



HAZARDOUS WASTE RECYCLING LAW (ADVANCED)

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Break: 10mins

Pre-requisite: Waste Classification training

Your participation 😊

Questions



TRAINING RESOURCES

- Online Waste Classification Training:
<https://dtsc.ca.gov/california-hazardous-waste-classification-training/>



HAZARDOUS WASTE IDENTIFICATION

Presented by

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23Rd Annual California CUPA Training Conference

February 2 thru March 18, 2021

Virtual Conference



RECYCLING, EXEMPTIONS & EXCLUSIONS

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<https://calcupa.org/conference/index.html>

OBJECTIVES

- Overview:
 - Health and Safety Code § 25143.2
 - Health and Safety Code § 25143.9
 - Health and Safety Code § 25143.10
- Sham vs. Legitimate recycling
- Scenarios



Resources

- **Hazardous Waste Control Law:**
California Health and Safety Code (HSC)
- **Regulations:**
California Code of Regulations, title 22 (22 CCR)

Definition of Recycling

- **Recycling** (HSC § 25121.1): using, reusing, or reclaiming a recyclable material.
- Recyclable material (HSC § 25120.5).

You must be able to distinguish between these two types of recycling!

HOW?

22 CCR § 66260.10

- "Reclaimed" means that a material is processed to recover a usable product, or that it is regenerated.
 - Examples:
 - recovery of lead from spent batteries.
 - regeneration of spent solvents.
- "Processing" means treatment.

HSC § 25123.5

Treatment:

- Change in physical, chemical, or biological character or composition of hazardous waste or which removes its harmful properties.
 - Examples: distilling solvents to regenerate them, fortifying acid baths, smelting metals, de-watering filter cake, hydrating dried out chemicals.

Direct Recycling vs. Indirect Recycling

Empty plastic water bottle



Direct Recycling vs. Indirect Recycling

Refill



Melting and reforming





Hazardous Waste Recycling

Question 1:
What is it?

Question 2:
What is going to happen to it?

HSC § 25143.2(a)

(a) Recyclable materials are subject to this chapter and the regulations adopted by the department to implement this chapter that apply to hazardous wastes, unless the department issues a variance pursuant to Section 25143, or except as provided otherwise in subdivision (b), (c), or (d) or in the regulations adopted by the department pursuant to Sections 25150 and 25151.

HSC § 25143.2(b)

- This section is a direct copy of the federal direct use or reuse exclusions [40 CFR § 261.2(e)(1)(i), 261.2(e)(1)(ii), and 261.2(e)(1)(iii)].
- Three exclusions: RCRA and non-RCRA hazardous waste:
 - (b)(1) and (b)(2): Onsite and off-site
 - (b)(3): Onsite

HSC § 25143.2(b)

- NO RECLAMATION:
 - (b)(1) and (b)(2) – use/reuse
 - b(1): An **ingredient** to make a product
 - b(2): A **safe and effective substitute** for a commercial product
 - Requirements?
 - Misconceptions?

HSC § 25143.2(b)(3)

- Returned to the original process from which the material was generated, without first being reclaimed, if the material is returned as a substitute for raw material feedstock, and the process uses raw materials as principal feedstocks.
 - A “higher form” of recycling because it looks more like normal manufacturing than waste management.
- Requirements?

22 CCR § 66261.4(a)(5)

- Secondary materials are NOT WASTES that **are reclaimed and returned to the original process or processes** in which they were generated where they are reused in the production process provided:
 - (A) only **tank storage** is involved, and the entire process through completion of reclamation is **closed by being entirely connected with pipes** or other comparable enclosed means of conveyance;
 - (B) reclamation does not involve **controlled flame combustion** (such as occurs in boilers, industrial furnaces);
 - (C) the materials are never accumulated in such tanks for over **twelve months** without being reclaimed; and
 - (D) the reclaimed material is **not used to produce a fuel or used to produce products that are used in a manner constituting disposal.**

QUESTION?



- What is the difference between HSC § 25143.2(b)(3) AND 22 CCR § 66261.4(a)(5)?

SCENARIOS

Assumptions?

- Misconceptions:
 - One or more exclusion
 - Case-by-case determination

KEY QUESTIONS?

Question 1: What is it?

Secondary materials/ recyclable materials

Question 2: What is going to happen to it?

Use/reuse

Reclamation

Conditions and requirements

KEY QUESTIONS?



RCRA or non-RCRA HW?



Recycling process?

Scenario

- Primary smelter A generates a listed emission control dust that it sends to primary smelter B for metals recovery.
- Question: Which of the following provision is applicable for this recycling situation?
 - A. HSC § 25143.2(b)(1)
 - B. HSC § 25143.2(b)(2)
 - C. HSC § 25143.2(b)(3)
 - D. 22 CCR § 66261.4(a)(5)
 - E. None of the above

Scenario

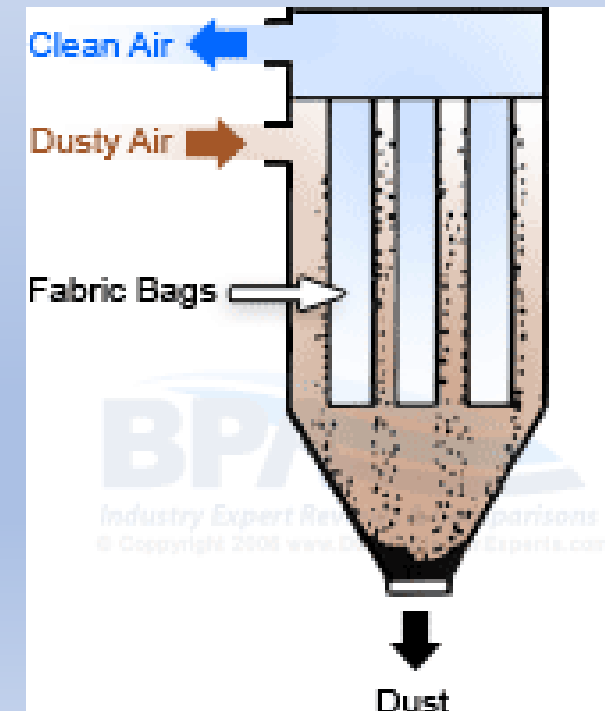
- Primary smelter B generates a listed emission control dust that it reclaims itself in as-is condition in its own smelting furnace.
- Question: What is the proper provision for this recycling situation?
 - A. HSC § 25143.2(b)(1)
 - B. HSC § 25143.2(b)(2)
 - C. HSC § 25143.2(b)(3)
 - D. 22 CCR § 66261.4(a)(5)

Scenario

- Plating rinse water is put through an ion exchange process and put back into the plating process as a rinse water.
- Question: What is the proper provision for this recycling situation?
 - A. HSC § 25143.2(b)(1)
 - B. HSC § 25143.2(b)(2)
 - C. HSC § 25143.2(b)(3)
 - D. 22 CCR § 66261.4(a)(5)

Scenario

- Silica and sulfite dust is captured in a baghouse during glass manufacturing process. The dust is returned directly through an enclosed conveyance to the glass bottle manufacturing process.
- Question: What is the proper provision for this recycling?
 - A. HSC § 25143.2(b)(1)
 - B. HSC § 25143.2(b)(2)
 - C. HSC § 25143.2(b)(3)
 - D. 22 CCR § 66261.4(a)(5)
 - E. Need more information



Scenario

- Hydrofluorosilicic acid, an air pollution control dust, exhibiting a characteristic of corrosivity, is used as a fluoridating agent in drinking water.
- Question: What is the proper provision for this recycling situation?
 - A. HSC § 25143.2(b)(1)
 - B. HSC § 25143.2(b)(2)
 - C. HSC § 25143.2(b)(3)
 - D. 22 CCR § 66261.4(a)(5)

Scenario

- A company generates distillation tank bottoms (listed as K016) from the manufacture of carbon tetrachloride (CCl₄). The material is sent to a different company to be used as a feedstock to make tetrachlorethylene without any reclamation prior to use.
- Question: What is the proper provision for this recycling situation?
 - A. HSC § 25143.2(b)(1)
 - B. HSC § 25143.2(b)(2)
 - C. HSC § 25143.2(b)(3)
 - D. Need more information

Scenario

- Emission control dust from a primary zinc smelting furnace is returned to the dross furnace.
- Question: What is the proper provision for this recycling situation?
 - A. HSC § 25143.2(b)(1)
 - B. HSC § 25143.2(b)(2)
 - C. HSC § 25143.2(b)(3)
 - D. 22 CCR § 66261.4(a)(5)

HSC § 25143.2(c)

- Two exemptions from facility permitting requirements.
- Onsite Recycling (RCRA and non-RCRA HW) including reclamation.
 - **(c)(1)** Refineries- petroleum refinery waste converted to coke.
 - **(c)(2)** Material meets all the following conditions-
 - A. Recycled and used onsite.
 - B. Recycled within the applicable generator accumulation time limits.
 - C. Managed according to all applicable DTSC requirements for generators.

HSC § 25143.2(c)

- What is the difference between this exemption and the (b) exclusion?
- Conditional?

Scenario

- XYZ Inc. generates F003 solvents from the manufacturing processes. In an effort to reduce costs, the company buys a distillation unit that will reclaim the solvent for use at the facility. The solvents are managed as hazardous waste.
- Question: Which of the following provision is applicable for this recycling situation?
 - A. HSC § 25143.2(c)(1)
 - B. HSC § 25143.2(c)(2)



Brief Review

- **HSC § 25143.2:**

- (b) Exclusions: RCRA and non-RCRA HW

- (c) Permit Exemptions only: RCRA and non-RCRA HW

HSC § 25143.2(d)

- California's unique Hazardous Waste Recycling Law
- Seven recycling law exclusions
- Applicable to **only non-RCRA** hazardous wastes

HSC § 25143.2(d)(1)

- HSC § 25143.2(d)(1)
 - An exclusion for onsite recycling
 - Non-RCRA HW must be recycled and used onsite
 - Reclamation is allowed

Onsite Recycling

- Three provisions in HSC § 25143.2 for onsite recycling
 - Exclusion: HSC § 25143.2(b)(3)
 - Exemptions: HSC § 25143.2(c)(1) and (c)(2)
 - Exclusion: HSC § 25143.2(d)(1)

Scenario

- A cleaner was used and dried out. The water is added to reconstitute the material.
- HSC § 25143.2(d)(1)?



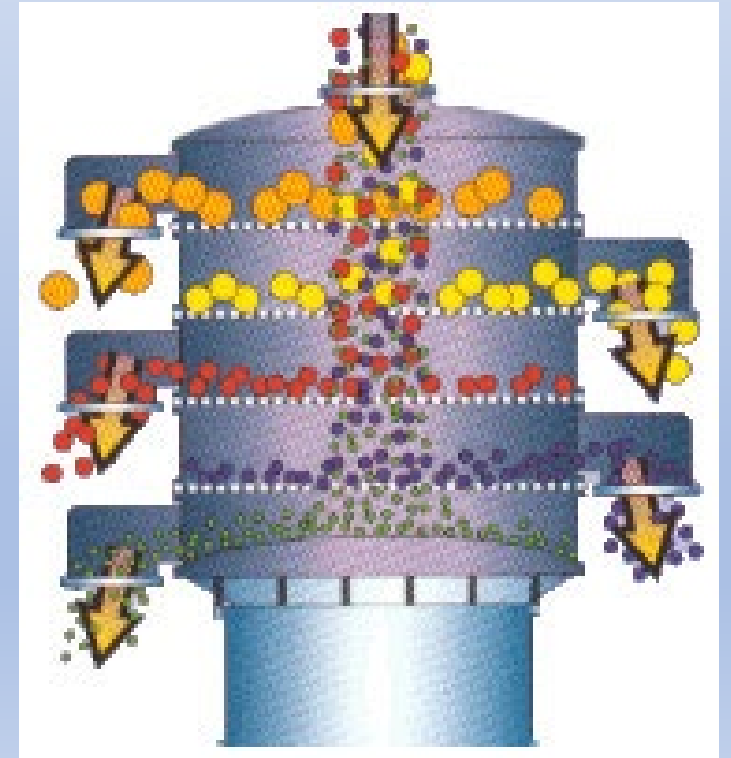
Scenario

- A solution is spent. A chemical (a flocculent) is added, and the clean water (without sludge and flocculent) is used for another purpose.
- HSC § 25143.2(d)(1)?



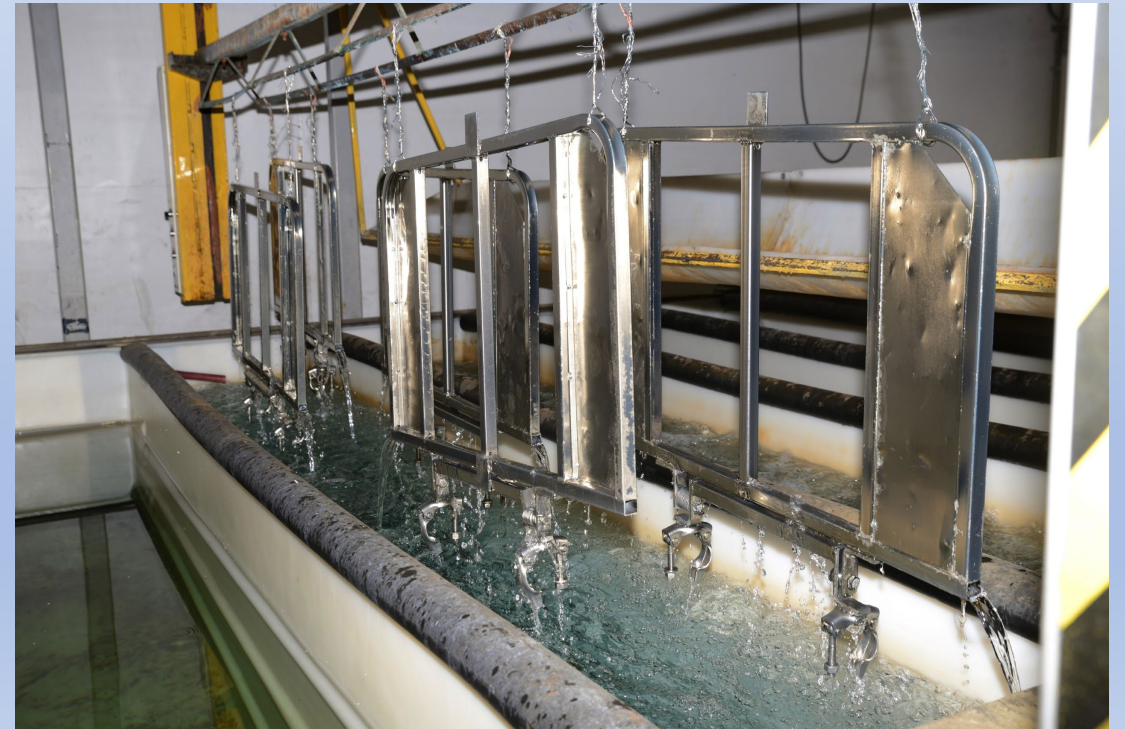
Scenario

- The waste mixture is separated into different components before it can be reused.
- HSC § 25143.2(d)(1)?



Scenario

- Plating wastewaters that are RCRA hazardous waste are “recycled” onsite in a Wastewater Treatment Unit and then the water is reused onsite.
- HSC § 25143.2(d)(1)?



HSC § 25143.2(d)(2)

- HSC § 25143.2(d)(2)(A)
- HSC § 25143.2(d)(2)(B)
- HSC § 25143.2(d)(2)(C)
- HSC § 25143.2(d)(2)(D)

HSC § 25143.2(d)(2)

- HSC § 25143.2(d)(2)(A) – The material is a product processed from a hazardous waste or handled at an authorized facility if the product *meets both conditions* (i and ii):
 - (i) no constituents other than for those for which the material is being recycled.
 - (ii) used or distributed or sold for use in a manner for which it is commonly used.

HSC § 25143.2(d)(2)

- HSC § 25143.2(d)(2)(A) – The material is a product **processed** from a hazardous waste or handled at an authorized a facility if the product meets both conditions (i and ii).
 - What does process mean?
 - What are requirements for this section?
 - Misconceptions?

California Code of Regulations

- § 66261.3(c)(1): Any waste generated from the treatment, storage, or disposal of a hazardous waste is a hazardous waste. (However, materials that are reclaimed from wastes and that are used beneficially are not wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal).
- § 66266.11(a): No person shall create, manufacture, or produce from a hazardous waste, a product which poses a hazard to health, safety or the environment under the circumstances of its intended use.

Scenario

- Company A processes its used solvent onsite using a Transportable Treatment Unit (TTU). After onsite treatment it is sent to Company B (offsite) to be distilled, prior to its reuse by Company A. Company A claims the treated solvent is product-like prior to distillation.
- What is the status of solvent after onsite treatment and prior to distillation?



HSC § 25143.2(d)(2)

HSC § 25143.2(d)(2): (d)(2)(B), (d)(2)(C) and (d)(2)(D)

Three exclusions related to petroleum wastes
(refinery wastes and petroleum fuel distribution wastes)

- (B) Onsite- petroleum refinery waste (oil): petroleum coke
- (C) Oily waste, used oil or spent nonhalogenated solvents
- (D) Off-spec fuels sent back to refineries

HSC § 25143.2(d)(2)(C)

SUMMARY of HSC § 25143.2(d)(2)(C):

- **Oily waste**, used oil, or spent nonhalogenated solvent that is managed by the owner or operator of a refinery.
- **Requirements:**
 - i. Material is burned in an industrial boiler, an industrial furnace, an incinerator or a utility boiler.
 - ii. Material is managed at the site where it was generated; managed at another site owned or operated by the generator, a corporate subsidiary of the generator.
 - iii. Material does not contain constituents, other than those for which the material is being recycled, that render the material hazardous.

HSC § 25143.2(d)(2)(D)

- The material is a fuel that is transferred to, and processed into, a fuel or other refined petroleum product at a petroleum refinery, as defined in paragraph (4) of subdivision (a) of section 25144, and **meets one** of the following requirements:
 - (i) The fuel has been removed from a fuel tank and is contaminated with water or nonhazardous debris, of not more than 2 percent by weight, including, but not limited to, rust or sand.
 - (ii) The fuel has been unintentionally mixed with an unused petroleum product.

Scenario

- Gasoline removed from an automobile tank at salvage yards and transferred (without prior processing) to another person for use as gasoline in another gasoline engine.



- What is the regulatory status of gasoline?

Scenario resources

1. ADVISORY ON THE MANAGEMENT OF SPENT FUELS:

https://dtsc.ca.gov/wp-content/uploads/sites/31/2021/12/DTSC-Advisory-on-the-Management-of-Spent-Fuels_12202021_V7-Final_a.pdf

2. TRAINING RESOURCES:

- 2022 Hot Topics in Waste Classification and Recycling (accessible via <https://calcupa.org/conference/index.html>)
- 2023 Hot Topics in Waste Classification and Recycling

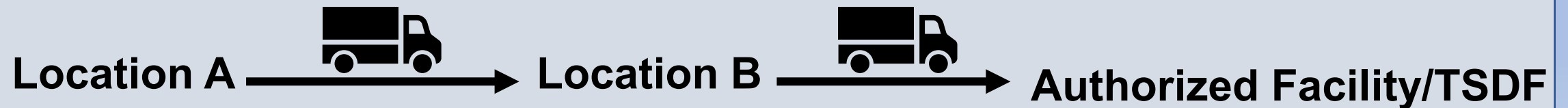
HSC § 25143.2(d)(3) and (d)(4)

- HSC § 25143.2(d)(3) and (d)(4)
- **Transportation Exclusions**
 - (d)(3): HW is transported between 2 locations operated by the person who generated it and is recycled at the last location operated by that person. **Conditions apply!**
 - (d)(4): HW is transferred between 2 locations operated by the person who generated it and is recycled at an authorized offsite HW facility. **Conditions apply!**

HSC § 25143.2(d)(3)



HSC § 25143.2(d)(4)



HSC § 25143.2(d)(3) and (d)(4)

CONDITIONS

- Transfer: employee or registered hauler
- Handling
- Management of materials
- Information for the operating log
- Documentation

Scenario

ABC Machine Inc. has several facilities in Northern California and generates the same non-RCRA hazardous waste at each of the facilities. When a 55-gallon drum of waste is generated or after 90 days, the waste is transported by the company to the main facility. The transportation of the waste meet all the applicable requirements of Health and Safety Code. The waste is reclaimed by the main facility and used by the company for the original purpose of the material.

- Question: Which of the following provision is applicable for this scenario?
 - A. HSC § 25143.2(d)(3)
 - B. HSC § 25143.2(d)(4)

BREAK TIME



Quick Review

Hazardous
Secondary
Material
40 CFR § 260.10

A hazardous
waste
capable of
being
recycled.

Recyclable
Material
HSC § 25120.5

REMEMBER

If an Excluded Recyclable Material meets the conditions of the exclusion, what is being handled is no longer a waste.



HSC § 25143.2(d)(5)

Use or Reuse exclusion

The material is used or reused **as an ingredient in an industrial process** to make a product if the material meets all of the following requirements: (A-C)

- (A) Not a RCRA wastewater (conditions apply).
- (B) Air discharge procedures do not contain HW constituents and in compliance with applicable air pollution control laws.
- (C) Allowable treatment procedures.



HSC § 25143.2(d)(6)

Use or Reuse exclusion

The material is used or reused **as a safe and effective substitute for commercial products**, if the material meets all of the following requirements: (A-C)

- (A) Not a RCRA wastewater (conditions apply).
- (B) Air discharge does not contain HW constituents and meets air pollution control laws.
- (C) Allowable treatment procedures.



REMEMBER

The treatment procedures under HSC sections 25143.2(d)(5) and (d)(6) are allowed prior to introduction of the recyclable material into the industrial process that produces the end products.



HSC § 25143.2(d)(5)(C) and (d)(6)(C)

(C) The material is not being treated, except by one or more of the following procedures:

- (i) Filtering.
- (ii) Screening.
- (iii) Sorting.
- (iv) Sieving.
- (v) Grinding.
- (vi) Physical or gravity separation without the addition of external heat or any chemicals.
- (vii) pH adjustment.
- (viii) Viscosity adjustment.



Scenario

Molding sands at a brass foundry are contaminated with concentrations of copper and zinc that exceed regulatory thresholds. They are screened to remove clay binders. The molding sands are then reused for molding brass fixtures until the sands are spent.

What section of 25143.2 would they be eligible for?



Scenario

Molding sands at a brass foundry are contaminated with concentrations of **copper and zinc** that exceed regulatory thresholds. They are screened to remove clay binders. The molding sands are then reused for molding brass fixtures until the sands are spent.

What section of 25143.2 would they be eligible for?



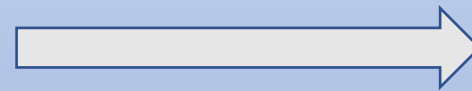
- What is a spent material?

Any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing.

- Copper and zinc are [non-RCRA metals](#).

- What kind of treatment?

Screening



Acceptable



Scenario

An air pollution control scrubber produces acidic ethylene glycol solution with a $\text{pH} \leq 2$. When the effectiveness of the solution diminishes, the tank is bled down and the ethylene glycol is removed. The waste ethylene glycol is transported to a third-party manufacturer who uses all the material as a main ingredient to manufacture another product. The treatment process involves heating, application of vacuum, and removal of water and salts constituents.

Does it qualify as an excluded recyclable material under HSC § 25143.2(d)(5)?



Scenario

What do we know about the waste ethylene glycol?

- Type of recyclable material?
 - Sludge: solid, semi-solid, or **liquid waste** generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or **air pollution control facility** exclusive of the treated effluent from a wastewater treatment plant.” **[Emphasis added.]**
- Is it a hazardous waste? Yes, corrosive.
- How will it be recycled? Reclamation.



Scenario

An air pollution control scrubber produces an acidic ethylene glycol solution with a $\text{pH} \leq 2$. When the effectiveness of the solution diminishes, the tank is bled down and the ethylene glycol is removed. The waste ethylene glycol is transported to a third-party manufacturer who uses all the material as a main ingredient to manufacture another product. The treatment process involves heating, application of vacuum, and removal of water and salts constituents.

Does it qualify as an excluded recyclable material under HSC § 25143.2(d)(5)?



Federal Definition of Solid Waste

40 CFR § 261.2 (Table 1)

Secondary Materials	Use constituting disposal 1	Energy recovery/fuel 2	Reclamation 3	Speculative Accumulation 4
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in 40 CFR 261.31 or 261.32)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	--	(*)
By-products (listed 40 CFR 261.31 or or 261.32)	(*)	(*)	(*)	(*)
By-products exhibiting a characteristic of hazardous waste	(*)	(*)	--	(*)
Commercial chemical products listed in 40 CFR 261.33	(*)	(*)	--	--

Note: See 40 CFR for complete table.



State Definition of Waste

22 CCR § 66261.2 (Table 1)

Secondary Materials	Use constituting disposal	Energy recovery/fuel	Reclamation	Speculative Accumulation
	1	2	3	4
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in § 66261.31 or 66261.32)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	(**)	(*)
By-products (listed in § 66261.31 or or 66261.32)	(*)	(*)	(*)	(*)
By-products exhibiting a characteristic of hazardous waste	(*)	(*)	(**)	(*)
Commercial chemical products (listed in § 66261.33)	(*)	(*)	(**)	(**)



Scenario

What do we know about the waste ethylene glycol?

- Sludge
- Characteristic hazardous waste (corrosive)
- Not a RCRA HW [40 CFR § 261.2(c)(3)]
- Non-RCRA HW [22 CCR § 66261.2(d)(3)]
 - As a non-RCRA HW, it may be eligible as an excluded recyclable material, if it meets all the conditions of the exclusion.



Scenario

HSC § 25143.2(d)(5) Use or Reuse exclusion

The material is used or reused as an ingredient in an industrial process to make a product if the material meets all of the requirements in (A-C).

Do the treatment procedures for the waste ethylene glycol fall under (d)(5)(C)?



Scenario

No!

Heating is not an allowable treatment procedure so the waste ethylene glycol does not meet the conditions of HSC § 25143.2(d)(5).

(d)(5)(C)(vi) Physical or gravity separation
without the addition of external heat or
any chemicals



HSC § 25143.2(d)(7)

- Applies to chlorofluorocarbons and hydrochlorofluorocarbons (mobile air conditioning systems, refrigeration systems, fire extinguisher products and contained within foam products)
- Allows reclamation
- Must be reused or recycled and is used in heat transfer equipment.
- Federal counterpart is 40 CFR § 261.4(b)(12)



(e) Overrides

HSC § 25143.2(e)(1) to (e)(7)

Recyclable materials managed as fully regulated hazardous wastes.

No matter what you think you have in (b), (c), or (d), if recycling in a certain way in (e), you don't get to take advantage of (b), (c), or (d).

Subdivisions (e)(1) through (e)(4) are red flags. Subdivisions (e)(5) through (e)(7) apply to specific wastestreams.



HSC § 25143.2(e)(1)

Use Constituting Disposal (UCD)

- (1) *Materials that are a RCRA hazardous waste*, as defined in Section 25120.2, used in a manner constituting disposal, or used to produce products that are applied to the land, including, but not limited to, materials used to produce a fertilizer, soil amendment, agricultural mineral, or an auxiliary soil and plant substance.



Use Constituting Disposal

22 CCR § 66261.2(d)(1)(A)

Recycling is (or involves) “use constituting disposal” if the recyclable material is:

- Directly applied to or placed on the land, or is
- Indirectly applied to the ground such as products applied to, placed on, or otherwise contained in products applied to or placed on the land.



HSC § 25143.2(e)(2) - UCD

(2) *Materials that are a non-RCRA hazardous waste*, as defined in Section 25117.9, and used in a manner constituting disposal or used to produce products that are applied to the land as a fertilizer, soil amendment, agricultural mineral, or an auxiliary soil and plant substance. **The department may adopt regulations to exclude materials from regulation pursuant to this paragraph.**

22 CCR Chapter 16, Article 3



22 CCR § 66266.21

- Requirements for recyclable materials placed on the land
- May be eligible for exclusion or exemption in HSC § 25143.2 and not regulated pursuant to HSC § 25143.2(e)(2), if certain requirements are met
- For non-RCRA hazardous waste only



Use Constituting Disposal

- Case-by-case basis.
- Please see all requirements. A few to highlight from § 66266.21 are:
 - Does it pass the WET?
 - Show you didn't pass it by dilution (see calculation)
 - Engineer or other qualified person's certification that product produced from the recyclable material meets applicable standards



Scenario

Used sulfuric acid, a RCRA hazardous waste, from a metal finishing operation is used in a fertilizer.

Question: What is the material type and activity? Is it eligible for a 25143.2 exclusion?

- A. No, it's a sludge and involves reclamation so that's not allowed in any 25143.2 exclusion.
- B. Yes, ERM. It's a spent material and use constituting disposal.
- C. No, it's fully regulated hazardous waste. It's a RCRA hazardous waste and applied to the land.
- D. Yes, it can work for (d)(5) because that allows for processing. It's a spent material and UCD is allowed because it's a fertilizer.



HSC § 25143.2(e)(1)

- (1) *Materials that are a RCRA hazardous waste*, as defined in Section 25120.2, used in a manner constituting disposal, or used to produce products that are applied to the land, including, but not limited to, *materials used to produce a fertilizer*, soil amendment, agricultural mineral, or an auxiliary soil and plant substance.



Scenario

Waste jewelry sweeps, which exceed regulatory thresholds for nickel (non-RCRA HW), are generated in Long Beach and shipped to a recycling facility in Temecula. The recycling facility processes the waste jewelry sweeps to produce metals bars that involves multiple processing steps. One of these processing steps is the addition of external heat in a natural gas-fired roasting furnace to incinerate combustible materials and impurities. The larger materials are shipped to another facility and used as a safe and effective substitute for raw material in an industrial process. The residual materials are used for road surfacing.

Does this qualify for HSC § 25143.2(d)(6)?



Scenario

What if the processing steps did not involve heat?


- Potentially HSC § 25143.2(d)(6) if all conditions of the exclusion are met
- Need to check (e) overrides next!
 - As a non-RCRA hazardous recyclable material used for road surfacing  look at UCD
 - With (e)(2), need to review 22 CCR Chapter 16, Article 3
 - Generator would need to verify it meets the requirements of 22 CCR § 66266.21



Diagram a Scenario

Let's diagram this one out!

Is it a waste?

Is it a hazardous waste?

Status of material under federal law?

Status of material under State law?

Does it meet the conditions for one of the recycling exclusions or exemptions?



Diagram a Scenario

First concept of statutory construction

KEEP READING!



Diagram a Scenario

Is it a waste?

Yes, **disposal**. Metal dust swept from the floor is combined with filter catch material.

Is it a hazardous waste?

Yes, **non-RCRA** hazardous waste but....

Exceeds regulatory thresholds for nickel

[22 CCR § 66261.24 \(a\)\(2\)\(A\) Table II](#)



Diagram a Scenario

Status of material under federal law?

Pursuant to [HSC § 25117.9](#), a hazardous waste is assumed to be a RCRA hazardous waste until determined it is a non-RCRA hazardous waste.

40 CFR § 261.6(a)(2)(III): Recyclable materials from which precious metals are reclaimed are conditionally exempted from regulation when legitimately recycled (see 40 CFR part 266, subpart f).



Diagram a Scenario

Status of material under State law?

Since the waste jewelry sweeps are conditionally exempt under RCRA, we need to see if they meet a characteristic of hazardous waste for non-RCRA.

Yes, exceeds regulatory thresholds for nickel, which is a non-RCRA HW.

[22 CCR § 66261.24 \(a\)\(2\)\(A\) Table II](#)



Diagram a Scenario

Next, since we know it's a non-RCRA hazardous waste capable of being recycled, we can look to see if it meets one of the conditions of the exclusions or exemptions under HSC § 25143.2.

To see if it meets one of exclusions or exemptions in HSC § 25143.2, we need to read all of that section.



Diagram a Scenario

What is happening to waste jewelry sweeps?

They are used to produce metal bars and fine dust containing precious metals.

Any treatment? [HSC § 25123.5](#)

Yes, addition of external heat in a natural gas-fired roasting furnace to incinerate combustible materials and impurities.

Is this allowable under [HSC § 25143.2\(d\)\(6\)\(C\)?](#)

No.



Diagram a Scenario

But what if the recycler determines a way to not have the addition of external heat and they can meet all the conditions of HSC § 25143.2 (d)(6)(A through C)?

Need to keep reading through HSC § 25143.2(e).

We are told the residual materials are used for road surfacing which is use constituting disposal.



Diagram a Scenario

HSC § 25143.2(e)(2) directs us to 22 CCR Chapter 16, Article 3.

If the generator met the conditions of one of the (d) exclusions in HSC § 25143.2, and then met the requirements beginning with §66266.20 on a case-by-case basis, then it could be eligible for one of the recycling exclusions.

Also, would need to meet the other applicable sections, such as § 25143.9 and § 25143.10.



HSC § 25143.2(e)(3) Burned for Energy Recovery

Materials burned for energy recovery, used to produce a fuel, or contained in fuels, except materials exempted under paragraph (1) of subdivision (c) or excluded under subparagraph (B), (C), or (D) of paragraph (2) of subdivision (d).

- 25143.2(c)(1) – onsite petroleum refinery waste exemption
- 25143.2(d)(2)(B),(C), or (D) – petroleum refinery waste and fuel exclusions



Burning for Energy Recovery

22 CCR § 66261.2(d)(2)(A)

(d) A material is a waste if it is recycled, or accumulated, stored or treated before recycling, by being managed:

(2) through being burned for energy recovery:

(A) materials noted with an “*” in column 2 of Table 1 are wastes when they are:

1. burned to recover energy;
2. used to produce a fuel or are otherwise contained in fuels (in which cases the fuel itself is a waste);



State Definition of Waste

22 CCR § 66261.2 (Table 1)

Secondary Materials	Use constituting disposal	Energy recovery/fuel	Reclamation	Speculative Accumulation
	1	2	3	4
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in § 66261.31 or 66261.32)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	(**)	(*)
By-products (listed in § 66261.31 or or 66261.32)	(*)	(*)	(*)	(*)
By-products exhibiting a characteristic of hazardous waste	(*)	(*)	(**)	(*)
Commercial chemical products (listed in § 66261.33)	(*)	(*)	(**)	(**)



HSC § 25143.2(e)(4) Speculative Accumulation

Materials accumulated speculatively.



Definition of Accumulated Speculatively – 22 CCR § 66260.10

A material is “accumulated speculatively” if it is accumulated (or stored) prior to being recycled and

75 percent of the material in inventory on January 1 has not been recycled at the end of the calendar year.

- This provision serves to prevent indefinite stockpiling of recyclable materials.
- Applied to each material of the same type that is recycled in the same way.



Scenario 1

January 2001						
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

200 lbs. of Zinc dross in storage

December 2001						
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

150 lbs. of the same Zinc dross still in storage

Is the dross being accumulated speculatively?



Scenario 2

QUESTION: ABC Company generates 2,000 lbs. of non-RCRA hazardous waste that fails the TTLC for metals. The waste was generated on April 1, 2022. They can recycle the waste onsite using HSC § 25143.2(d)(1).

On January 16, 2023, none of the waste has been recycled yet. Has the company exceeded their time to store the waste?

Is the material being accumulated speculatively?



Speculative Accumulation

- When did the accumulation start?
- What was the material inventory on Jan. 1st?
- What was the amount of material in and out during the year?
- What are they doing with this material?
- Who has the burden of proof?



HSC § 25143.2(e)(5) to (e)(7)

Specific Wastestreams

- (e)(5): materials that are inherently wastelike
- (e)(6): Used or spent etchants, stripping solutions, and plating solutions sent offsite
- (e)(7): Used oil sent offsite



HSC § 25143.2(e)(5)

Materials determined to be inherently wastelike pursuant to regulations adopted by the department.

What does inherently wastelike mean?

22 CCR § 66261.2(e)

Materials so dangerous they pose a threat to human health and the environment even when recycled.



Inherently wastelike materials

- 22 CCR § 66261.2(e)
 - Dioxin bearing wastes
(RCRA F-listings F020, F021, F022, F023, F026, & F028)
 - Secondary materials fed to a halogen acid furnace
(conditions apply)



HSC § 25143.2(e)(6)

Used or spent etchants, stripping solutions, and plating solutions transported to an offsite facility operated by a person other than the generator and either of two conditions apply [(A) or (B)]

See HSC § 25120.55



HSC § 25143.2(e)(7) – Used Oil

Different ways for used oil, as defined in HSC § 25250.1(a), can be excluded or exempted

- Comply with Part 279 in 40 CFR
- Subdivision (e) is only an override for section 25143.2



HSC § 25143.2(e)(7)(A) – Used Oil

Certain exclusions in 25143.2 (d) that pertain to used oil

- HSC § 25143.2 (d)(2)(B), (d)(2)(C)
 - Petroleum refineries exclusions
- HSC § 25143.2(d)(4)
 - Transportation exclusion

Also, HSC § 25250.1(b) or HSC § 25250.3



HSC § 25143.2(e)(7)(B) – Used Oil

Other ways used oil is excluded or exempted is when

- Used or reused onsite where generated

[HSC § 25143.2(d)(1)]

- Transported between locations by the same person & used or reused at the last site where it is finally collected

[HSC § 25143.2(d)(3)]



HSC § 25143.2(e)(7)(B) – Used Oil

Provided none of the following occur:

UCD

Burned for energy recovery or used to produce a fuel*

Accumulated speculatively

Inherently wastelike



HSC § 25143.2(f)

Documentation Requirements

- If claiming exclusion or exemption under 25143.2, a person managing a recyclable material needs to provide the following information:
 - A. Name, address and phone number of the facility
 - B. Any other information related to the management of the recyclable material.
- Maintain adequate records to demonstrate
 - A. Known market or proper disposition (e.g., contract, viable product)
 - B. Meet the requirements of exemption/exclusion
- Subject to inspection (HSC § 25185)



HSC § 25143.2(g)

For purposes of Part 2 (commencing with Section 78000) of Division 45, recyclable materials excluded from classification as a waste pursuant to this section are not excluded from the definition of hazardous substances in paragraph (7) of subdivision (a) of Section 78075.

(Amended by Stats. 2022, Ch. 258, Sec. 39. (AB 2327) Effective January 1, 2023. Operative January 1, 2024, pursuant to Sec. 130 of Stats. 2022, Ch. 258.)



HSC § 25143.2(h)

Used oil that fails to qualify for exclusion pursuant to subdivision (d) solely because the used oil is a RCRA hazardous waste may be managed pursuant to subdivision (d) if the used oil is also managed in accordance with the applicable requirements of Part 279 (commencing with Section 279.1) of Title 40 of the Code of Federal Regulations.



HSC § 25143.2(h) – Used Oil

What does (h) mean?

You need to read all 25143.2(e) to understand (h)!

Used oil

RCRA hazardous waste

Certain HSC § 25143.2 (d) exclusions

- See 25143.2 (e)(7)
- Comply with 40 CFR part 279



HSC § 25143.2(e)(7) – Used Oil

Certain exclusions and exemptions in HSC § 25143.2(d) that pertain to used oil:

- (d)(1)
- (d)(2)(B), (d)(2)(C)
- (d)(3)
- (d)(4)



HSC § 25143.9 – Requirements for Excluded Recyclable Materials

Recyclable material shall not be excluded from classification as a waste pursuant to HSC § 25143.2(b) and § 25143.2(d), unless all of the following requirements are met:

- a. Label as “Excluded Recyclable Material”
- b. HMBPs including, but not limited to, emergency response plans and procedures
- c. Storage and handling include secondary containment
- d. Transboundary export requirements (HSC § 25162.1)



EXCLUDED RECYCLABLE MATERIAL

STATE & FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY OR YOUR STATE DEPARTMENT OF TOXIC SUBSTANCES CONTROL.

GENERATOR INFORMATION:

NAME _____

ADDRESS _____ PHONE _____

CITY _____ STATE _____ ZIP _____

EPA / MANIFEST ID NO. / DOCUMENT NO. _____ / **NOT APPLICABLE**

EPA WASTE NO. _____ CA WASTE NO. _____ ACCUMULATION START DATE _____

CONTENTS, COMPOSITION: _____

PHYSICAL STATE: SOLID LIQUID | HAZARDOUS PROPERTIES: FLAMMABLE TOXIC
 CORROSIVE REACTIVITY OTHER _____

DO NOT PROPER SHIPPING NAME AND UN OR HA NO. WITH PREFIX

HANDLE WITH CARE!

EXEMPT



HSC § 25143.10

Recyclable Materials Report

- Not a condition of HSC § 25143.2, but applies to all of that section
- If recycle more than 100 kg (220 lbs) per month
- Every two years report in CERS for previous two years of recycling



REMEMBER

- The only person who can claim an exclusion, and proceed to manage as excluded recyclable material, is the generator.

Look at the entire process from beginning to end to make sure all the conditions are met along the way.

- The recycler may file on behalf of the generator, but the recycler cannot claim the exclusion.



HSC § 25143.10 (e) and (f)

Recyclable Materials Report

Subdivision (e)

- RMR notification is not required until the recyclable material exits the unit in which it was generated or unless the material remains in the unit for more than 90 days after the unit ceases to be operated.

Subdivision (f)

- CUPA may exempt any person who operates antifreeze recycling units or solvent distillation units where the RM is returned to productive at site of generation or require less information.



Recyclable Materials Report

Two pages with 5 sections

- Generator doesn't need to file if the offsite recycler submits the RMR. The offsite recycler would notify the generator. Generator still has to comply with all the terms and conditions of the exclusion or exemption.
 - If recycling exclusion requires something specific of the recycler, that requirement has to be met or the generator loses the exclusion for their recyclable material.
 - Recycler doesn't get to assert the claim on behalf of the generator. Generator has to comply from point-of-generation.



Recyclable Materials Report

[Two pages with 5 sections](#)

- One recyclable material and manner of recycling per Page 2, onsite or offsite.
- If the waste changes or the manner in which it is recycled changes, a new RMR must be submitted.



UNIFIED PROGRAM CONSOLIDATED FORM **HAZARDOUS WASTE**
RECYCLABLE MATERIALS REPORT – PAGE 1
FOR EXCLUDED OR EXEMPTED MATERIALS ONLY

FACILITY ID#	1	EPA ID #	2
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BUSINESS NAME (Same as FACILITY NAME or DBA – Doing Business As) 3

DATES OF REPORTING PERIOD	BEGINNING DATE	500	ENDING DATE	501
---------------------------	----------------	-----	-------------	-----

I. TYPE OF RECYCLING ACTIVITIES

If yes, please follow instructions.

<p>1. Do you recycle more than 100 kg/month of excluded or exempted recyclable material at the same location at which the material was generated (onsite recycling)?</p> <p style="text-align: center;"><input type="checkbox"/> YES <input type="checkbox"/> NO 502</p>		<p>4 If YES, you are both the generator and recycler. Complete one Recyclable Materials Report. Do not complete Parts II and V.</p>
<p>2. Do you recycle more than 100 kg/month of non-manifested, excluded recyclable materials received from an offsite location (offsite recycling)?</p> <p style="text-align: center;"><input type="checkbox"/> YES <input type="checkbox"/> NO 503</p>		<p>4 If YES, you are an offsite recycler but not the generator. Complete a Recyclable Materials Report for each generator that sends you materials.</p>

--Businesses that only send recyclable materials to an offsite recycler are not required to file this report. --

II. OFFSITE GENERATOR OF RECYCLABLE MATERIAL

Only complete when the generator is different from the recycler.

OFFSITE GENERATOR OF RECYCLABLE MATERIAL 504	OFFSITE GENERATOR EPA ID# 505
STREET ADDRESS 506	PHONE 507
CITY 508	STATE 509 ZIP CODE 510
MAILING ADDRESS (IF DIFFERENT) 511	
CITY 512	STATE 513 ZIP CODE 514

III. CERTIFICATION SECTION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete.

SIGNATURE OF CERTIFIER	DATE 515	NAME OF DOCUMENT PREPARER 516
NAME OF SIGNER (print) 517	TITLE OF SIGNER 518	



UNIFIED PROGRAM CONSOLIDATED FORM
RECYCLABLE MATERIALS REPORT – PAGE 2
FOR EXCLUDED OR EXEMPTED MATERIALS ONLY

HAZARDOUS WASTE

(one description per material recycled, attach additional pages, if needed)

TOTAL NUMBER OF RECYCLABLE MATERIALS _____ 519 Page _____ of _____

FACILITY ID# _____ BUSINESS NAME (Same as FACILITY NAME or DBA – Doing Business As) _____

IV. RECYCLABLE MATERIAL INFORMATION
A. DESCRIPTION

RECYCLABLE MATERIAL NUMBER 520	COMMON NAME OF RECYCLABLE MATERIAL 521	QUANTITY DURING TWO YEAR REPORTING PERIOD 522	UNITS <input type="checkbox"/> a. Gallons <input type="checkbox"/> c. Tons <input type="checkbox"/> b. Pounds <input type="checkbox"/> d. Kilograms 523
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RECYCLABLE MATERIAL DESCRIPTION 524

RECYCLING PROCESS AND BENEFICIAL USE OF RECYCLABLE MATERIAL 525

AUTHORIZING PROVISION OF HSC SECTION 25143.2 526	BASIS FOR CLAIM TO AN EXCLUSION OR EXEMPTION 527
--	--

B. PRODUCT AND CONSTITUENT INFORMATION: OFFSITE ONLY

Only complete if recyclable material was used to make or substitute for a product and operating pursuant to HSC Section 25143.2(b) or (d)(5) or (6).

HAZARDOUS CONSTITUENT 528	HAZARDOUS CONSTITUENT		LIST FINAL PRODUCT(S) MADE FROM THIS RECYCLABLE MATERIAL AND BENEFICIAL USE OF FINAL PRODUCT(S) 533
	In Recyclable Material 529	In Final Product 531	
534	UNITS 530 <input type="checkbox"/> a percent <input type="checkbox"/> b ppm	UNITS 532 <input type="checkbox"/> a percent <input type="checkbox"/> b ppm	539
	535	537	
540	UNITS 536 <input type="checkbox"/> a percent <input type="checkbox"/> b ppm	UNITS 538 <input type="checkbox"/> a percent <input type="checkbox"/> b ppm	545
	541	543	
546	UNITS 542 <input type="checkbox"/> a percent <input type="checkbox"/> b ppm	UNITS 544 <input type="checkbox"/> a percent <input type="checkbox"/> b ppm	551
	547	549	
	UNITS 548 <input type="checkbox"/> a percent <input type="checkbox"/> b ppm	UNITS 550 <input type="checkbox"/> a percent <input type="checkbox"/> b ppm	

If more than four constituents are recycled, attach additional sheets using this same format.

V. DOCUMENTATION OF KNOWN MARKET (Offsite recyclers only)

DOCUMENTATION IS ATTACHED: Offsite recyclers must attach documentation that there was a known market for disposition of the recyclable material and any products manufactured from the recyclable materials and provide copy of this report to the generator when the report is submitted to the CUPA. (HSC Section 25143.10(a)(3)(A)) 552





Legitimate recycling vs. Sham recycling



Sham recycling criteria

- January 4, 1985, Federal Register (Volume 50, Number 3)
- RCRA Online 11426, U.S. EPA Memo, Sylvia Lowrance, April 26, 1989
 - <https://archive.epa.gov/epawaste/hazard/web/pdf/11426.pdf>

Sham recycling criteria

- **FACTORS:**

- Analogous raw material or product?
 - Compare: hazardous characteristics, levels of hazardous constituents, amount, economic value, effective, recovery
- Handling?
 - Storage, adequate records
- Toxic constituents: “along for the ride”?
- Product: market?
 - Contract

DTSC response letters: Sham recycling criteria

- Recycling Of Spent Process Solutions, Wastewaters, and Heavy Metal Sludge Into Concrete Products, September 10, 1999. Available at: <https://dtsc.ca.gov/wp-content/uploads/sites/31/DORY/WASTE-REDUCTION-RECYCLING-BF-GOODRICH-AEROSPACE.pdf>.
- Offsite Use Of Spent Lithium Hydroxide In Cement And/Or Concrete, August 23, 1996. Available at: <https://dtsc.ca.gov/wp-content/uploads/sites/31/DORY/LITHIUM-HYDROXIDE-FMC-CORPORATION.pdf>.
- Recycling Spent Plastic Abrasive Material To Produce Activated Charcoal, May 19, 1999. Available at: <https://dtsc.ca.gov/wp-content/uploads/sites/31/DORY/ABRASIVES-PATENT-PLASTICS.pdf>.

SUMMARY

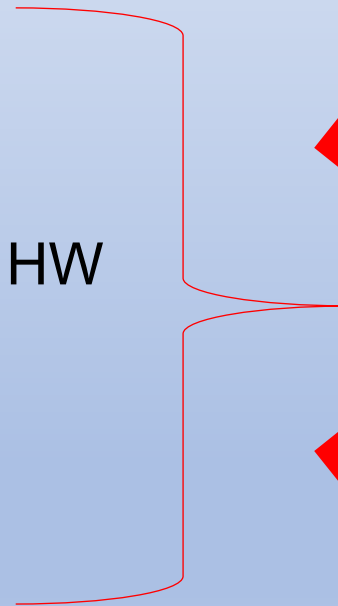
- HSC § 25143.2:

(b) Exclusions: RCRA and non-RCRA HW

(c) Permit exemptions: RCRA and non-RCRA HW

(d) Exclusions: non-RCRA HW

CONDITIONS APPLY!!!



PROHIBITIONS:
HSC § 25143.2(e)

Scenarios: Hazardous Waste Recycling



- Department of Toxic Substances Control Online Reference Library (DORY): <https://dtsc.ca.gov/dory/>
- DORY: formal responses by DTSC regarding hazardous waste identification, classification, and recycling.



QUESTIONS?

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