Point of Generation & Waste Determinations

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UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
WASTE MANAGEMENT & RADIATION CONTROL

Overview

Everything starts with a determination

- Solid waste
- When is something discarded?
- What is hazardous waste?
- How can you stay in compliance?
- Commercial Chemical Products
- Satellite Accumulation Area Guidance

Definition of Solid Waste R315-261-2

- A Solid Waste is a material that is DISCARDED
- Is not EXCLUDED (R315-261-4)
- Liquids, Semi-Solid, or Contained Gaseous Materials are Solid Wastes too!

DISCARDED MATERIALS

Abandoned

- Disposed of
- Burned or Incinerated
- Accumulated, stored, or treated before/instead of being disposed of, burned, or incinerated

Inherently Waste-like Materials

Recycled Materials

- Used in a Manner Constituting Disposal
- Burned/used as fuel
- Reclaimed
- Used/Reused

Military Munitions

What is Hazardous Waste?

Any unwanted leftover substance that is toxic, ignitable, reactive, and/or corrosive or is listed as hazardous in the Utah Administrative Code (UAC) R315-261.

- Used/spent solvents
- Used/spent acids or bases
- Used/spent plating chemicals
- Unused cleaning products, oil-based paints, thinners, acids, bases

Characteristics

Ignitable

Corrosive

Reactive

Toxic

Ignitability – D001

R315-261-21

1. **Liquid** with a flashpoint less than 140°F
2. **Non-liquid** that can cause fire through friction, absorption, or spontaneous combustion
3. Ignitable compressed gas
4. Oxidizers

Corrosivity – D002

R315-261-22

1. **Aqueous** with a pH less than or equal to **2** or greater than or equal to **12.5**

2. **Liquid** that corrodes steel at a rate of greater than 0.25 inches per year

Reactivity – D003

R315-261-23

1. Material that is normally unstable

2. Undergoes rapid or violent reaction when exposed to water, shock, heat or pressure – an explosion

3. Generates toxic gases, fumes or vapors

Examples

- Sodium azide (airbags)
- Black powder
- TNT
- Picric acid – shock sensitive when dry
- Military propellants
- Metallic Sodium
- Sodium Cyanide
- Peroxide Forming Chemicals

Toxicity – D004-D043

R315-261-24

- 8 Heavy Metals

  Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver

- 10 Pesticides/Herbicides

  Chlordane, 2,4-D, Endrin, Lindane, Toxaphene, Pentachlorophenol

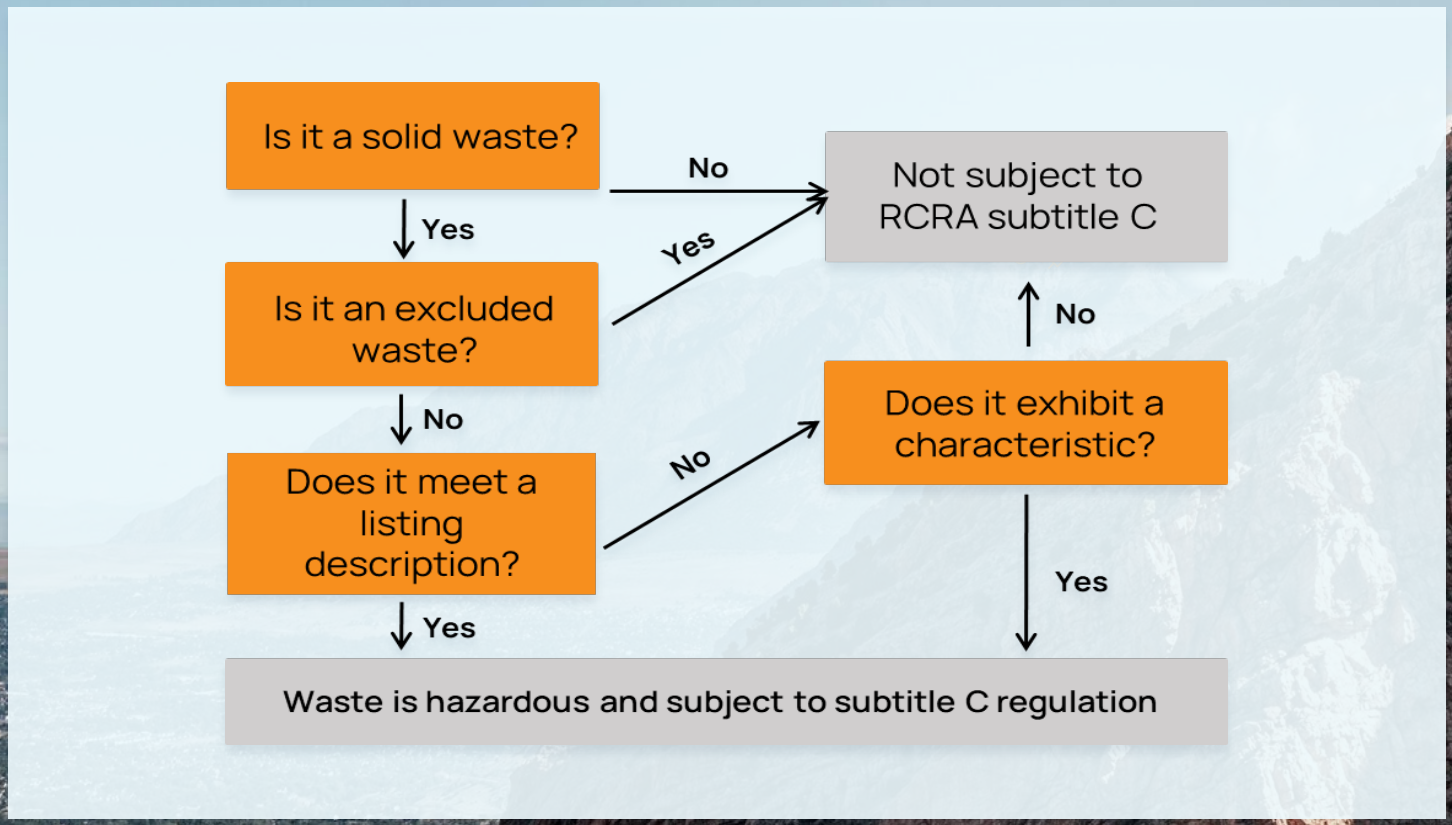
- 22 Organic Chemicals

  Carbon tetrachloride, Chloroform, Methyl ethyl ketone, Tetrachloroethylene, Trichloroethylene

Listed Wastes

- F-listed: Wastes from non-specific industrial sources (R315-261-31)
- K-listed: Waste from specific industrial processes (R315-261-32)
- U-listed: Unused commercial chemical products (R315-261-33)
- P-listed: Acutely hazardous unused commercial chemical products (R315-261-33)

Hazardous Waste Determination



R315-262-11:
Hazardous Waste Determination

01 Accurate Determination

02 Made at the Point of Generation

03 Before Dilution, Mixing, Other Alteration

04 Any Time the Waste Has or May Have Changed its Properties

When Do I Have to Make My Hazardous Waste Determination?

The point of generation for hazardous waste is when it is first produced or first becomes subject to hazardous waste regulations, not after the generator receives the waste analysis results. The hazardous waste regulations in R315-262 apply as soon as the waste is generated, and the accumulation period applies either as soons as the waste is generated or when waste is removed from the satellite accumulation are. (Memo, Lowrance to Axtell; April 21, 1989) RCRA Online #11424

Land Disposal Restrictions (LDRs) ensure Hazardous Waste is treated and safe before being buried.

- R315-268-7(a) requires generators to determine if the waste has to be treated before it can be land disposed.
- Linked to waste codes.
- Make the land disposal determination at the same time as the waste determination!

What do you know about your waste and how do you know it?

Knowledge of the Waste

Origin	Composition	Process
Feedstock	Changes	Testing

Sampling

01 Representative (R315-260-10)

02 Sampling for VOCs

03 Preservation & Holding Times

04 Documentation

Analysis

- Only Utah Certified Labs
- Methods Specified in R315-261
  - Ignitability: SW846 Method 1010B or 1020C
  - Corrosivity: pH Meter using SW846 Method 9040C
  - Toxicity: Toxicity Characteristic Leaching Procedure, SW846 Method 1311

EXAMPLES

WASTE DETERMINATION

QUIZ

Are these rags waste?

Are they hazardous?

How can you determine if they are hazardous?

WASTE MANAGEMENT & RADIATION CONTROL


JUSTRITE MFG. CO. MATTOON, ILL.
10-GAL. OILY WASTE CAN
EMPTY EVERY NIGHT

POLL

Commercial Chemical Products

Why might these unused chemicals be hazardous waste?

Commercial Chemical Product Storage

2013 EPA Guidance

Not waste if appropriately stored for use, legitimately recycled, or managed for legitimate reclamation

"I haven't declared it a waste yet!"

- Is solid waste if abandoned
- Checklist to evaluate status

Storage in Lieu of Disposal = Discard

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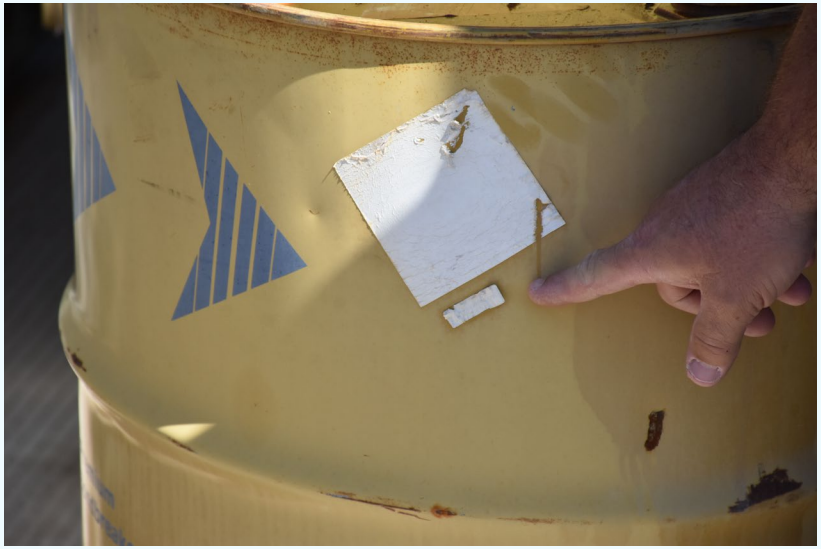
Missing, illegible label



Deteriorated container

Contaminated Debris

Planning is Key!

What contaminants might be present?

- Mercury in floors and mercury-containing devices
- Lead paint

Making a Waste Determination

- Test material first if possible
- Manage as HW until you know its not

Managing Project Waste

Generator Status Implications

Satellite Accumulation Area Guidance

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Satellite Accumulation
R315-262-15

1. At or Near the Point of Generation
2. Under the Control of the Operator
3. 55 Gallons or Either 1 Quart or 2.2 Pounds (1 Kilogram)
4. “Hazardous Waste” and Indication of Hazards
5. Containers Kept Closed Except Under Limited Circumstances
6. Container Must be Dated and Moved to a Central Accumulation Area or Offsite Within 3 Consecutive Calendar Days

At or Near the Point of Generation


PM 1:31 APR/21/2022

Operator Control


HAZARDOUS WASTE
HANDLE WITH CARE!
CHROMIUM
&
SELENIUM
pig
NON-HAZARDOUS WASTE
CORROSIVE
8
ACIDS
CORROSIVE
8


HAZARDOUS
WASTE
pig


Lab where hazardous waste is generated
Satellite Accumulation Area for lab

In-Process Hazardous Waste

- Integral to the Process
- Continuously Generated
- Moved Each Shift

Good Examples of In-Process Lab Waste