processes, specific industries and can be generated from discarded commercial products.

- F, K, P and U codes (F003)

EPA Listed Wastes

- **P Listed:** Acutely Hazardous Waste
- **U Listed:** Non-acutely hazardous waste
- **K Listed:** Waste from Specific Sources
- **F Listed:** Waste from Non-Specific Sources



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IGNITABILITY



- Liquids flashpoint $<140^{\circ}\text{F}$, or Solids that are ignitable
: Acetone, xylene, and acetonitrile and other solvents, naphthalene etc.
- Compressed flammable gases, such as propane
- Oxidizers such as sodium nitrate
- Ignitable materials are represented by a D001 waste code.



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CORROSIVITY



- Aqueous pH <2 or >12.5
- Liquid capable of corroding steel at a rate greater than 0.25 inches (6.35mm) per year
- Corrosive materials are represented by a D002 waste code
: nitric acid, aqueous sodium hydroxide, hydrochloric acid.



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REACTIVITY



- Normally unstable and readily undergoes violent change without detonating
- Reacts violently with water and forms potentially explosives mixtures with water
- It is capable of detonation or explosive reaction if subjected to strong initiating source
- Cyanide or Sulfide bearing waste exposed to pH conditions between 2 and 12.5, that can generate toxic gases, fumes capable of endangering human health and the environment.
- Reactive materials are represented by a D003 waste code : sodium metal, calcium carbide, cyanides etc.

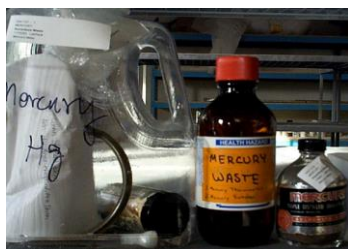


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TOXICITY



- Fails TCLP (Toxicity Characteristic Leaching Procedure) laboratory test
- Materials that are poisonous, harmful and potentially deadly : Lead acetate, mercuric chloride, benzene etc.
- The wastes are represented by codes from D004 – D043
- These codes are specific to material types, for instance, : Mercury has a D009 code, Benzene has D018



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Difference between Hazardous Materials and Hazardous Wastes.

What is a hazardous materials?

- Defined and governed by The Department of Transportation (DOT).
- Products, articles, or substances that are capable of posing a significant risk to health, safety or property when transported by air, rail, ground, or sea.
- Often are Products - Hazardous Wastes (HW) are a subset!!!
- All have a Proper Shipping Name.(PSN)
- For HW look for PSN on the SDS. If it has PSN ... 80-90% of the time it is a hazardous waste.



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Examples of Common Hazardous Wastes



- Gasoline usually a Hazardous waste, depends on disposal method
- Laboratory chemicals
- Solvent drums
- Aerosol cans, Hazardous Waste –Soon Universal
- Paint, Oil Hazardous Waste / Latex, NON Haz
- Lead paint, when in a drum, fail TCLP. Hazard Waste
- Soils contaminated with metals, cleaning solvents,
- Some pharmaceuticals
- PCBS IN MARYLAND except light ballasts.

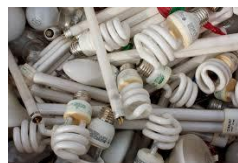


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"Special" Regulated but NOT Hazardous wastes



- Petroleum Oil usually NON Haz.
- Petroleum Soil, rags, debris.... NON Haz.
- Gasoline Soil usually NON Haz.
- Asbestos..... NOT a hazardous waste, a DOT Hazardous material, when Friable.
- Fluorescent Light Tubes, Ballasts (PCBs) and batteries can be Universal Wastes
- Medical Wastes
- Pharmaceuticals
- Concrete Washout – less than 12.5 pH



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Requirements for Hazardous waste management



- Have an **EPA ID number**
- Transportation company that has Hazardous waste Permits (Placard properly)
- Wastes to go to a TDSF (Treatment Disposal Storage Facility)
- Label properly
- Training of personnel to handle the hazardous waste
- Have contingency plans/measures in place
 - Emergency Response Plan
- Weekly inspections
- Biennial reports

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Packaging, Labeling and Pick-up date



DOT-(Department of Transportation) and EPA hazardous wastes requirements



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Hazardous Waste Generators (40CFR, pt2.62)



- A generator is any person who produces a hazardous waste as listed or characterized in 40 CFR pt. 261
- Generators produce waste in different quantities, hence EPA established three categories of generators in the regulations, based on volumes of hazardous waste generated in a calendar month :

- Very small quantity generators (VSQGs)
- Small quantity generators (SQGs)
- Large quantity generators (LQGs)



Generator Status

The amount and type of hazardous waste generated in a given calendar month will determine your "generator status".

Large Quantity Generators (LQGs)

Small Quantity Generators (SQG)

Conditionally Exempt Small Quantity Generators (CESQGs)



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HOWEVER

...MARYLAND HAS TWO (2) GENERATORS SIZES

MD – (not counting acute)

- MD Fully Regulated (similar large quantity generator -LQG) if you have greater than approx. 220 lbs/30 gallons (100 kg).
- MD Small Quantity Generator (similar to Federal VSQG (past CESQG)) – less than above

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MARYLAND DEPARTMENT OF THE ENVIRONMENT
Hazardous Waste Program



Hazardous Waste Generator Status Comparison Chart

(This information is for purposes of comparison only. Maryland generators are required to comply with Maryland regulations)

	Maryland Regulations		Federal Regulations		
Generator Status	Small Quantity Generator (SQG) COMAR 26.13.02.05	Generator (Fully Regulated)	Conditionally Exempt Small Quantity Generator (CESQG)	Small Quantity Generator (SQG)	Large Quantity Generator (LQG)
Amount per Calendar Month	Less than 220 lbs of hazardous waste and 2.2 lbs* or less of acute** hazardous waste.	220 lbs or more hazardous waste or more than 2.2 lbs of acute hazardous waste.	220 lbs or less of hazardous waste and 2.2 lbs or less of acute hazardous waste.	More than 220 lbs, but less than 2,200 lbs of hazardous waste or less than 2.2 lbs of acute hazardous waste.	More than 2,200 lbs of hazardous waste or more than 2.2 lbs of acute hazardous waste.
Amount of hazardous waste permitted to be accumulated on-site at one time	No more than 220 lbs of hazardous waste and 2.2 lbs of acute hazardous waste.	No Limit	2,200 lbs of hazardous waste and 2.2 lbs of acute hazardous waste.	13,200 lbs (and generates between 220 and 2,200 lbs each month)	No Limit
Maximum length of time hazardous waste can be stored without a permit.	No Limit	90-180 Days	No Limit	90 days (180 or 270 Days under certain circumstances. See 40CFR 262.34(d) and (e))	90 Days
Biennial reporting requirements	Requested	Required	Not Required	Not Required	Required

*2.2 lbs = 1 kg, 220 lbs = 100 kg; 2,200 lbs = 1,000 kg.

**Acute Hazardous Waste includes the following:

*Any waste identified by a hazardous waste number (EPA hazardous waste code) beginning with the letter "P" (COMAR 26.13.02.19E).

*Any waste that contains polychlorinated biphenyls (PCB) at a concentration above 500 parts per million (ppm).

*Any of the following hazardous wastes from non-specific sources: F020, F021, F022, F023, F026, and F027 (COMAR 26.13.02.16); and

*Any of the following hazardous wastes from specific sources: K991, K992, K993, K994, K995, K996, K997, K998 and K999 (COMAR 26.13.02.17)

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Maryland RCRA Hazardous Waste Generators



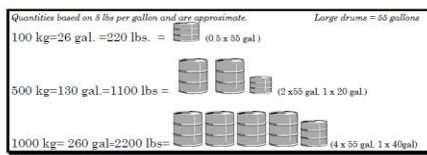
GENERATOR SIZE:

0 - <100kg hazardous waste	(100 kg = 26gal = 220 lbs.)	MD: Small Quantity
AND	< 1kg acutely hazardous waste	FED: Cond. Exempt Sm. Qty.
100-1000kg hazardous waste	(1000kg = 260gal = 2200 lbs.)	MD: Large Quantity
AND	< 1kg acutely hazardous waste	FED: Small Quantity
>1000kg hazardous waste		MD: Large Quantity
OR	>1kg acutely hazardous waste	FED: Large Quantity

**Note: MD doesn't distinguish between the two sizes

ACCUMULATION TIME: (If the amount accumulated is...)

0 - <100kg hazardous waste	(100 kg = 26gal = 220 lbs.)	Once exceed 100 kg then time limits begin
AND	< 1kg acutely hazardous waste	
100-500kg hazardous waste	(500kg = 130gal = 1100 lbs.)	180 days
AND	< 1kg acutely hazardous waste	
= >500kg hazardous waste		90 days
OR	= >1kg acutely hazardous waste	



...MARYLAND HAS TWO (2) GENERATORS SIZES

Determines the list of things you need to do because you are a Generator i.e. EPA ID number, haz. waste manifests, biennial report, training...

AND how long you can accumulate material before shipping.

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Generator Improvement Rules

New regulations for Hazardous Waste passed in Maryland, May 3, 2021

Selected highlights

- Explain relationship between MD generator categories and Federal
- Periodic renotification for generators
- Must indicate the hazard on labeling/markings on containers (previously just Hazardous Waste)
- Relaxation of 50 ft setback for ignitable wastes for for some generators
- Episodic events – can be over generator size quantities without being reclassified, under special circumstances. i.e. clean outs, spills.



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ECOWISE

- The Montgomery County ECOWISE program provides businesses and institutions the opportunity to dispose of **small quantities** of hazardous wastes in an environmentally responsible manner at a fraction of the cost of direct contracting with a hazardous waste management firm.
- Publicity promoting participants as environmentally concerned members of the community.



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ECOWISE

- Series of collection events.
- No acute waste, radioactive, explosives or medical waste.
- Up to 100 kg (approx. 220 lbs) SQG only.
- Must for drop off

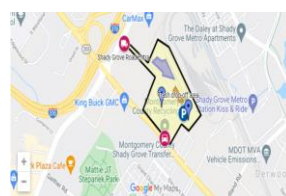


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ECOWISE

- Location: Mont. County Solid Waste Transfer Station (Derwood, MD)
- Must pre-register, may need appt. OR collections are held each [Wednesday from 1:00 p.m. to 5:00 p.m.](#) (check this info, may have changed)
- There is a cost. (approx. 1/4 of cost for a hazardous waste firm to properly dispose). Pay by the pound including container.



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And how this fits in...

In Montgomery Co. If a company uses, stores treats or transfers 50 pounds (5 gallons) or more of a hazardous materials, including wastes... they must...

1. Register with Mont Co. Dept of Fire and Rescue Services, Local Emergency Planning Council
2. Obtain a Hazardous Materials Use Permit.
3. More info is needed if over 2,000 lbs (220 gal)
4. Renewed annually, and a fee.

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ECOWISE

- Great resource MD Hazardous Waste Rules, Ecowise, and resources for Montgomery County.
- <https://www.montgomerycountymd.gov/sws/ecowise/>

Montgomery County Division of Solid Waste Services
ECOWISE Program 16101 Frederick Rd. Derwood, MD 20855
301-840-2370
www.mcrcycles.org, click on Trash then ECOWISE

HAZARDOUS WASTE MANAGEMENT IN MONTGOMERY COUNTY

A GUIDE FOR BUSINESSES GENERATING SMALL QUANTITIES OF HAZARDOUS WASTE



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E-Manifest vs. Paper

EPA established a national system for tracking hazardous waste shipments electronically. This system, known as “e-Manifest,” will modernize the nation's cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states. EPA launched e-Manifest on June 30, 2018. Initial proposal 2001.

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PAPER

6 page, carbonless,

Copy for 1. generator, 2. transporter, 3. TSDF, 4. TSDF signed copy back to generator

AND 5. TSDF to generator state if required
AND 6. TSDF to destination state if required

Generator signs →

Transporter signs →

Treatment facility signs →

The form is a 'UNIFORM HAZARDOUS WASTE MANIFEST' with a header section containing identification numbers and a table for waste description. The table has columns for waste code, quantity, and other details. The form is signed by the generator, transporter, and treatment facility.

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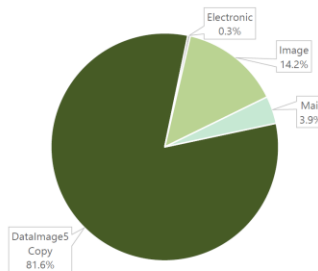
E-MANIFEST

Percentage of e-manifest usage as of September 2021

From EPA e-Manifest Monthly Webinars, Sept. 29, 2021

All Time Submission Summary

- Submitted manifests: 5.8 M
- Submission breakdown:
 - Data + Image: 4,750,868
 - Image Only: 824,372
 - Mail: 227,120
 - Electronic: 20,135



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Fees for manifests beginning Oct. 1, 2021

From EPA e-Manifest Monthly Webinars, Sept. 29, 2021



FY 2022/2023 User Fees Start Oct 1

e-Manifest

Type	Fee
Image Upload	\$20
Data + Image Upload	\$13
Electronic	\$8

- **Beginning October 1, 2021:** Any manifest that originates (signed by the generator) will be charged the fiscal years 2022 and 2023 user fee rate when submitted to the e-Manifest system by the receiving facility.
- Receiving facilities will see their first invoices reflecting the new rates starting in November 2021.

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E-MANIFEST



Generators, Transporters, Brokers, Receiving Facilities all must register!

<https://rcrainfo.epa.gov>

RCRAInfo

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The system enables cradle-to-grave waste tracking of many types of information regarding the regulated universe of RCRA hazardous waste handlers. RCRAInfo characterizes facility status, regulated activities, and compliance histories in addition to capturing detailed data on the generation of hazardous waste from large quantity generators and on waste management practices from treatment, storage, and disposal facilities.

RCRAInfo Sign In

Sarahhenderson1

Sign in

Register Forgot password?

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E-MANIFEST

- Site Manager
 - Recommended two Site Managers per site. One site manager can manage multiple sites. Site manager manages the users of the e-Manifest system for their organization.
- Preparers
 - Can prepare manifests
- Certifiers
 - Can electronically sign manifests
- Viewers
 - Can only view manifests

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“Waste disposal is no problem with us. We just put it in a fancy package and sell it as fertilizer!”