



**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?



Definition of Solid Waste

R315-261-2

- A Solid Waste is a material that is **DISCARDED**
- Not Excluded

**Liquids, Semi-Solid, or
Contained Gaseous Materials
are Solid Wastes too!**



say
what. “ ”



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Full Definition Solid Waste: **R315-261-2 UAC**
Exclusions: **R315-261-4**

Exclusions R315-261-4(a)

Materials which are NOT SOLID WASTE

- Domestic Sewage
- Industrial Wastewater discharges regulated under CWA
- Excluded scrap metal
- Solvent-contaminated wipes that are laundered and reused

Exemptions R315-261-4(b)

Solid Wastes that are NOT HAZARDOUS WASTES

- Household hazardous waste
- Gravity hot-drained oil filters
- Exploration and production waste – commonly referred to as E&P Exempt wastes
- Solvent-contaminated wipes sent for disposal



Solvent-Contaminated Wipes Exclusions

R315-261-4(a)(26) & R315-261-4(b)(18)

Solvent-contaminated wipes sent for cleaning or disposal are conditionally excluded from hazardous waste regulation.

- * Labeling
- * Closed containers
- * No free liquids
- * Accumulation Time - 180 days
- * Recordkeeping
- * Laundering or Disposal



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DISCARDED MATERIALS

- **Abandoned**
 - Disposed of
 - Burned or Incinerated
 - Accumulated, stored, or treated before or in lieu of being abandoned by being disposed of, burned, or incinerated
- **Recycled Materials** Used in a manner constituting disposal
 - Burned for energy recovery or used as a fuel
 - Reclaimed
 - Used/reused
- **Inherently Waste-like Materials**
- **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

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



Corrosivity – D002

- Aqueous with a pH less than or equal to 2 or greater than or equal to 12.5
- Liquid that corrodes steel at a rate of greater than 0.25 inches per year



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Reactivity – D003

- Material that is normally unstable
- Undergoes rapid or violent reaction when exposed to water, shock, heat or pressure – an explosion
- Generates toxic gases, fumes or vapors



Toxicity – Hazardous Waste Codes D004-D043

➤ 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



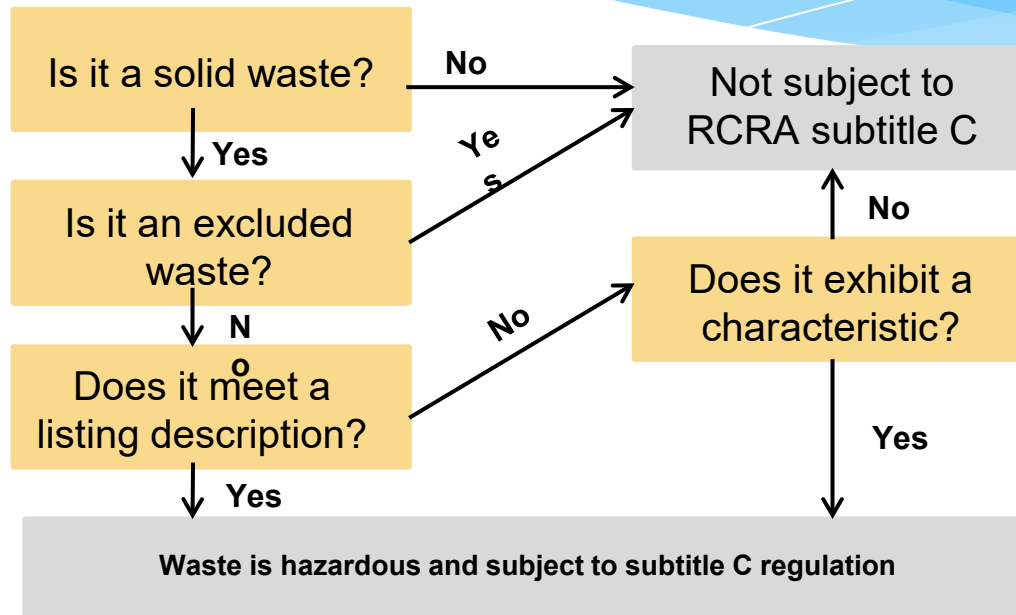
Listed Wastes

- **F-listed:** Wastes from non-specific industrial sources
- **K-listed:** Waste from specific industrial processes
- **U-listed:** Unused commercial chemical products
- **P-listed:** Acutely hazardous unused commercial chemical products



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Hazardous Waste Determination





1. Needs to be Accurate & Representative
2. Made at the Point of Generation Before Dilution, Mixing, Other Alteration
3. Made at Any Time the Waste Has or May Have Changed its Properties



Reminder

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 generator regulations in R315-262 apply **as soon as waste is generated**, and the accumulation period applies either as soon as the waste is generated or when waste is removed from the satellite accumulation area (Memo, Lowrance to Axtell; April 21, 1989 ([RCRA Online #11424](#))).



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F-Listed Solvent-Contaminated Rags

What determination needs to be made on solvent-contaminated rags?



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WASTE DETERMINATION



Are these rags waste?
Are they hazardous?
How can you determine
if they are hazardous?



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**Why might
these unused
chemicals be
hazardous
waste?**



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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

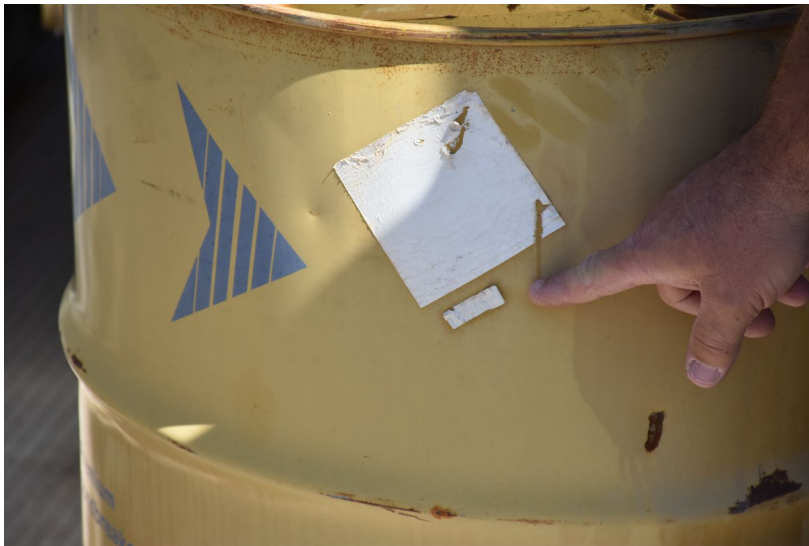


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Storage in Lieu of Disposal = Discard

Missing, illegible label

Deteriorated container



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Contaminated Debris



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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



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