

# Beneficial Use/Reuse of Solid & Hazardous Waste Requirements and Policies

---



# Presented by...



- **Ross Bunnell** - Sanitary Engineer  
DEEP Bureau of Materials  
Management & Compliance Assurance  
Waste Engineering & Enforcement  
Division (WEED)
- (860) 424-3274  
[ross.bunnell@ct.gov](mailto:ross.bunnell@ct.gov)
- WEED COMPASS line:  
1-888-424-4193



# Solid Waste vs. Hazardous Waste

## • **Solid Waste**

---

- Non-hazardous.
- Municipal solid waste.
- Designated recyclables.
- “Special Waste” –
  - Industrial sludges, liquids, solids & contained gases.
  - Fly ash.
  - Casting sands/slag.
  - Scrap tires
  - Demolition waste.
  - Land-clearing debris.



## • **Hazardous Waste**

---

- Defined by regulation.
- Characteristic HW:
  - Ignitable.
  - Corrosive.
  - Reactive
  - Toxic.
- Listed HW:
  - Spent solvents.
  - Industrial sludges.
  - Discarded Commercial Chemical Products.



# When is a waste not a waste?



- Hazardous Waste:
  - Regulations are complex.
  - However, they carefully define what is a waste and what is not a waste through exemptions or exclusions.
  - Self-implementing (DEEP approval/permit generally not required for the exemption to apply).
- Solid Waste:
  - Not many specific exemptions or exclusions.
  - Specific wastes can be exempted through a DEEP approval process.

# Solid Waste - Beneficial Use



- Specific exemptions:
  - Scrap metal processors exempt from permitting requirement provided they submit annual reports (CGS 22a-208f).
  - Crushed glass used as landfill cover (CGS 22a-208z).
  - Certain processed wood and wood fuel (CGS 22a-209a).
  - Casting sands used as landfill cover (CGS 22a-209d).
  - Water treatment solids used under a DEEP-approved operations plan (CGS 22a-209d).
- Approval processes. Two types:
  - Beneficial Use General Permit (CGS 22a-209f).
  - Beneficial Use Determination or “BUD” (CGS 22a-209f(b)).

# Solid Waste

## Beneficial Use General Permits



- Applicable statewide for a particular material.
- Individual users must register for the GP and comply with its requirements.
- There are 2 Current BU GPs:
  - Storage and Processing of Asphalt Roofing Shingle Waste for Beneficial Use and Recycling.
  - Storage and Processing of Scrap Tires for Recycling and Beneficial Reuse.
- Copies of GPs, Registration forms, etc. available at:  
[www.ct.gov/deep/permits&licenses](http://www.ct.gov/deep/permits&licenses)
- For further help: WEED permitting – (860) 424-3366.

# Solid Waste

## Beneficial Use Determinations

- Are issued per user and waste.
- Must complete DEEP BUD application and receive approval from DEEP.
- Current BUDs include:
  - Coal combustion products used in making concrete.
  - Alum sludge used as a soil amendment (4 separate BUDs).
  - Scrubber residue used as a soil amendment.
  - Trench line excess soils used as structural fill.
  - Treated soil used as fill.
- Application forms and instructions available at:  
[www.ct.gov/deep/permits&licenses](http://www.ct.gov/deep/permits&licenses)
- For further help: WEED permitting – (860) 424-3366.

# Hazardous Waste

## Exemptions from Classification as a Waste



- Specific exemptions:
  - Characteristically-hazardous sludges, by-products, and commercial chemical products being reclaimed – 40 CFR 261.2(c)(3).
  - Scrap metal – 40 CFR 261.6(a)(3)(ii), 261.4(a)(13) & (14).
  - Use/Reuse – 40 CFR 261.2(e).
  - Materials that are reclaimed from hazardous waste and used beneficially – 40 CFR 263.3(c)(2)(i).
  - Zinc Fertilizer Rule (not yet adopted in CT).
  - Definition of Solid Waste Rule (not yet adopted in CT).

# Hazardous Waste

## Exemptions from Classification as a Waste

- Approval processes (only 1):
  - Variance from classification as a solid/hazardous waste – 40 CFR 260.30 & 260.31.
  - DEEP has not adopted this provision of the federal regulations.
  - DEEP is not authorized to issue these variances.
  - EPA's policy is not to accept applications for these variances if the state has not adopted the rule.
  - Bottom line: not available in CT at this time.

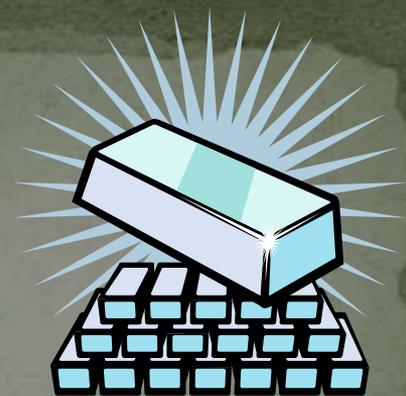


# Hazardous Waste – Reclamation of Char. Sludges, By-Products , and CCPs

- Based on EPA review of waste management practices before HW rules were passed.
- Not considered a waste if they are “reclaimed.”
  - Processed to recover a usable product or regenerated.
- Examples:
  - Metal-bearing sludges recycled for metals values.
  - By-products of chemical manufacturing recycled to reclaim valuable constituents.
  - Old chemical products reprocessed into new products.
- Not exempt if applied to the ground, burned for energy recovery, or speculatively accumulated (e.g., stored > 1 yr.).

# Hazardous Waste

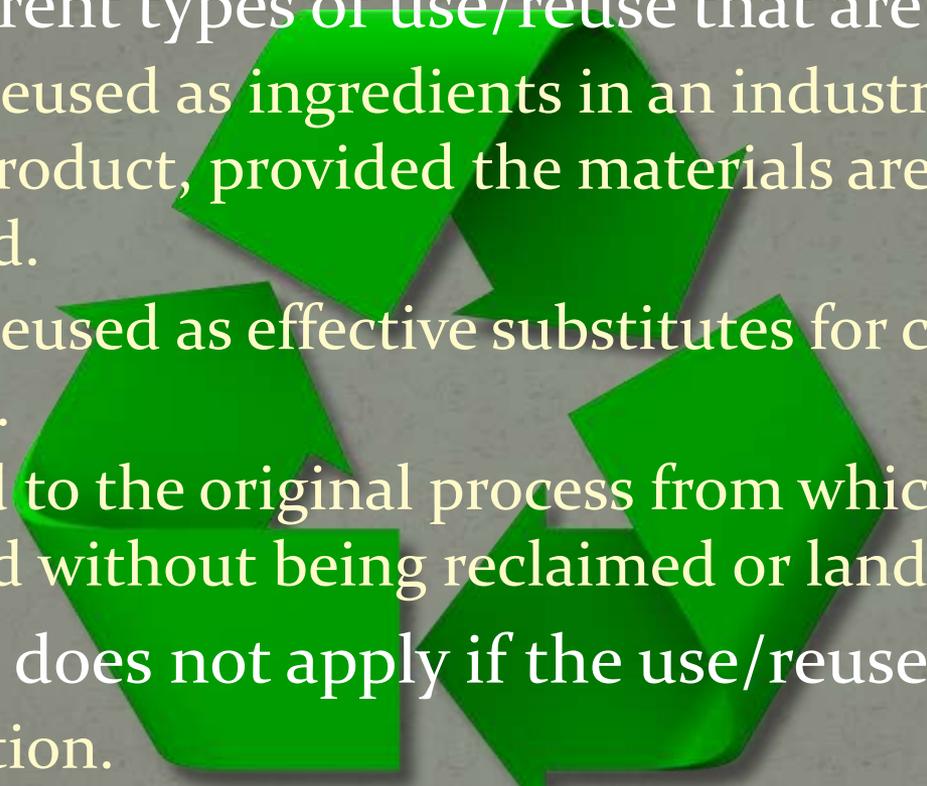
## Scrap Metal that Is Reclaimed



- Also based on EPA review of waste management practices before HW rules were passed.
- Materials covered:
  - “Bits and pieces of metal parts...” – 40 CFR 261.1(c)(6).
  - “Excluded scrap metal” – 40 CFR 261.4(a)(13).
    - Processed scrap metal – 40 CFR 261.1(c)(10).
    - Unprocessed home scrap metal – 40 CFR 261.1(c)(11).
    - Unprocessed prompt scrap metal – 40 CFR 261.1(c)(12).
  - Shredded circuit boards – 40 CFR 261.4(a)(14).
- In CT, these exemption do not apply to:
  - Ignitable & reactive scrap metals.
  - Examples: sodium, potassium, finely-divided magnesium or zirconium.

# Hazardous Waste

## Use/Reuse

- Three different types of use/reuse that are exempt:
    - Used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed.
    - Used or reused as effective substitutes for commercial products.
    - Returned to the original process from which they were generated without being reclaimed or land-disposed.
  - Exemption does not apply if the use/reuse involves:
    - Reclamation.
    - Use in a manner constituting disposal.
    - Burning for energy recovery (unless the material is a fuel).
    - “Speculative Accumulation” (e.g., storage > 1 year).
    - Inherently waste-like materials (e.g., dioxin wastes).
- 

# Hazardous Waste Use/Reuse



- Examples:
  - Spent copper etchant that is as an ingredient in a process to make copper sulfate.
  - “Spent” caustic soda from acetylene production used for pH adjustment in an industrial wastewater treatment plant.
  - Spent sandblasting grit used as a colorant and aggregate in “cultured marble” for countertops, vanities, etc.
- For more information, see 2/4/2010 HWAC presentation.
  - [www.ct.gov/deep/hwac](http://www.ct.gov/deep/hwac)
  - Click on “State Hazardous Waste Advisory Committee Information And Schedule” and scroll down to 2/4/2010.
- 7/15/1997 WEED memo summarizing evaluation criteria.

# Hazardous Waste

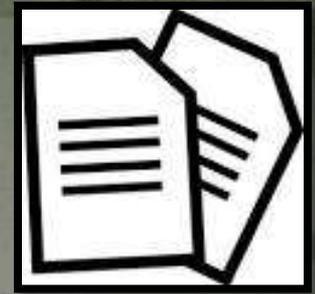
## Materials that Are Reclaimed from Hazardous Waste and Used Beneficially

- Allows an “out” for reclaimed materials.
- Have to be sufficiently processed that they are no longer wastes.
- Example: nickel metal which has been reclaimed from an industrial process waste, and which only needs some additional refining in order to be sold as a commodity.



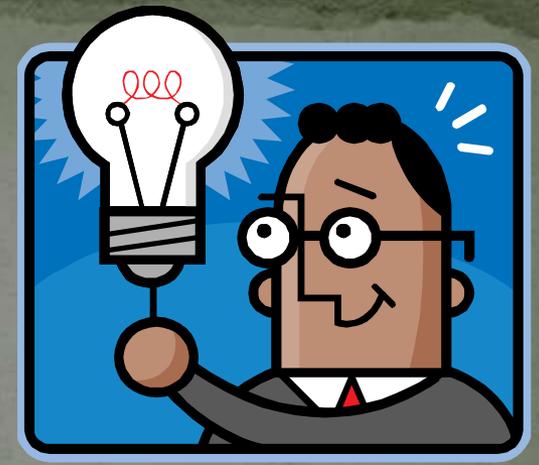
# Hazardous Waste

## Documentation of Claims



- HW rules require anyone claiming an exemption to document their claim – 40 CFR 261.2(f).
- Important to provide to inspectors during inspections.
- Documentation must demonstrate that:
  - There is a known market or disposition for the material.
  - The terms of the exemption or exclusion are met.
  - The material is not a waste or is exempt from regulation.
  - Owners and operators of facilities claiming that they use/reuse the material have the necessary equipment to do so.
- Additional information in 2/4/2010 HWAC presentation.

# Hazardous & Solid Waste: Suggestions/Advice



- ✦ It's important to carefully research any potential exemptions.
- ✦ Small details may make a big difference in whether or not the exemption applies.
- ✦ Details may change over time, voiding an exemption.
- ✦ Don't rely on the end user's say-so. Double check their information.
- ✦ Be sure you have all required documentation (HW).
- ✦ Specific uses may be approved in other states but not in Connecticut.
- ✦ If in doubt, call or write DEEP.

Questions?

