



# WHERE OBJECTIVITY FLOURISHES



## EXITING RCRA IN SUPPORT OF THE CIRCULAR ECONOMY

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# AGENDA

- Solid Waste / Hazardous Waste Determination Overview
  - Table 1
  - Materials that are not Solid Waste
  
- Long Standing Practical Hazardous Waste Exclusions
  - Recycle / Reuse
  
- “New” Definition of Solid Waste
  - Hazardous Secondary Materials – Reclamation
  - Legitimacy – Four Factors
  - Notifications
  
- Questions & Answers

# CASE STUDY : DIRECTLY REUSING SODIUM HYDROXIDE SOLUTION



40 – 50% Sodium Hydroxide Solution produced

Load into totes for shipment to end user



Material safely transferred to storage facility

Storage until requested by end user due to small size of site and lack of storage area

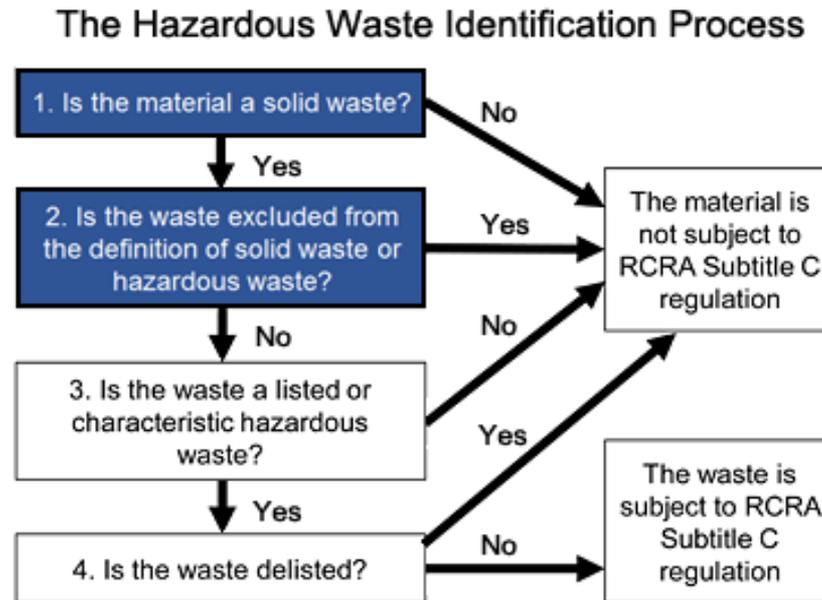


End User receives materials as needed for Waste Hydrolysis Process

400 MT Annually

# WASTES EXCLUDED FROM HAZARDOUS WASTE REGULATION

A material must first be classified as a Solid Waste in order to be classified as Hazardous Waste. USEPA allows for **Exclusions** from the definition of Solid Waste. Once **excluded** it is not regulated as a Hazardous Waste.



# 40 CFR § 261.2 – TABLE 1

	Use constituting disposal (§ 261.2(c)(1))	Energy recovery/fuel (§ 261.2(c)(2))	Reclamation (§ 261.2(c)(3)), except as provided in §§ 261.4(a)(17), 261.4(a)(23), 261.4(a)(24) or 261.4(a)(27)	Speculative accumulation (§ 261.2(c)(4))
	1	2	3	4
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in <a href="#">40 CFR Part 261.31</a> or <a href="#">261.32</a> )	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
By-products (listed in <a href="#">40 CFR 261.31</a> or <a href="#">261.32</a> )	(*)	(*)	(*)	(*)
By-products exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
Commercial chemical products listed in <a href="#">40 CFR 261.33</a>	(*)	(*)	-	-
Scrap metal that is not excluded under <a href="#">40 CFR 261.4(a)(13)</a>	(*)	(*)	(*)	(*)

# 40 CFR § 261.2 – TABLE FOCUS

**Column 3 - Reclaimed.** Materials noted with a “-” in column 3 of Table 1 are not solid wastes when reclaimed. Materials noted with an “\*” in column 3 of Table 1 are solid wastes when reclaimed unless they meet the requirements of § 261.4(a)(17), or 261.4(a)(23), 261.4(a)(24), or 261.4(a)(27).

Reclamation: According to the RCRA regulations at 40 CFR 261.1(c)(4), “a material is ‘reclaimed’ if it is processed to recover a usable product, or if it is regenerated...”

- Characteristic sludges being reclaimed
- Characteristic by-products being reclaimed
- Commercial chemical products being reclaimed

# DEFINITIONS USED IN TABLE 1 AND 261

## **Sludge**

Means any 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.

## **By-Product**

A “by-product” is a material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residues such as slags or distillation column bottoms. The term does not include a co-product that is produced for the general public's use and is ordinarily used in the form it is produced by the process. (Co-products are not referenced, thus are excluded from reference. )

## **Commercial Chemical Product**

A chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical any technical grades of the chemical and all formulations in which the chemical is the sole active ingredient

# REGULATORY EXCLUSIONS AND ALTERNATIVE STANDARDS FOR THE RECYCLING OF MATERIALS, SOLID WASTES AND HAZARDOUS WASTES

In order to encourage hazardous waste recycling, RCRA excludes three types of what we would consider to be Hazardous Wastes from the definition of solid waste:

## 261.2 Use/Reuse

- **Used as an Ingredient:** If a material is directly used as an ingredient in a production process without first being reclaimed, then that material is not a solid waste.
- **Used as a Product Substitute:** If a material is directly used as an effective substitute for a commercial product (without first being reclaimed), it is exempt from the definition of solid waste.
- **Returned to the Production Process:** When a material is returned directly to the production process (without first being reclaimed) for use as a feedstock or raw material, it is not a solid waste.

# 40 CFR § 261.2 – DEFINITION OF SOLID WASTE

**(f) Documentation of claims that materials are not solid wastes or are conditionally exempt from regulation.** Respondents in actions to enforce regulations implementing subtitle C of RCRA who raise a claim that a certain material is not a solid waste, or is conditionally exempt from regulation, must demonstrate that there is a known market or disposition for the material, and that they meet the terms of the exclusion or exemption. In doing so, they must provide appropriate documentation (such as contracts showing that a second person uses the material as an ingredient in a production process) to demonstrate that the material is not a waste or is exempt from regulation.

In addition, owners or operators of facilities claiming that they actually are recycling materials must show that they have the necessary equipment to do so.

# DOCUMENT, DOCUMENT, DOCUMENT



# DEFINITION OF SOLID WASTE & HAZARDOUS SECONDARY MATERIALS

In October 2008, EPA published a final rule revising the definition of solid waste by promulgating two exclusions:

- one for hazardous secondary material recycled under the control of the generator (the generator-controlled exclusion, currently found at Title 40 of the Code of Federal Regulations, or CFR, in section 261.4(a)(23)),
- and one for hazardous secondary material transferred to a third party for recycling (the transfer-based exclusion, currently found at 40 CFR sections 261.4(a)(24) and (25)). The 2008 DSW rule also codified a definition of legitimate recycling.

# DEFINITION OF SOLID WASTE & HAZARDOUS SECONDARY MATERIALS

In January 2015, EPA revised the 2008 final rule by, among other things, (1) replacing the transfer-based recycling exclusion with the verified recycler exclusion, and (2) strengthening the definition of legitimate recycling.

The United States Court of Appeals for the District of Columbia Circuit issued a decision on the 2015 final rule on July 7, 2017 and amended it on March 6, 2018. These orders

- (1) vacated the 2015 verified recycler exclusion (except for certain provisions) and reinstated the transfer-based exclusion from the 2008 rule to replace it;
- (2) upheld the containment and emergency preparedness provisions of the 2015 rule, thus including them in the reinstated transfer-based rule;
- (3) vacated the fourth factor of the 2015 definition of legitimate recycling and reinstated the 2008 version of the fourth factor to replace it.

# HAZARDOUS SECONDARY MATERIALS – DEFINITION

## 40CFR § 260.10

*Hazardous secondary material* means a secondary material (e.g., spent material, by-product, or sludge) that, when discarded, would be identified as hazardous waste under part 261 of this chapter.

# HAZARDOUS SECONDARY MATERIALS – EXCLUSIONS

- **Generator Controlled** exclusion - Hazardous secondary material generated and legitimately reclaimed within the United States or its territories and under the control of the generator §261.4(a)(23)
- **Transfer Based** exclusion - Hazardous secondary material that is generated and then transferred for the purpose of reclamation is not a solid waste §261.4(a)(24)
- **Remanufacturing Based** exclusion - Hazardous secondary material that is generated and then transferred to another person for the purpose of remanufacturing is not a solid waste §261.4(a)(27)

# GENERATOR CONTROLLED EXCLUSION

Three ways that this particular exclusion can be utilized:

1. On-site where the material is generated
2. Within the same company (i.e. it can be transferred to another physical location owned or controlled by the same company)
3. Through the use of tolling agreements (reclaimed/recycled material returned to the generator)

# TRANSFER CONTROLLED EXCLUSION

- Generator transfers the Hazardous Secondary Material to another entity for reclamation.
- Generator needs to perform due diligence to make sure the receiving facility has the necessary equipment safely and compliantly reclaim the HSM and manage the residues.
- Receiving facility must provide financial assurance
- Receiving facility can't have had any RCRA violations in the past 3 years

# REMANUFACTURING EXCLUSION

Applies ONLY to the "remanufacture" (i.e. reclamation) of 18 high value and high volume spent solvents used in 4 specific industries.

Key provisions:

1. Recycled solvent returned to the 4 industries or used to manufacture a product
2. Must develop a joint remanufacturing plan
3. Manage in RCRA equivalent tanks and meet emission standards
4. The four industries are:
  - Pharmaceutical manufacturing (NAICS 325412)
  - Basic organic chemical manufacturing (NAICS 325199)
  - Plastics and resins manufacturing (NAICS 325211)
  - Paints and coating manufacturing (NAICS 325510)

# 40 CFR § 260.43 – LEGITIMATE RECYCLING

## § 260.43 Legitimate recycling of hazardous secondary materials.

(a) Recycling of hazardous secondary materials for the purpose of the exclusions or exemptions from the hazardous waste regulations must be legitimate. Hazardous secondary material that is not legitimately recycled is discarded material and is a solid waste. In determining if their recycling is legitimate, persons must address all the requirements of this paragraph and must consider the requirements of paragraph (b) of this section.

# DEFINITION AND FACTORS OF LEGITIMATE RECYCLING

The four legitimacy factors are as follows:

1. Legitimate recycling must involve a hazardous secondary material that provides a useful contribution to the recycling process or to a product or intermediate of the recycling process.
2. The recycling process must produce a valuable product or intermediate.
3. The generator and the recycler must manage the hazardous secondary material as a valuable commodity when it is under their control.
4. The product of the recycling process must be comparable to a legitimate product or intermediate.

# 40 CFR § 261.2 – SHAM RECYCLING

Sham recycling is recycling that is not legitimate recycling as defined in 40CFR§ 260.43

A hazardous secondary material found to be sham recycled is considered discarded and is a solid waste.

# NOTIFICATIONS – 40CFR § 261.4

Facilities managing Hazardous Secondary Materials must send a notification (EPA Form 8700-12) to the Regional Administrator or authorized state agency PRIOR to operating under the regulatory provision.

- Name and address of the facility
- Name and telephone number of a contact person
- NAICS Code
- Regulation under which the HSM will be managed
- Financial assurance for facilities HSM managing under 261.4(a)(24) or (25)
- Date the facility or expects to begin managing HSM
- A list and description of the HSM(s) that will be managed
- Whether the HSM will be managed in a land-based unit
- The quantity of each HSM managed annually
- Certification signed and dated by an authorized representative

Subsequent notifications must be made on evennumbered years using Form 8700-12.

A facility that stops managing HSM, must notify the Regional Administrator within 30 days

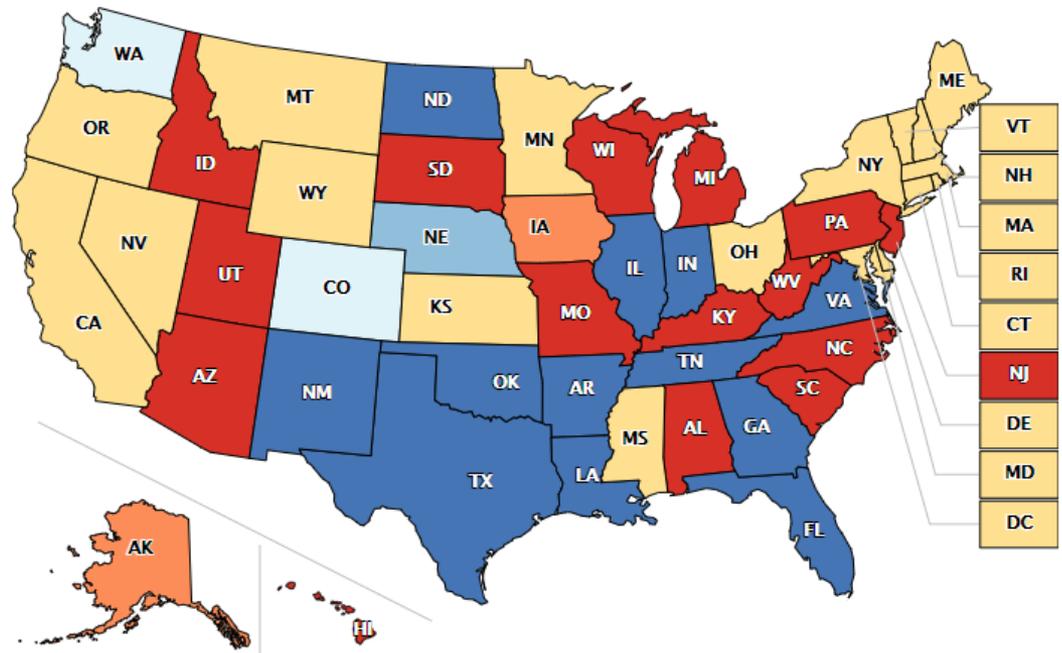
# KEY PROVISIONS THAT APPLY TO ALL EXCLUSIONS

- Only applicable to material generated and managed within the U.S. and its territories (Export allowed but receiving country must assent - very difficult)
- Generators and reclamation facilities must make initial and subsequent notification of the activity (40CFR§260.42)
- No speculative accumulation is allowed
- Must document the recycling is legitimate
- The material must be contained
- Must have emergency response plans
- Must maintain detailed records for three years

# ADOPTION BY THE STATES

- One potential impediment is that the individual states with Authorized programs must adopt it (automatically adopted in Alaska and Iowa)
- Many states adopted the HSM based on the 2015 Definition of Solid Waste but have not adopted the 2018 version.
- If transferring from one state to another, both states must have adopted the HSM regulations
- Some states may require additional notifications and reporting

# ADOPTION BY THE STATES --- AS OF 3/8/21



- Guam
- Trust Territories
- American Samoa
- Northern Mariana Islands
- Virgin Islands
- Puerto Rico

- Adopted entire 2018 rule
- Adopted entire 2015 rule
- Authorized for entire 2015 rule
- Adopted mandatory portions of 2015 rule
- Neither adopted nor authorized
- Administered by EPA Region

# IT TAKES TWO TO TANGO!



QUESTIONS?

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