

# Waste Regulations 101

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# Waste Regulations 101



**Type II Municipal Waste Landfill**

## **Goal of Today's Discussion:**

**Provide an overview of the types of waste regulated by the state and federal regulations**

## Types of Waste Regulated by Statute:

- Hazardous Wastes
- Solid Wastes
- Waste Recycling and Reduction
- Liquid Industrial By-Products
- PCB Waste
- Medical Wastes
- Radioactive Waste

# Waste Regulations 101

## How do I start?

- Identify what wastes are generated at your facility
- Tour your entire facility and inventory all waste streams

# Waste Regulations 101

## What is a waste?

- A waste is any discarded material
- A waste can be a solid, liquid, semisolid, or gaseous material

# Waste Regulations 101

## What is a waste?

Material that can not be used for its original intended purposes, including materials that are:

- Burned as fuel
- Accumulated and recycled or reclaimed
- Discarded, abandoned or disposed

# Waste Regulations 101

**As a general rule of thumb...**

**...less hazardous waste = less regulation & more disposal options under the law**

*There is no one best answer for how to dispose of waste for all businesses & locations*

# Waste Regulations 101

## Hazardous Waste Regulations

- Regulated under Part 111 of Act 451
- Determined to be a threat to human health or the environment
- Apply to all businesses, including municipalities, hospitals, & service industries, not just manufacturing industries

# Waste Regulations 101

## Waste Characterization

Is the waste *listed* on lists in the hazardous waste rules?

Does the waste exhibit a *characteristic* that makes it hazardous?

- Ignitable
- Corrosive
- Toxic
- Reactive

# Waste Regulations 101

## Listed Hazardous Waste Codes

Listed In  
Part 111  
Hazardous  
Waste Rules



**R 299.9220 Table 203a; hazardous waste from nonspecific sources.**  
Rule 220. Table 203a reads as follows:

| Table 203a                 |  |             |
|----------------------------|--|-------------|
| EPA Hazardous Waste Number | Hazardous Waste From Nonspecific Sources   | Hazard Code |
| F001                       | The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures and blends used in degreasing containing, before use, a total of 10% or more, by volume, of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures                                     | (T)         |
| F002                       | The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane and 1,1,2-trichloroethane; all spent solvent mixtures and blends containing, before use, a total of 10% or more, by volume, of one or more of the above halogenated solvents or those solvents listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures | (T)         |

# Waste Regulations 101

## Listed Hazardous Waste Codes

**Wastes from non-specific sources** like spent solvents & metal treatment sludges

- Table 203a
- F codes

**Wastes from specific industries like** petroleum refineries and chemical manufacturer

- Table 204a
- K codes

## Listed Hazardous Waste Codes

Commercial chemical products, off-specification products, container and spill residues like nicotine formaldehyde, DDT, & xylene

- Materials with sole active ingredient
- Tables 205 a, b & c
- P & U codes

P Codes & those with “H” hazard code - all acutely toxic

# Waste Regulations 101

## Characteristic Hazardous Waste Codes

- Ignitable - D001
- Corrosive - D002
- Reactive - D003
- Toxic - D004 – D043 (Table 201a)
- Severely Toxic – 001S - 007S  
(Table 202, includes dioxins & furans)

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## Characteristic Waste Common Test

- **Flash point** – Used for testing Ignitability  $< 140$  F  
Examples: paints, solvents
- **pH** – Used for testing corrosivity  $\leq 2$  or  $\geq 12.5$   
Examples: acids, bases
- **Reactivity** – Test as required for DOT classification for materials that are unstable at normal conditions, reacts violently with water, explode, etc.  
Examples: lithium hydride & trichlorosilane

## Characteristic Waste Common Tests

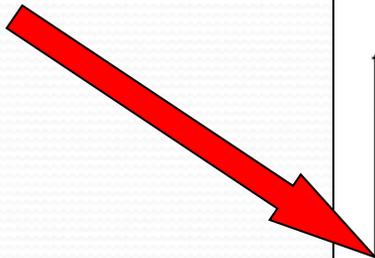
- **TCLP (Toxicity Characteristic Leaching Procedure)**
  - Used for testing leaching potential for the 40 Table 201a hazardous constituents

Examples: Paints or sludges containing metals or MEK, contaminated media

# Waste Regulations 101

## TCLP Characteristic Hazardous Waste Codes

Listed In Part 111  
Hazardous Waste  
Rules



R 299.9217 Table 201a.  
Rule 217. Table 201a reads as follows:

| Table 201a                 |                                   |  |  |
|----------------------------|-----------------------------------|--|--|
| EPA Hazardous Waste Number | Chemical Abstract Services Number | Material                               | Extract Concentration milligrams per liter |
| D004                       | 440-38-2                          | Arsenic                                | 5.0  |
| D005                       | 7440-39-3                         | Barium                                 | 100.0                                      |
| D018                       | 71-43-2                           | Benzene                                | 0.5  |
| D006                       | 7440-43-9                         | Cadmium                                | 1.0  |
| D019                       | 56-23-5                           | Carbon tetrachloride                   | 0.5  |
| D020                       | 57-74-9                           | Chlordane                              | 0.03                                       |
| D021                       | 108-90-7                          | Chlorobenzene                          | 100.0                                      |
| D022                       | 67-66-3                           | Chloroform                             | 6.0  |
| D007                       | 7440-47-3                         | Chromium                               | 5.0  |
| D023                       | 95-48-7                           | o-Cresol                               | 200.0**                                    |
| D024                       | 108-39-4                          | m-Cresol                               | 200.0**                                    |
| D025                       | 106-44-5                          | p-Cresol                               | 200.0**                                    |
| D026                       | -----                             | Cresol                                 | 200.0**                                    |
| D016                       | 84-75-7                           | 2,4-D (2,4-Dichlorophenoxyacetic Acid) | 10.0                                       |

# Waste Regulations 101

**Once the hazardous wastes have been identified,  
check for exemptions or exclusions!**

# Waste Regulations 101

## Common Exemptions & Exclusions

- Wastewater discharges to POTW's that are **approved** by that sewer authority are exempted at the point of discharge to the sewer



# Waste Regulations 101

## Common Exemptions & Exclusions

- Batteries, pesticides, mercury devices, electric lamps, pharmaceuticals, consumer electronics & antifreeze handled as Universal Waste enjoy a **partial exemption**



## Common Exemptions & Exclusions

- Used oils that are recycled
- Petroleum contaminated media from leaking UST systems that fail the TCLP for D018 – D043 only & are being remediated under DEQ approval pursuant to Part 213 of Act 451
- Off-specification fuel (gas, kerosene, diesel, etc.) being recycled into fuel or burned as fuel

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## Common Exemptions & Exclusions

- Materials remaining in manufacturing units that would otherwise be hazardous wastes - if taken out of service the material becomes a hazardous waste (degreasers, paint pots)
- Laundered rags that are reused that would otherwise be a hazardous waste



# Waste Regulations 101

## Common Exemptions & Exclusions

- Household waste, including single & multiple residences, hotels & motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, & day-use recreational areas



## Conditionally Exempt Small Quantity Generator Exemption

- Monthly hazardous waste generation < 220 lbs. or ~ 1/2 drum non-acute and 2.2 lbs. acute
- Total hazardous waste accumulation **ALWAYS** be less than 2200 pounds (5 drums)
- Wastes are properly disposed under other regulations

# Waste Regulations 101

Less  
Regulation



More  
Regulation

Solid Waste

Liquid Industrial By-Products Generators (LIB)

Universal Waste Generators

Conditionally Exempt Small Quantity Generators (CESQGs)

Small Quantity Generators (SQGs)

Large Quantity Generators (LQGs)



## Hazardous Waste Generator Status

Hazardous waste generator status is based:

- Total quantity of hazardous waste generated each calendar month AND
- The amount of hazardous waste accumulated at any one time

*This information is used to determine the handling & disposal requirements for the waste!!!*

## Hazardous Waste Generator Status

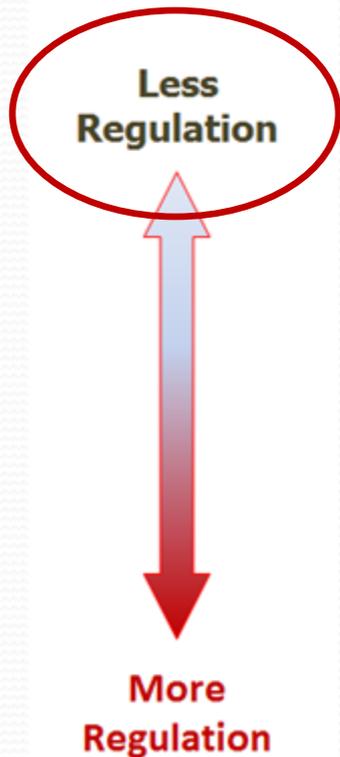
Do not count the following wastes when determining your monthly generator status:

- Materials excluded from definition of solid waste (e.g. recycled scrap metal, recycled fuel, POTW permitted direct discharge)
- Universal waste
- Used oil
- Empty containers
- Liquid industrial by-product

# Hazardous Waste Generators

## CESQG

- ü **Generate < 220 lbs. non-acute monthly**
- ü **~ 1/2 drum non-acute monthly**
- ü **Never accumulate > 2,200 lbs.**

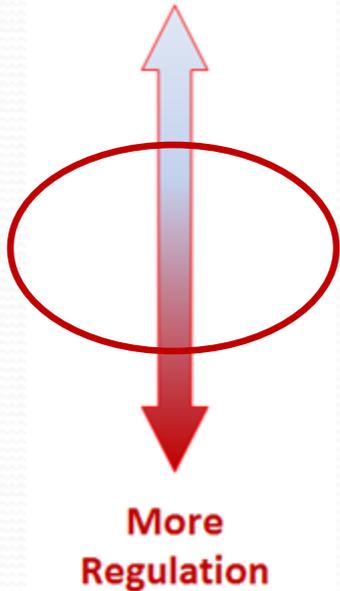


Less  
Regulation

## SQG



- ü **Generate > 220 lbs. & < 2200 lbs. non-acute monthly**
- ü **~ 1/2 drum to 5 drums monthly**
- ü **Never accumulate > 13,200 lbs.**



More  
Regulation

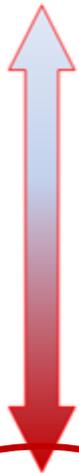
# Waste Regulations 101

## LQG

- ü **Generate > 2200 lbs. non-acute or**
- ü **> 5 drums monthly**
- ü **> 2.2 lbs. acute**



Less  
Regulation



More  
Regulation

# Waste Regulations 101

## Hazardous Waste Generator Requirements

See Chapter 2, Table 2.6 on page 2-41 of your Guidebook for summary table

TABLE 2.6 Summary of the Hazardous Waste Generator Requirements

|  | Conditionally Exempt Small Quantity Generator (CESQG)   | Small Quantity Generator (SQG)   | Large Quantity Generator (LQG)   |
|--|---|--|--|
| <b>Off-site Treatment, Storage or Disposal Destination for Waste</b>     | Licensed solid waste disposal facility (solids); Liquid industrial by-product designated facility (liquids); licensed or exempt recycler; or licensed hazardous waste facility. Also, universal waste handler or universal waste destination facility for hazardous waste managed as universal waste.   | Licensed hazardous waste facility; or exempt hazardous waste recycling facility. Also, universal waste handler or universal waste destination facility for hazardous waste managed as universal waste. | Licensed hazardous waste facility; or exempt hazardous waste recycling facility. Also, universal waste handler or universal waste destination facility for hazardous waste managed as universal waste. |
| <b>Maximum Time Period Before Waste Must Be Shipped</b>                  | No time limit if never exceed 2,200 pounds.   | 180 days, unless shipping over 200 miles, then 270 days. Storage beyond time period requires a hazardous waste license for storage.  | 90 days and storage beyond time period requires a hazardous waste license for storage unless meeting Rule 306(7) (R 299.9306(7)).  |
| <b>Maximum Amount Of Hazardous Waste That Can Be Accumulated On-site</b> | 2,200 pounds non-acute and/or 2.2 pounds or less acute. If exceed 2,200 pounds non-acute, subject to SQG requirements. If exceed 2.2 pounds acute, subject to LQG requirements.   | 13,200 pounds non-acute and/or 2.2 pounds or less acute. If exceed 13,200 pounds non-acute, requires a hazardous waste license for storage. If exceed 2.2 pounds acute, subject to LQG requirements.   | No maximum amount  |
| <b>On-site Treatment, Disposal, &amp; Waste Analysis Plan</b>            | Small and Large Quantity Generator on-site treatment is allowed without a hazardous waste license if conditions in Rule 503 or Rule 206 of the Part 111 rules are met. CESQGs can treat on-site and are not subject to Rule 503. Facilities with waste discharges to a POTW (municipal sanitary sewer system authorized under the Clean Water Act) may need wastewater operator certification depending on process (Chapter 3.5), require POTW approval for discharge, and require records of disposal. LQGs doing on-site treatment must |  |  |

# Waste Regulations 101

## Minimum Hazardous Waste Records All Generators

Generators must maintain records on site for at least 3 years:

- Waste characterization
- Hazardous Waste Manifest (SQG & LQG)
- Shipping records (CESQG)

DEQ, OVMSP, Example Shipping Document  
**STRAIGHT BILL OF LADING**  
ORIGINAL - NOT NEGOTIABLE

FROM:  
1. Shipper / Generator Location  
2. Shipper / Generator Mailing Address (if different)

TO:  
3. Consignee / Facility Name and Address  
4. Consignee / Facility ID#

DELIVERED BY:  
5. Carrier/Transporter Name and Address  
6. Carrier/Transporter ID#

| No. | Basic Description<br>(UN or NA number, Proper Shipping Name, Hazard Class, Packing Group (if any)) | 7. Container |      | 8. Total Quantity | 9. Unit | 10. Date | 11. Other |
|-----|--|--------------|------|-------------------|---------|----------|-----------|
|     |  | No.          | Type |                   |         |          |           |
| 1   | Acetone  | 60           | DRM  | 1200 g            | gallon  |          |           |
| 2   |  |              |      |                   |         |          |           |
| 3   |  |              |      |                   |         |          |           |
| 4   |  |              |      |                   |         |          |           |

12. Special Handling Instructions and Additional Information

By signing this Bill of Lading, the carrier/transporter certifies that the contents of this consignment are fully and accurately described above by the prepending name and are classified, packaged, labeled and certified in accordance with applicable governmental regulations, and that the information is true and accurate and that the information is true and accurate and that the information is true and accurate.

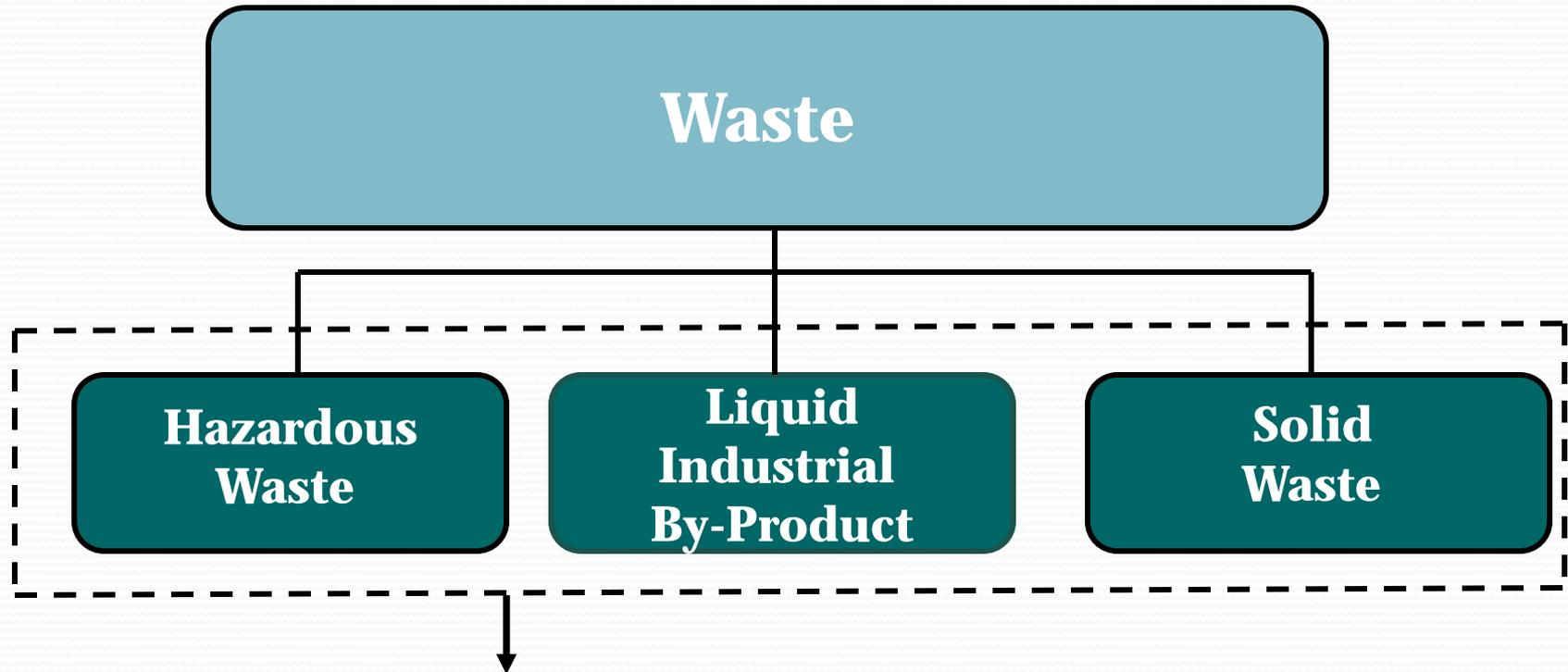
Signature lines for Shipper, Carrier/Transporter, and Consignee/Facility, with checkboxes for Mailed and E-mailed.

White Copy: Consignee/Facility Original • Yellow Copy: Consignee to Shipper • Pink Copy: Carrier/Transporter • Green Copy: Shipper Total Copy

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# Waste Regulations 101



Subject unless excluded:

- ∅ Hazardous waste if listed or characteristic
- ∅ Liquid industrial by-product if free liquids
- ∅ Solid waste if solid

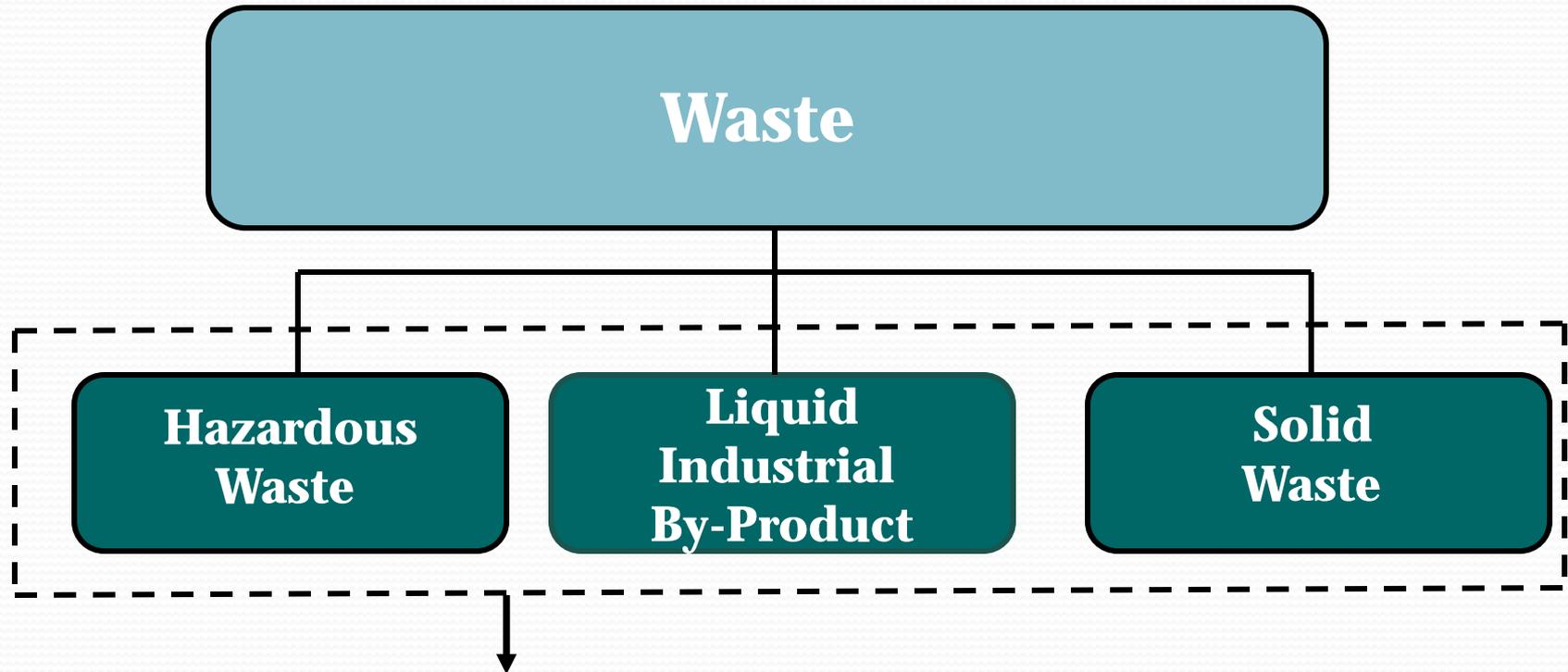
# Waste Regulations 101

## Liquid Industrial By-Product

- Regulated under Part 121 of Act 451
- Formally “Liquid Industrial Waste”
- Determined by using the Paint Filter Test, EPA Method 9095 of SW-846.
- If there are any free liquids in the waste it should be managed as a liquid industrial by-product



# Waste Regulations 101



Subject unless excluded:

- ∅ Hazardous waste if listed or characteristic
- ∅ Liquid industrial by-product if free liquids
- ∅ Solid waste if solid

# Waste Regulations 101

## Liquid Industrial By-Product

- Liquid CESQG hazardous waste
- Liquid waste that is not a listed or characteristic hazardous waste such as:

Used oil

Catch basin clean-out

Antifreeze

Contaminated fuel

Wastewaters

Waste waters

Fats, oils, grease

Wash waters

# Waste Regulations 101

## Liquid Industrial By-Product

Generators must maintain records on site for at least 3 years:

- Waste characterization
- Shipping records

DEQ, OWMRP Example Shipping Document

**STRAIGHT BILL OF LADING**  
ORIGINAL - NOT NEGOTIABLE

Bill of Lading Number: \_\_\_\_\_

**FROM:**

|  |  |   |  |
|--|--|---|--|
| 1. Shipper / Generator Location                          |  | 2. Shipper / Generator Mailing Address (if different)   |  |
| A Top Generator<br>947 Oak Drive<br>Carmichael, MI 48222 |  | Phone No.: _____<br>Generator ID (if applicable): _____ |  |
| Emergency Response Phone: _____                          |  |   |  |

**TO:**

|   |  |                                 |  |
|---|--|---------------------------------|--|
| 3. Consignee / Facility Name and Address                |  | 4. Consignee / Facility ID#     |  |
| West Disposal<br>123 Main Street<br>Smithtown, MI 48333 |  | Phone No.: _____<br>MIK13321406 |  |
| 5. Notes: _____   |  |                                 |  |

**DELIVERED BY:**

|   |  |                                 |  |
|---|--|---------------------------------|--|
| 5. Carrier/Transporter Name and Address             |  | 6. Carrier/Transporter ID#      |  |
| A Great Transporter<br>123 Elm<br>Jenison, MI 48822 |  | Phone No.: _____<br>MIK88739987 |  |

| To | From | BASIC DESCRIPTION<br>(UN or UN number, Proper Shipping Name, Hazard Class, Packing Group (if any)) | 8. Containers |      | 9. Total Quantity | 10. Units Wh/Typ | 11. other |
|----|------|--|---------------|------|-------------------|------------------|-----------|
|    |      |  | No.           | Type |                   |                  |           |
|    | 1.   | Acetone  | 40            | DR   | 2200 g            | gallon           |           |
|    | 2.   |  |               |      |                   |                  |           |
|    | 3.   |  |               |      |                   |                  |           |
|    | 4.   |  |               |      |                   |                  |           |

12. Special Handling Instructions and Additional Information

By signing below, Shipper hereby declares that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled in accordance with applicable governmental regulations, and are in all respects in proper condition for transport according to applicable governmental regulations. As shipper, I hereby certify that the liquid industrial by-products are fully and accurately described on this shipping document, in proper condition for transport, and that the information contained on this shipping document is factual.

|  |           |       |     |      |
|--|-----------|-------|-----|------|
| SHIPPER (Print Employee Name)                              | Signature | Month | Day | Year |
| Carrier/Transporter (Print Driver Name)                    | Signature | Month | Day | Year |
| Consignee / Facility (Acknowledge/Signatures) (Print Name) | Signature | Month | Day | Year |

White Copy: Consignee/Facility Original • Yellow Copy: Consignee to Shipper • Pink Copy: Carrier/Transporter • Green Copy: Shipper Initial Copy

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## Liquid Industrial By-Product

Manage liquid industrial by-product in tanks or container that are...

- in good condition
- closed
- non leaking
- labeled to identify contents
- Protected from weather, fire, physical damage, and vandals

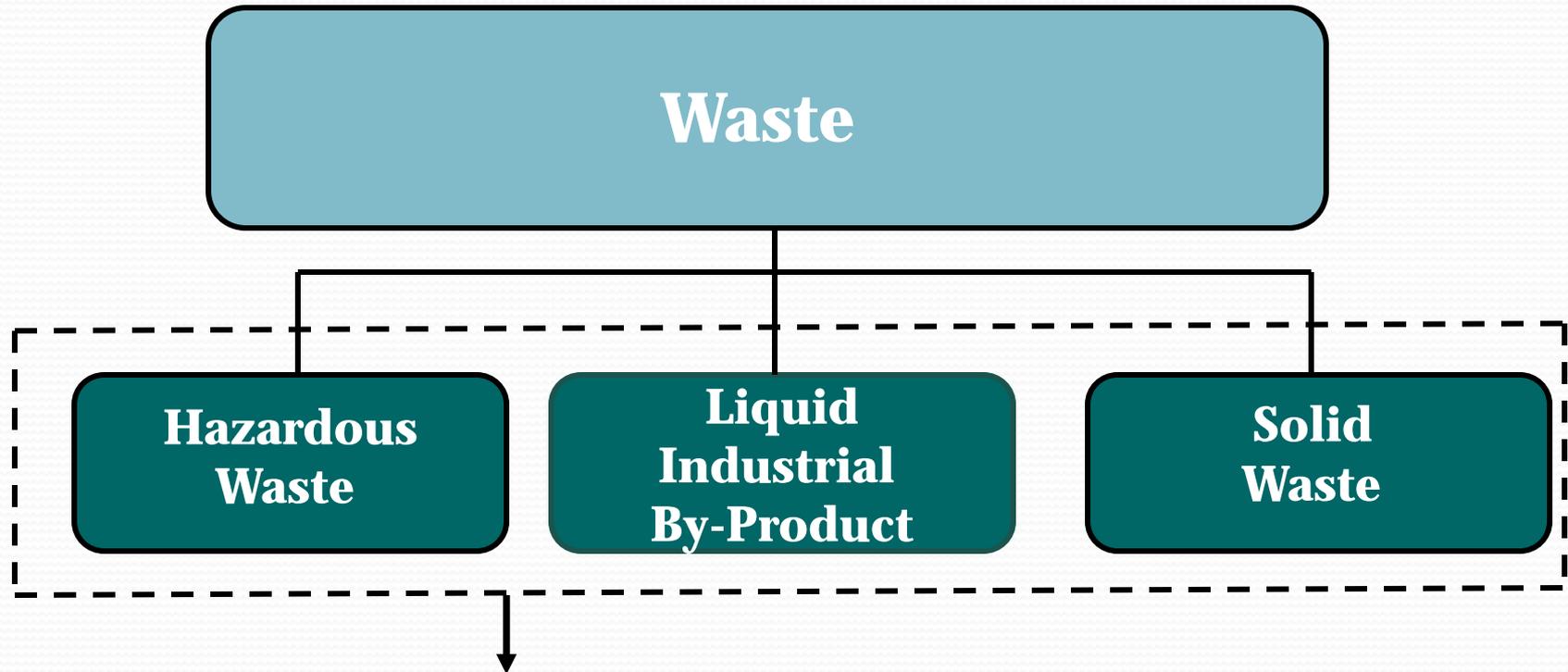
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## Liquid Industrial By-Product

Generators of liquid industrial by-product must...

- Must have exterior of all vehicles, containers and tanks free of use oil residues
- Prevent release to ground
- Use permitted registered LIB transporter or maintain spill insurance if self transporting

# Waste Regulations 101



Subject unless excluded:

- ∅ Hazardous waste if listed or characteristic
- ∅ Liquid industrial by-product if free liquids
- ∅ Solid waste if solid

# Waste Regulations 101

## Solid Waste

If the waste meets a hazardous waste exemptions or exclusions, it is subject to non-hazardous solid waste regulation if solid

Regulated under Part 115 of Act 451

Solid waste must be disposed in a Type II Municipal Solid Waste Landfill unless:

- Recycled or
- Diverted

# Waste Regulations 101

Landfills  
require special  
waste approval  
prior to  
shipment for  
special waste  
(e.g. CESQG  
solid  
hazardous  
waste)



## Special Waste Acceptance Profile

Requested Facility: \_\_\_\_\_  Unsure Profile Number: \_\_\_\_\_  
 Multiple Generator Locations (Attach Locations)  Request Certificate of Disposal  Renewal? Original Profile Number: \_\_\_\_\_

### A. GENERATOR INFORMATION (MATERIAL ORIGIN)

1. Generator Name: \_\_\_\_\_  
2. Site Address: \_\_\_\_\_  
(City, State, ZIP) \_\_\_\_\_  
3. County: \_\_\_\_\_  
4. Contact Name: \_\_\_\_\_  
5. Email: \_\_\_\_\_  
6. Phone: \_\_\_\_\_ 7. Fax: \_\_\_\_\_  
8. Generator EPA ID: \_\_\_\_\_  N/A  
9. State ID: \_\_\_\_\_  N/A

### B. BILLING INFORMATION

SAME AS GENERATOR

1. Billing Name: \_\_\_\_\_  
2. Billing Address: \_\_\_\_\_  
(City, State, ZIP) \_\_\_\_\_  
3. Contact Name: \_\_\_\_\_  
4. Email: \_\_\_\_\_  
5. Phone: \_\_\_\_\_ 6. Fax: \_\_\_\_\_  
7. WM Hauled?  Yes  No  
8. P.O. Number: \_\_\_\_\_  
9. Payment Method:  Credit Account  Cash  Credit Card

### C. MATERIAL INFORMATION

1. Common Name: \_\_\_\_\_  
Describe Process Generating Material:  See Attached

|  |  |
|--|--|
|  |  |
|--|--|

2. Material Composition and Contaminants:  See Attached

| 1. | 2. | 3. | 4. |
|----|----|----|----|
|    |    |    |    |
|    |    |    |    |
|    |    |    |    |
|    |    |    |    |

Total composition must be equal to or greater than 100%   $\geq 100\%$

3. State Waste Codes: \_\_\_\_\_  N/A  
4. Color: \_\_\_\_\_  
5. Physical State at 70°F:  Solid  Liquid  Other: \_\_\_\_\_  
6. Free Liquid Range Percentage: \_\_\_\_\_ to \_\_\_\_\_  N/A  
7. pH: \_\_\_\_\_ to \_\_\_\_\_  N/A  
8. Strong Odor:  Yes  No Describe: \_\_\_\_\_

### D. REGULATORY INFORMATION

1. EPA Hazardous Waste?  Yes\*  No  
Code: \_\_\_\_\_  
2. State Hazardous Waste?  Yes  No  
Code: \_\_\_\_\_  
3. Is this material non-hazardous due to Treatment, Delisting, or an Exclusion?  Yes\*  No  
4. Contains Underlying Hazardous Constituents?  Yes\*  No  
5. From an industry regulated under Benzene NESHAP?  Yes\*  No  
6. Facility remediation subject to 40 CFR 63 GGGGG?  Yes\*  No  
7. CERCLA or State-mandated clean-up?  Yes\*  No  
8. NRC or State-regulated radioactive or NORM waste?  Yes\*  No

\*If Yes, see Addendum (page 2) for additional questions and space.

9. Contains PCBs? → If Yes, answer a, b and c.  Yes  No  
a. Regulated by 40 CFR 761?  Yes  No  
b. Remediation under 40 CFR 761.61 (a)?  Yes  No  
c. Were PCB imported into the US?  Yes  No  
10. Regulated and/or Untreated Medical/Infectious Waste?  Yes  No  
11. Contains Asbestos?  Yes  No

# Waste Regulations 101

## Prohibited Wates

- Used Oil
- Liquid Waste
- Lead Acid Batteries
- Hazardous Waste from SQG & LQG
- Low Level Radioactive Waste
- PCB Waste
- Medical Waste
- Empty Drums
- Whole Tires
- Returnable Beverage Containers
- Sewage
- Asbestos (unless landfill approved)

# Waste Regulations 101

## Solid Waste Recycling Exemptions

- Concrete Grinding Slurry
- Ethanol
- Lime Sludge
- Manure, Paunch and Pen Waste
- Gypsum Drywall
- Fish Waste
- Scrap Wood



# Waste Regulations 101

## Inert Materials



- Inert means there are no listed hazardous wastes, or hazardous substances present in a waste at concentrations above current Part 201 cleanup criteria
- Inert materials can include dredged spoils, excavated soils, cement kiln dust, asphalt, certain construction materials, rock, etc.
- Inert materials can be used as alternate daily cover in landfills with DEQ approval or as fill

# Waste Regulations 101

## Beneficial Reuse and Recycling

- Beneficial use recycles waste materials like coal and wood bottom ash, paper pulp, cement kiln dust and foundry sand for use in industrial settings.
- Statute identifies specific use conditions that must be met for a beneficial use for the materials identified



# Waste Regulations 101

## Examples of Diverted Waste

Household and CESQG hazardous wastes like:

- Medications
- Computer, TVs, Cell Phones & Tablets
- Paints & Solvents
- Fluorescent Light Bulbs
- Batteries
- Used Oil



# Waste Regulations 101

## Toxic Substances Control Act (TSCA)

- Regulation of TSCA is implemented by EPA
- Applies to the manufacture, processing, distribution, marking, use, storage, cleanup, and disposal of PCB-containing wastes
- Sources of PCBs include dielectric fluids, heat transfer fluids, capacitors, hydraulic fluids, etc.

## Toxic Substances Control Act

There are generally 3 action levels of total PCB concentrations:

- <50 ppm
- $\geq$  50ppm to <500 ppm
- $\geq$  500 ppm

See Chapter 4.5, Page 4-26

Contact EPA Region 5 at 800-621-8431 or  
[www.epa.gov/pcb](http://www.epa.gov/pcb)

# Waste Regulations 101

## Scrap Tires

Regulated by Part 169 of Act 451

Requirements for scrap tire generators include:

- Store tires safely at the location of generation
- Ensure scrap tires are taken to a registered tire collection site
- Use only register hauler
- Obtain and keep copies of scrap tire manifests

# Waste Regulations 101

## Scrap Tires

Can look up registered haulers and collection sites at [www.michigan.gov/scraptires](http://www.michigan.gov/scraptires)

Can self transport up to 10 tires without a manifest to a registered collection locations

See Chapter 2. Page 2-17 for more details



# Waste Regulations 101

## Medical Wastes

Regulated under Part 138 of Act 368,  
Michigan Public Health Code



Includes infectious biohazardous waste like:

- Blood and body fluids from human & animals
- Pathological waste like organs and tissue
- infectious agents like live or attenuated viruses
- Sharps or needles and scalpels



# Waste Regulations 101

## Medical Waste

Medical waste does not include pharmaceuticals unless they contain live or attenuated vaccines in which case they're dual/mixed waste

Many agencies regulate medical waste, including

- DEQ – Regulates how producers must manage medical waste from generation to disposal
- U.S. EPA – Produces guidelines for land disposal, requires air permits for incineration

# Waste Regulations 101

## Medical Waste

Many agencies regulate medical waste, including

- MSP/U.S. DOT – Specifies packaging, labeling, securing and shipping documents for safe transport
- MIOSHA – Specified work protections for handling of blood borne infection materials

# Waste Regulations 101

## Medical Waste

Medical Waste Regulatory Act requires:

- Producer registration every 3 years
- Medical Waste Management Plan
- Employee training records
- Proper packaging
- Storage no longer than 90 days
- Shipment records

## Radioactive Wastes

- NARM and LLMW wastes are *possibly* exempt from the definition of hazardous waste if certain conditions apply, such as if it meets the acceptance criteria of a low-level radioactive waste disposal facility or eligible NARM waste
- NARM and LLMW waste shall meet or be treated to meet LDR treatment standards

# Waste Regulations 101

## Asbestos

- Used in more than 3000 products over the past 100 years for its insulation and fire protective properties
- Common products include pipe insulation, floor and ceiling tiles, and electrical appliances
- Found in a wide range of settings including industrial and manufacturing, school and universities, and residential properties

# Waste Regulations 101

## Asbestos

- Asbestos is the general name of a group of minerals with a similar propensity to become airborne and cause damage to lungs. These minerals include Chrysotile, Amosite, and Crocidolite
- Additional information is available through the DEQ's Air Quality Division, NESHAPs Asbestos Coordinator at 517-373-7064



# Questions?

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Thank you for protecting Michigan's environment!