Webinar Series on the Hazardous Waste Generator Improvements Rule

US EPA

Office of Resource Conservation and Recovery

2019

Hazardous Waste Generator Improvements Rule Webinar

Part 1 – Modules 1 and 2

Module 1: Goals and Background of the Generator Improvements Rule

Contents of Module 1

- Purpose of this Training
- Background
- History of the Rule
- Generator Universe
- Goals of the Final Rule
- Reorganization of the Generator Regulations
- New Definitions
- Revisions to § 262.10

Purpose of this Training

- Spread awareness of this new rule to the states and regulated community
- Describe and explain in more detail the rule's provisions and how this rule may potentially affect generators and states implementing the rule
- Obtain feedback and answer questions from participants about the rule and how it will work
- Discuss what types of training and outreach materials would be most useful for EPA to develop to assist in implementing this rule

Background

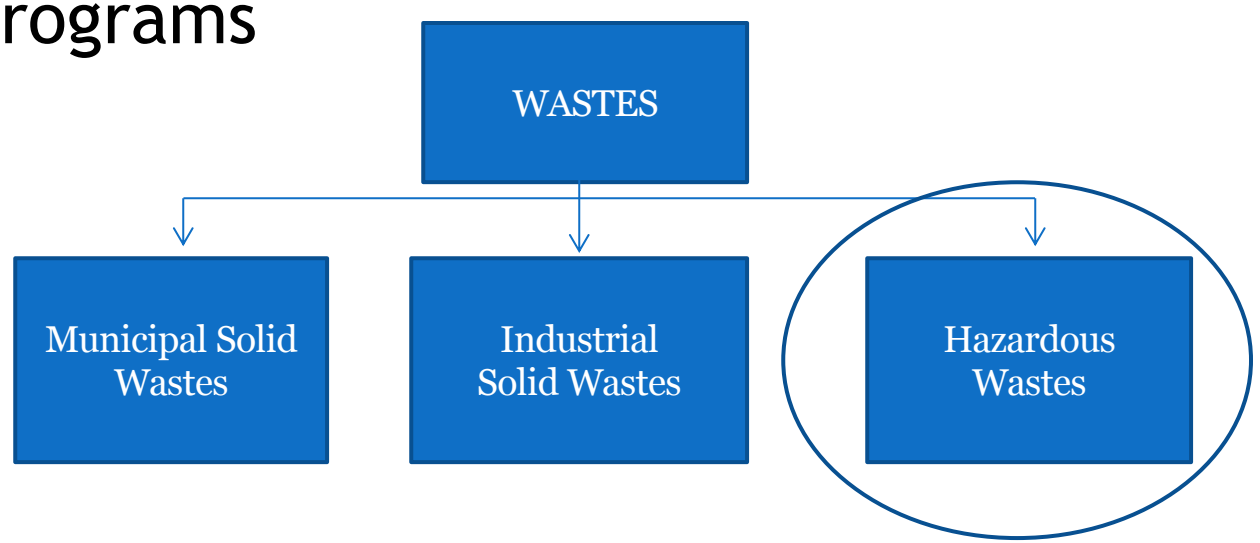
- Resource Conservation and Recovery Act (RCRA) was enacted by Congress in 1976 and regulates the management of solid waste (e.g., garbage), hazardous waste, and underground storage tanks holding petroleum or certain other chemicals.

- RCRA Program Goals
  - To protect human health and the environment from the potential hazards of waste disposal.
  - To conserve energy and natural resources.
  - To reduce the amount of waste generated.

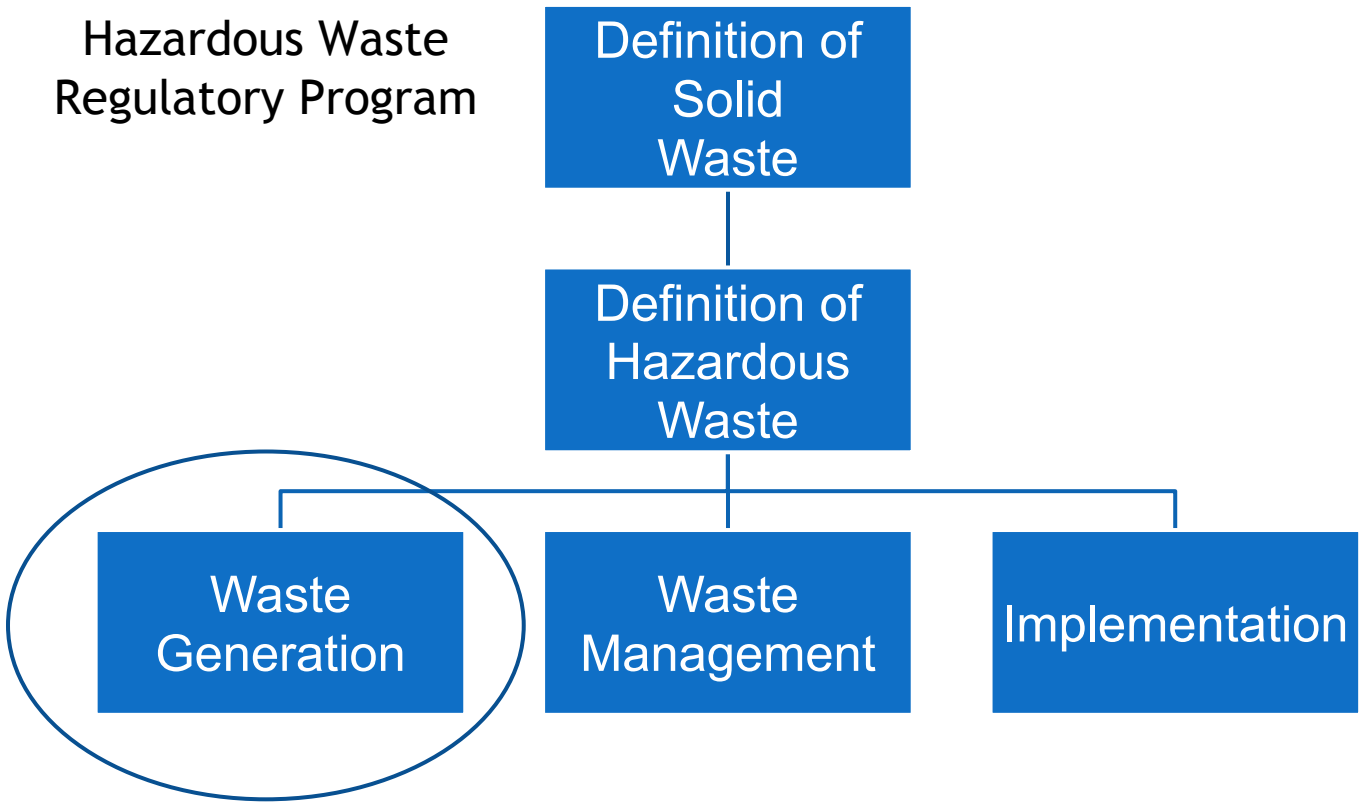
- Statutory Authority for Generator Improvements Rule: Sections 2002, 3001, 3002, 3003, 3004, 3007, 3010 of the Solid Waste Disposal Act of 1965, as amended by the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. 6921, 6922, 6923, 6924.

Background

Waste Programs



Background


Hazardous Waste Regulatory Program
Definition of Solid Waste
Definition of Hazardous Waste
Waste Generation
Waste Management
Implementation

Background

- Waste Generation

- Different levels of regulation for facilities that generate different volumes of hazardous waste on a monthly basis
  - Three categories of Generators:
    - Very small quantity generators (VSQGs) – renamed in this rule (previously called "conditionally exempt small quantity generators (CESQGs)")
    - Small quantity generators (SQGs)
    - Large quantity generators (LQGs)

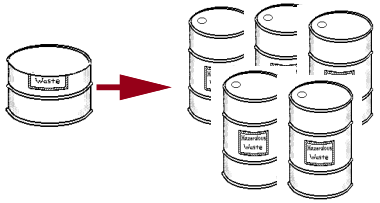
Background

To determine your generator category, count all waste generated <u>in a calendar month:</u>

Very Small Quantity Generator (VSQG)

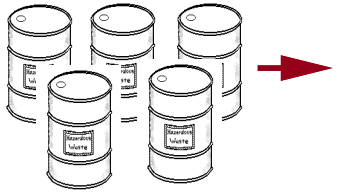
≤ ½ Drum or
27 Gal. Or
220 lbs. Or
100 Kg

Small Quantity Generator (SQG)



½ to 5 Drums or
27-275 Gal. Or
220-2200 lbs. Or
100-1000 Kg.

Large Quantity Generator (LQG)



>5 Drums or
>275 Gal. or
>2200 lbs. or
≥1000 Kg.

Key: 55 Gallon Drum = 440 lbs. = 200 Kg.

History of the Rule

- Most of the generator rules were promulgated in the 1980s and are over thirty years old
- In 2004, ORCR conducted an evaluation of the generator program to improve program effectiveness, reduce compliance costs, and foster an improved relationship with states and the regulated community, published an ANPRM (April 22, 2004, 69 FR 21800) and held four public meetings soliciting comment on the effectiveness of the generator program
  - Comments received included: simplify the regulations, eliminate cross-referencing, codify guidance, provide flexibility for episodic generators, require re-notification for SQGs, provide one-pager basic information for contingency planning, clarify ambiguities, clarify concepts in satellite accumulation, and more

History of the Rule

- After 2004, ORCR took a number of non-regulatory actions to respond to public comments and to improve the generator program:
  - Improved user-friendliness of generator website
  - Developed online guide to the "Hazardous Waste Generator Regulations"
  - Released "Closed Container" guidance
  - Issued memo for turnover of hazardous waste in tanks
  - Issued a Technical Corrections (direct final) rule

- We also engaged in further program evaluation
  - 2013 Hazardous Waste Determination Program Evaluation
  - 2014 Retail NODA OMB Retrospective Review

- However, EPA determined that many of the existing issues with the generator regulations could only be resolved through rulemaking.

- The September 25, 2015, proposed rule grew out of all of these evaluations and presented more than 60 proposed changes to the generator regulations, plus technical corrections, for public comment.

History of the Rule

- Over 230 public comments were received on the Generator Improvements Proposed Rule
- The commenters included:
  - 25 states
  - 10 local governments
  - More than 50 from academic institutions
  - About a dozen from the energy sector/utilities
  - More than 25 from industry and related trade associations
  - 10 from the waste management industry
- Comments covered all aspects of the rule, particularly waste determinations and marking and labeling; independent requirements and conditions for exclusion; VSQG consolidation; and episodic generation

Generator Universe

Generator Category	Number of Facilities	Total Hazardous Waste Generated (tons)	Percent of Total Hazardous Waste Generated
VSQGs	353,400–591,800	46,000–148,000	<1%
SQGs	49,900–64,300	66,000–141,000	<1%
LQGs	20,800	35.2 million	99%
Total	424,100–676,900	35.3–35.4 million	**100%**

* Numbers of VSQGs and SQGs are estimates based on Biennial Report (BR) and limited state data. LQG number is derived from 2013 BR.

Goals of the Final Rule

The 2016 HW Generator Improvements Final Rule —

- Over 60 changes to Hazardous Waste Generator Program that:
  - Reorganizes the regulations to make them more user-friendly and thus enables improved compliance by the regulated community
  - Provides greater flexibility for hazardous waste generators to manage waste in a cost-effective manner through episodic generation and VSQG-LQG consolidation provisions
  - Strengthens environmental protection by addressing identified gaps in the regulations
  - Clarifies certain components of the hazardous waste generator program to address ambiguities and foster improved compliance

Reorganization of Generator Regulations

Provision	Previous Citation	New Citation
Generator Category Determination	§ 261.5(c)–(e)	§ 262.13
VSQG Provisions	§ 261.5(a), (b), (f)–(g)	§ 262.14
Satellite Accumulation Area Provisions	§ 262.34(c)	§ 262.15
SQG Provisions	§ 262.34(d)–(f)	§ 262.16
LQG Provisions	§ 262.34(a), (b), (g)–(i), (m)	§ 262.17

As part of this reorganization, the Agency made conforming changes to citations that reference § 261.5 and § 262.34

Note: See Crosswalk Handout for more details about reorganization.

Definitions of Terms

§ 260.10

- Acute hazardous waste/ Non-acute hazardous waste
- Central accumulation area
- Large quantity Generator/ Small quantity generator/ Very small quantity generator

Revisions to § 262.10

- § 262.10(a)-(l) has been revised in a variety of ways to clarify the structure of the regulations and remove obsolete provisions.
- Obsolete provisions being removed are—
  - § 262.10(c)—outdated provision from the early days of RCRA when the regulations distinguished between generators that shipped off-site for management and those that were also RCRA-designated facilities
  - § 262.10(j)—Laboratory XL regulations
- §§ 262.10(b), (d), and (l) are updated to reflect the new structure of the regulations, but still point generators to counting requirements, import and export requirements, and regulations for academic laboratories
- §§ 262.10(e), (f), (h), & (i) are unchanged

Revisions to § 262.10

- § 262.1 contains definitions of conditions for exemption and independent requirement, used in § 262.10
- § 262.10(a)(1) lists the independent requirements for each generator category
- § 262.10(a)(2) points generators to the conditions for exemption for each generator category
- § 262.10(a)(3) states that hazardous waste must be sent to a designated facility (permitted TSDF or recycler)
- § 262.10(g) is revised to distinguish between independent requirements and conditions for exemption.

Module 2: Independent Requirements for All Generators

Contents of Module 2

- Hazardous Waste Determinations
- Counting and HW Generator Categories
- Mixtures
- Marking and Labeling

Hazardous Waste Determinations

Hazardous Waste Determinations: What Changed

What changed?

- Clarifies and emphasizes that waste determinations **must be accurate**!
- Confirms when a generator's hazardous waste determination must be made
- Elaborates on how to determine if a solid waste is either a listed and/or characteristic hazardous waste
- Reiterates what waste determination records must be kept
- Requires SQGs and LQGs to identify and mark RCRA waste codes on containers prior to sending hazardous waste off-site per § 262.32

Why did we make these changes?

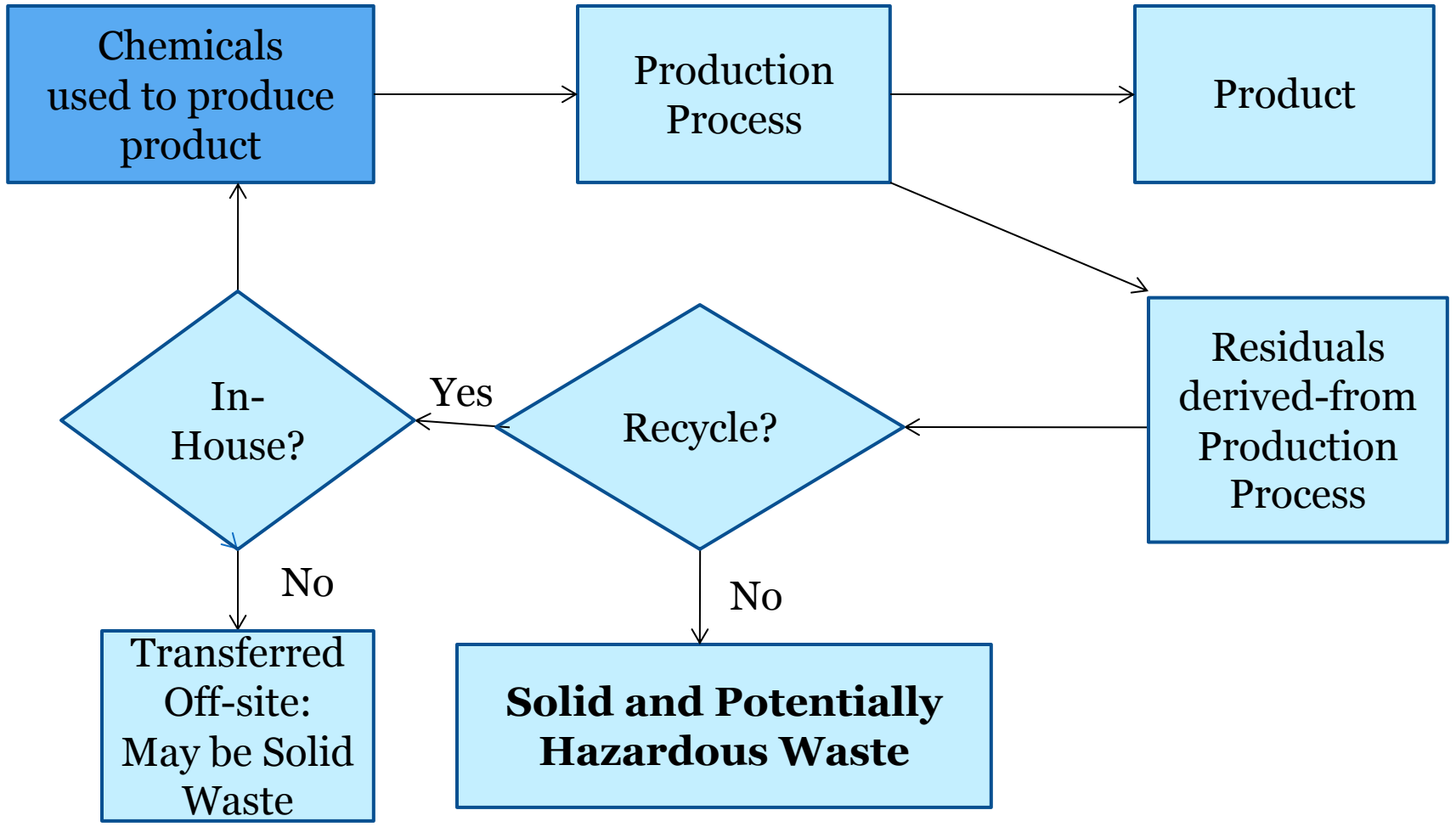
- To improve generator compliance and therefore program success
- From different Agency analyses, generators consistently fail to make an accurate hazardous waste determination, leading to the mismanagement of hazardous waste
  - Non-compliance rates range from 10 to 30 percent
  - Reasons vary from not understanding RCRA to not even being aware of RCRA
- Making an accurate hazardous waste determination reduces the domino effect
  - Hazardous waste most likely will be managed safely from “cradle to grave”

Where It All Begins

Statutory Definition of Solid Waste - 42 U.S.C. § 6903(27)

"The term "solid waste" means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include…"

Putting Things in Context



Making a Hazardous Waste Determination

- § 262.11(a) The hazardous waste determination for each solid waste must be made
  - at the point of waste generation,
  - before any dilution, mixing, or other alteration of the waste occurs,
  - and at any time in the course of its management that it has, or may have, changed its properties as a result of exposure to the environment or other factors that may change the properties of the waste such that the RCRA classification of the waste may change.

§ 262.11(a) Hazardous Waste Determination

The hazardous waste determination for each solid waste must be made at the point of waste generation,…

RCRA Statute is clear:
The term "hazardous waste generation" means the act or process of producing hazardous waste. See Solid Waste Disposal Act, Section 1004.

Why at the point of waste generation?

- To Ensure:
  - Proper waste identification
  - Proper handling and management from "cradle to grave"
  - Compliance with LDRs

§ 262.11(a) Hazardous Waste Determination

- The hazardous waste determination for each solid waste must be made at the point of waste generation, before any dilution, mixing, or other alteration of the waste occurs, …
  - We added this language to make it clear that you need to characterize your waste before dilution, mixing or alteration
  - Alteration of waste: May change waste properties and subsequent handling
    - Example: Letting volatile organic solvents volatilize from an uncovered container

§ 262.11(a) Hazardous Waste Determination

The hazardous waste determination for each solid waste must be made at the point of waste generation, before any dilution, mixing, or other alteration of the waste occurs, **and at any time in the course of its management that it has, or may have, changed its properties as a result of exposure to the environment or other factors that may change the properties of the waste such that the RCRA classification of the waste may change.**

Why inclusion of this statement?

At any time in the course of its management…

- Generators need to understand the chemistry and chemical properties of their waste.
- A SW determined to be non-hazardous at the point of generation can in some cases become hazardous over time while being managed on-site through exposure to the environment (reactive wastes), settling (bi-phasic solvent waste), etc.
- Note: Opposite also true; hazardous wastes can become non-hazardous so long as not diluted or non-LDR compliance treatment
- **Does this mean you need to monitor your waste 24/7?**

Hazardous Waste Determinations (continued)

- Generators may also take conservative approach and manage non-HW as HW if they so choose
- For waste where they are awaiting test results, the generator needs to manage as HW until they get confirmation
  - If it's not HW, they can simply remove the labels and manage as non-hazardous solid waste

§262.11(b) A person must determine whether the solid waste is excluded from regulation under 40 CFR 261.4

- 40 CFR 261.4 has three sections that exclude or exempt certain secondary materials from being either a SW or HW*
  - 40 CFR 261.4(a) identifies secondary materials that are not SW
  - 40 CFR 261.4(b) identifies SW but are not HW
  - 40 CFR 261.4(c) identifies HW which are exempted from certain regulations until the HW exits the unit(s) in which it was generated

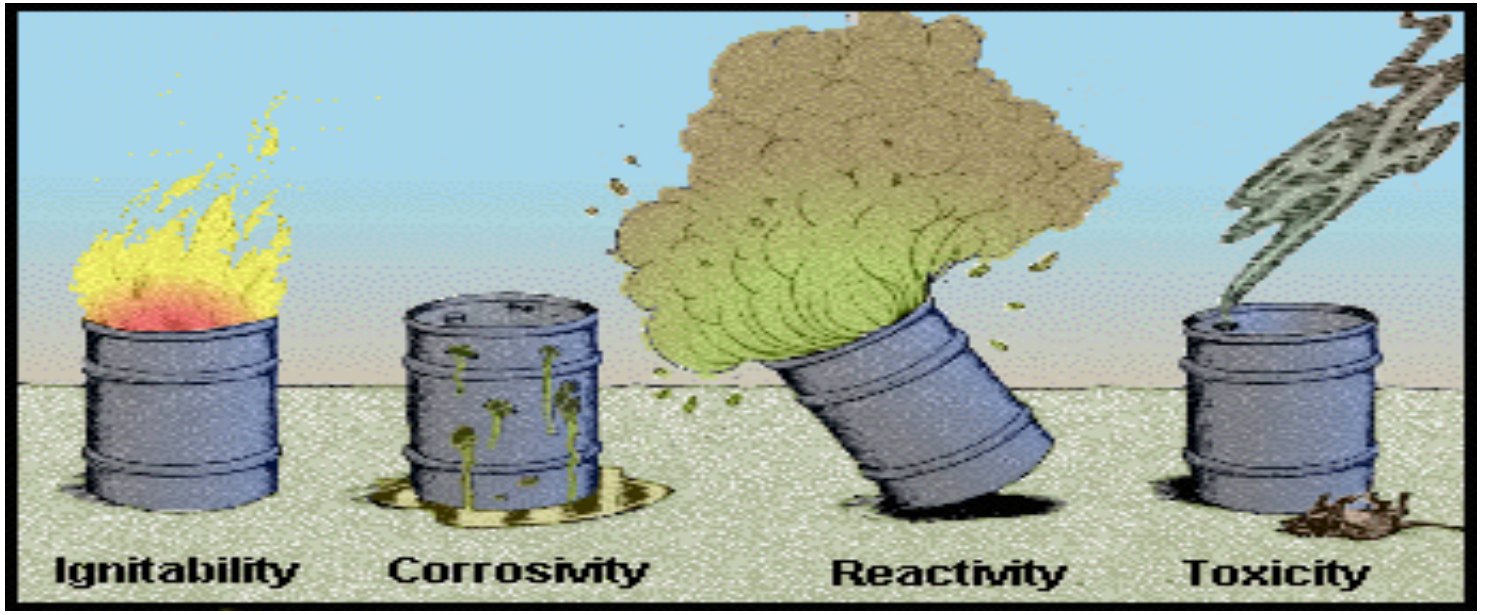
*This language has not changed

§262.11(c) Have You Generated a Listed Hazardous Waste?

- If the waste is not excluded under 40 CFR 261.4, the person **must then use knowledge** of the waste to determine if the waste meets any of the listing descriptions under subpart D of 40 CFR part 261.
- **Acceptable generator knowledge** that may be used in making an accurate determination as to whether the waste is listed may include:
  - waste origin
  - composition
  - the process producing the waste
  - feedstock, and
  - other reliable and relevant information; **e.g., the regulatory language of the listing, the regulatory intent of the original listing** (as evidenced by Federal Register notices, background documents, etc.)
- If the waste is listed, the person may file a delisting petition under 40 CFR 260.20 and 260.22 to demonstrate to the Administrator that the waste from this particular site or operation is not a hazardous waste.

§262.11(d): Have you generated a characteristically hazardous waste?

- There are four hazardous waste characteristics



§262.11(d): Have you generated a characteristically hazardous waste?

- The person then must also determine whether the waste exhibits one or more hazardous characteristics as identified in subpart C of 40 CFR part 261 by following the procedures in paragraph (d)(1) or (2) of this section or a combination of both.
- (1) The person must apply knowledge of the hazard characteristic of the waste in light of the materials or the processes used to generate the waste.

Have you generated a characteristically hazardous waste (cont.)?

- Acceptable knowledge may include:
  - process knowledge (e.g., information about chemical feedstocks and other inputs to the production process);
  - knowledge of products, by-products, and intermediates produced by the manufacturing process;
  - chemical or physical characterization of wastes;
  - information on the chemical and physical properties of the chemicals used or produced by the process or otherwise contained in the waste;
  - testing that illustrates the properties of the waste; or other reliable and relevant information about the properties of the waste or its constituents.
  - A test other than a test method set forth in subpart C of 40 CFR part 261, or an equivalent test method approved by the Administrator under 40 CFR 260.21, may be used as part of a person's knowledge to determine whether a solid waste exhibits a characteristic of hazardous waste.

Using "Tests" as part of "Knowledge" for Making a Characteristic HW Determination

- The results of non-regulatory tests may also provide relevant information:
  - Total concentration in the waste may show the waste is not TC hazardous
  - Tests that evaluate properties similar to the characteristic may be relevant, even if they do not define the waste as hazardous by themselves.
  - SW-846 includes several guidance tests, including method 1040 for oxidizers, and others.

Have you generated a characteristically hazardous waste (cont.)?

(2) **When available knowledge is inadequate to make an accurate determination, the person must test the waste** according to the applicable methods set forth in subpart C of 40 CFR part 261 or according to an equivalent method approved by the Administrator under 40 CFR 260.21 and in accordance with the following:

(i) Persons testing their waste must obtain a representative sample of the waste for the testing, as defined at 40 CFR 260.10.

(ii) Where a test method is specified in subpart C of 40 CFR part 261, the results of the regulatory test, when properly performed, are definitive for determining the regulatory status of the waste.

Remember: A Hazardous Characteristic Determination Must be Made Regardless of Listing Status

- **Even if the waste is listed, the generator must still determine if the waste exhibits a characteristic** in order to comply with land disposal restrictions (LDR) in 40 CFR Part 268
  - Need the full list of applicable waste codes to identify all necessary treatment

Note: Under 268.9(b), the treatment standard for the listed code will operate in lieu of the standard for the characteristic (if the constituent causing the characteristic has a treatment standard via the listed code).

§262.11(e): You've determined you have generated a hazardous waste

- (e) If the waste is determined to be hazardous, the generator must refer to parts 261, 264, 265, 266, 267, 268, and 273 of this chapter for other possible exclusions or restrictions pertaining to management of the specific waste.*

*This language has not changed

§262.11(f): Recordkeeping*

- A small or large quantity generator must maintain records supporting its hazardous waste determinations, including records that identify whether a solid waste is a hazardous waste, as defined by 40 CFR 261.3.
- Records must be maintained for at least three years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal.
- The records must include, but are not limited to, the following types of information:
  - the results of any tests, sampling, waste analyses, or other determinations made in accordance with this section;
  - records documenting the tests, sampling, and analytical methods used to demonstrate the validity and relevance of such tests;
  - records consulted in order to determine the process by which the waste was generated, the composition of the waste, and the properties of the waste; and
  - records which explain the knowledge basis for the generator's determination, as described at 40 CFR 262.11(d)(1).

*Basic recordkeeping requirement copied from existing 262.40

§262.11(g): RCRA Waste Codes

- If the waste is determined to be hazardous, small quantity generators and large quantity generators must identify all applicable EPA hazardous waste numbers (EPA hazardous waste codes) in subparts C and D of part 261. Prior to shipping the waste off site, the generator also must mark its containers with all applicable EPA hazardous waste numbers (EPA hazardous waste codes) or use electronic means (such as bar coding) according to § 262.32.

Comparison of New vs. Old §262.11

New	Old
A person who generates a solid waste, **as defined in 40 CFR 261.2**, must make an accurate determination as to whether that waste is a hazardous waste	A person who generates a solid waste, **as defined in 40 CFR 261.2,** must determine if that waste is a hazardous waste using the following method:
(a) The hazardous waste determination for each solid waste must be made at the point of waste generation, before any dilution, mixing, or other alteration of the waste occurs, and at any time in the course of its management…that may change the properties of the waste such that the RCRA classification of the waste may change.	
(b) A person must determine whether the solid waste is excluded from regulation under 40 CFR 261.4**.**	(a) He should first determine if the waste is excluded from regulation under 40 CFR 261.4.
(c) If the waste is not excluded under 40 CFR 261.4, the person must then use knowledge of the waste to determine if the waste meets any of **the listing descriptions** under subpart D of 40 CFR part 261.	(b) He must then determine if the **waste is listed as a hazardous waste** in subpart D of 40 CFR part 261.

Comparison of New vs. Old §262.11

NEW	OLD
(c) Continued Acceptable knowledge that may be used in making an accurate determination as to whether the waste is listed may include waste origin, composition, the process producing the waste, feedstock, and other reliable and relevant information. If the waste is listed, the person may file a delisting petition under 40 CFR 260.20 and 260.22 to demonstrate to the Administrator that the waste from this particular site or operation is not a hazardous waste.	

Comparison of New vs. Old §262.11 (cont.)

New	Old
(d) The person then must also determine whether the waste exhibits one or more hazardous characteristics as identified in subpart C of 40 CFR part 261 by following the procedures in paragraph (d)(1) or (2) of this section, or a combination of both. (1) The person must apply knowledge of the hazard characteristic of the waste in light of the materials or the processes used to generate the waste. Acceptable knowledge may include.....; testing that illustrates the properties of the waste; or other reliable and relevant information about the properties of the waste or its constituents. A test other than a test method set forth in subpart C of 40 CFR part 261, or an equivalent test method approved by the Administrator under 40 CFR 260.21, may be used as part of a person's knowledge to determine whether a solid waste exhibits a characteristic of hazardous waste. However, such tests do not, by themselves, provide definitive results. Persons testing their waste must obtain a representative sample of the waste for the testing, as defined at 40 CFR 260.10. (2) When available knowledge is inadequate to make an accurate determination, the person must test the waste according to the applicable methods set forth in subpart C of 40 CFR part 261 or according to an equivalent method approved by the Administrator under 40 CFR 260.21	(c) For purposes of compliance with 40 CFR part 268, or if the waste is not listed in subpart D of 40 CFR part 261, the generator must then determine whether the waste is identified in subpart C of 40 CFR part 261 by either: (1) Testing the waste according to the methods set forth in subpart C of 40 CFR part 261, or according to an equivalent method approved by the Administrator under 40 CFR 260.21; or (2) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

Comparison of New vs. Old §262.11 (cont.)

NEW	OLD
(e) If the waste is determined to be hazardous, the generator must refer to parts 261, 264, 265, 266, 267, 268, and 273 of this chapter for other possible exclusions or restrictions pertaining to management of the specific waste.	(d) If the waste is determined to be hazardous, the generator must refer to parts 261, 264, 265, 266, 267, 268, and 273 of this chapter for possible exclusions or restrictions pertaining to management of the specific waste.
(f) Recordkeeping for small and large quantity generators.	
(g) Identifying hazardous waste numbers for small and large quantity generators.	

Counting and Hazardous Waste Generator Categories

Determining Generator Category and Hazardous Waste Counting (§ 262.13)

- A hazardous waste generator has always had to know what category of generator it is (VSQG, SQG, or LQG).
- The regulations did not previously present requirements about determining generator categories in a clear and succinct way.
- New § 262.13 clarifies the process for a generator to determine its generator category each calendar month for generators of acute hazardous waste, generators of non-acute hazardous waste, and generators that mix acute and non-acute hazardous wastes.
  - "Acute" hazardous waste and "non-acute" hazardous waste
- This provision also discusses how mixing of hazardous waste with non-hazardous waste impacts generator category.

Hazardous Waste Counting

- Introductory language of § 262.13
  - A generator must determine its generator category
  - The category is based on the amount of hazardous waste that is generated in a calendar month.
  - A generator's category can change from month to month.
  - The counting requirements are based on the RCRA statute & are critical to the framework of the generator regulations

Hazardous Waste Counting

- 262.13 (a): Basic procedures for determining generator category if generating only non-acute hazardous waste or only acute hazardous waste
- 262.13(b): Procedures for determining generator category if generating a combination of acute and non-acute hazardous waste
- 262.13 (c) & (d): Those materials that do not need to be included when counting hazardous waste
  - Previous provisions moved from 261.5 (c) & (d) + hazardous waste from an episodic event
- 262.13 (e): Statement that a generator uses its determined category to identify which regulations apply

Generating Acute and Non-Acute Hazardous Waste in the Same Month

- Before the final generator rule, EPA had issued contradictory guidance documents on whether a generator could be one category of generator for acute waste and another for non-acute waste in the same month.
- The Generator final rule provisions make it clear that acute hazardous waste, non-acute hazardous waste, and residues of clean ups of hazardous waste are all considered in making a generator's monthly category determination.

Hazardous Waste Counting

TABLE 1 to § 262.13—Generator Categories Based on Quantity of Waste Generated in a Calendar Month

Quantity of acute hazardous waste generated in a calendar month	Quantity of non-acute hazardous waste generated in a calendar month	Quantity of residues from a cleanup of acute hazardous waste generated in a calendar month	Generator Category
> 1 kg	Any amount	Any amount	**Large quantity generator**
Any amount	≥ 1,000 kg	Any amount	**Large quantity generator**
Any amount	Any amount	> 100 kg	**Large quantity generator**
≤ 1 kg	> 100 kg and < 1,000 kg	≤ 100 kg	**Small quantity generator**
≤ 1 kg	≤ 100 kg	≤ 100 kg	**Very small quantity generator**

Comparison of Old § 261.5 vs. New § 262.13

New	Old
262.13 Introductory Text A generator must determine its generator category. A generator's category is based on the amount of hazardous waste generated each month and may change from month to month. This section sets forth procedures to determine whether a generator is a very small quantity generator, a small quantity generator, or a large quantity generator for a particular month, as defined in § 260.10 of this chapter.	
262.13 (a) & (b) (a) *Generators of either acute hazardous waste or non-acute hazardous waste.* A generator who either generates acute hazardous waste or non-acute hazardous waste in a calendar month shall determine its generator category for that month by doing the following: (1) Counting the total amount of hazardous waste generated in the calendar month; (2) Subtracting from the total any amounts of waste exempt from counting as described in paragraphs (c) and (d) of this section; and (3) Determining the resulting generator category for the hazardous waste generated using Table 1 of this section. (b) *Generators of both acute and non-acute hazardous wastes.* A generator who generates both acute hazardous waste and non-acute hazardous waste in the same calendar month shall determine its generator category for that month by doing the following: (1) Counting separately the total amount of acute hazardous waste and the total amount of non-acute hazardous waste generated in the calendar month; (2) Subtracting from each total any amounts of waste exempt from counting as described in paragraphs (c) and (d) of this section; (3) Determining separately the resulting generator categories for the quantities of acute and non-acute hazardous waste generated using Table 1 of this section; and (4) Comparing the resulting generator categories from paragraph (b)(3) of this section and applying the more stringent generator category to the accumulation and management of both non-acute hazardous waste and acute hazardous waste generated for that month.	

Comparison of Old § 261.5 vs. New § 262.13

New	Old
262.13 (c) (c) When making the monthly quantity-based determinations required by this part, the generator must include all hazardous waste that it generates, except hazardous waste that: (1) Is exempt from regulation under 40 CFR 261.4(c) through (f), 261.6(a)(3), 261.7(a)(1), or 261.8; (2) Is managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities as defined in 40 CFR 260.10; (3) Is recycled, without prior storage or accumulation, only in an on-site process subject to regulation under 40 CFR 261.6(c)(2); (4) Is used oil managed under the requirements of 40 CFR 261.6(a)(4) and 40 CFR part 279; (5) Is spent lead-acid batteries managed under the requirements of 40 CFR part 266 subpart G; (6) Is univ*ersal waste* managed under 40 CFR 261.9 and 40 CFR part 273; (7) Is a hazardous waste that is an unused commercial chemical product (listed in 40 CFR part 261 subpart D or exhibiting one or more characteristics in 40 CFR part 261 subpart C) that is generated solely as a result of a laboratory clean-out conducted at an eligible academic entity pursuant to § 262.213. For purposes of this provision, the term eligible academic entity shall have the meaning as defined in § 262.200; or (8) Is managed as part of an episodic event in compliance with the conditions of subpart L of this part.	261.5(c) (c) When making the quantity determinations ~~of~~ this part ~~and 40 CFR part 262~~, the generator must include all hazardous waste that it generates, except hazardous waste that: (1) Is exempt from regulation under 40 CFR 261.4(c) through (f), 261.6(a)(3), 261.7(a)(1), or 261.8; ~~or~~ (2) Is managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities as defined in 40 CFR 260.10; ~~or~~ (3) Is recycled, without prior storage or accumulation, only in an on-site process subject to regulation under 40 CFR 261.6(c)(2); ~~or~~ (4) Is used oil managed under the requirements of 40 CFR 261.6(a)(4) and 40 CFR part 279; ~~or~~ (5) Is spent lead-acid batteries managed under the requirements of 40 CFR part 266, subpart G; ~~or~~ (6) Is universal waste managed under 40 CFR 261.9 and 40 CFR part 273; (7) Is a hazardous waste that is an unused commercial chemical product (listed in 40 CFR part 261, subpart D or exhibiting one or more characteristics in 40 CFR part 261, subpart C) that is generated solely as a result of a laboratory clean-out conducted at an eligible academic entity pursuant to §262.213. For purposes of this provision, the term eligible academic entity shall have the meaning as defined in §262.200 of Part 262.

Comparison of Old § 261.5 vs. New § 262.13

New	Old
262.13(d) (d) In determining the quantity of hazardous waste generated in a calendar month, a generator need not include: (1) Hazardous waste when it is removed from on-site accumulation, so long as the hazardous waste was previously counted once; (2) Hazardous waste generated by on-site treatment (including reclamation) of the generator's hazardous waste, so long as the hazardous waste that is treated was previously counted once; and (3) Hazardous waste spent materials that are generated, reclaimed, and subsequently reused on site, so long as such spent materials have been previously counted once.	261.5(d) (d) In determining the quantity of hazardous waste generated, a generator need not include: (1) Hazardous waste when it is removed from on-site ~~storage~~; or (2) Hazardous waste ~~produced~~ by on-site treatment (including reclamation) of ~~his~~ hazardous waste, so long as the hazardous waste that is treated was counted once; or (3) Spent materials that are generated, reclaimed, and subsequently reused on-site, so long as such spent materials have been counted once.
262.13 (e) (e) Based on the generator category as determined under this section, the generator must meet the applicable independent requirements listed in § 262.10. A generator's category also determines which of the provisions of §§ 262.14, 262.15, 262.16 or 262.17 must be met to obtain an exemption from the storage facility permit, interim status, and operating requirements when accumulating hazardous waste.	

Mixing

Mixing Solid Waste with Hazardous Waste – What changed?

- Reorganization distinguished VSQGs mixing requirements from those for SQGs and LQGs
- Clarified VSQGs mixing solid waste with hazardous wastes and generating characteristic waste must count that waste towards their generator category for that month
- Made clear that SQGs and LQGs mixing solid wastes with hazardous wastes are subject to certain restrictions and requirements.

VSQGs Mixing Solid Waste with Hazardous Waste

- Clarifies that a VSQG mixing hazardous waste with solid waste can remain subject to VSQG requirements (i.e., § 262.14), even though the mixture may exceed the VSQG quantity limits (either 100 kg per month generated or 1,000 kg accumulated on site at any one time) as long as the mixture does not exhibits one or more of the characteristics of a hazardous waste.
- If the resultant mixture does exhibit a hazardous waste characteristic, the mixture is a newly generated hazardous waste.
  - The VSQG must add the quantity from the resulting mixture with any other regulated hazardous waste generated in the calendar month and determine whether the total quantity generated exceeds the generator calendar month quantity identified in the definition of generator categories found in 40 CFR 260.10.

(262.13(f)(1))

SQGs and LQGs Mixing Solid Waste with Hazardous Waste

- Mixtures of hazardous waste and solid waste at SQGs and LQGs are subject to:
  - The mixture rule in §§ 261.3(a)(2)(iv), (b)(2) and (3), and (g)(2)(i);
  - The prohibition of dilution rule at § 268.3(a);
  - The land disposal restriction requirements of § 268.40 if a characteristic hazardous waste is mixed with a solid waste so that it no longer exhibits the hazardous characteristic; and
  - The hazardous waste determination requirement at § 262.11.

Mixing vs Dilution

- Generators can't dilute their hazardous wastes unless it provides a useful and effective contribution (i.e., possess a unique property to remove the hazardous characteristic from the hazardous waste instead of merely diluting it).
- The prohibition of dilution rule at § 268.3(a) reads:
  - Except as provided in paragraph (b) of this section, no generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a restricted waste or the residual from treatment of a restricted waste as a substitute for adequate treatment to achieve compliance with subpart D of this part, to circumvent the effective date of a prohibition in subpart C of this part, to otherwise avoid a prohibition in subpart C of this part, or to circumvent a land disposal prohibition imposed by RCRA section 3004.

Mixing: Why the Changes?

- Changes are designed to clarify the language that was found at §§ 261.5(h) and (i) which addressed the mixing of hazardous waste and nonhazardous waste by a VSQG and the implications to its generator category if the mixture is determined to be a hazardous waste.
- The language specifically addressed how the regulations apply when VSQG hazardous waste is mixed with nonhazardous solid waste and the resulting combination exceeds the VSQG quantity limits.
- The previous §§ 261.5(h) and (i) had not evolved with the changes to the SQG and CESQG regulations through the years, leaving ambiguities.
- The previous regulations also did not specifically discuss SQGs and LQGs mixing solid wastes with hazardous wastes in the generator provisions.

Marking and Labeling

Marking and Labeling

- Marking and labeling requirements apply throughout the hazardous waste management regulations.
- Final Rule: What changed?
  - Containers and tanks labels must have the words “Hazardous Waste” and also indicate the hazards of the contents of the accumulation units
  - For containment buildings, the generator must have a sign in a conspicuous place with the words, “Hazardous Waste” and the hazards of the waste
- Added the hazards to improve risk communication for workers, waste handlers, emergency responders, and visitors
- Flexibility in how to comply with this new provision; can indicate the hazards of the contents of the accumulation unit using any of several established methods (e.g., DOT hazard communication, OSHA hazard statement or pictogram, NFPA chemical hazard label, or RCRA characteristic)

Examples of Labels that Indicate the “Hazards”

- The applicable hazardous waste characteristic (i.e., ignitable, corrosive, reactive, toxic)

Examples of Labels that Indicate the “Hazards”

- Hazard communication consistent with DOT (49 CFR part 172 subpart E – labeling or subpart F – placarding)

Examples of Labels that Indicate the “Hazards”

- Hazard statement or pictogram consistent with OSHA (29 CFR 1910.1200)

Examples of Labels that Indicate the “Hazards”

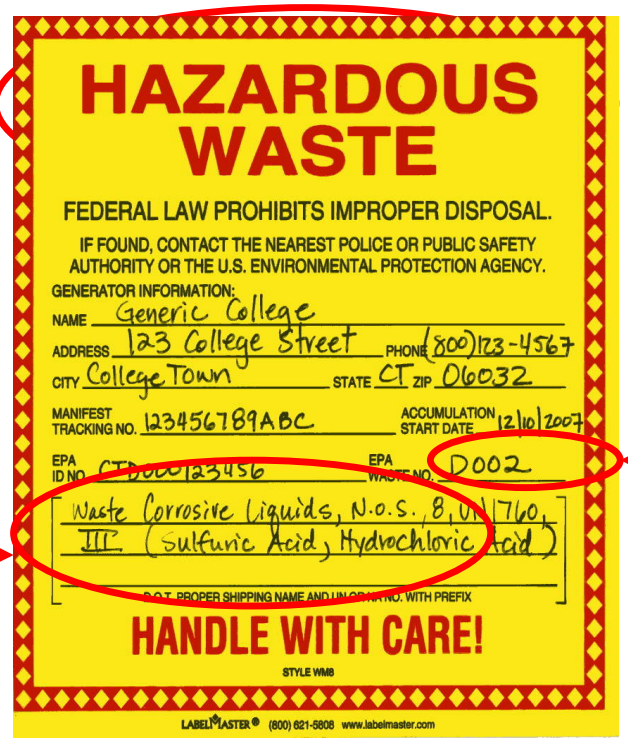
- Chemical hazard label consistent with the National Fire Protection Association code 704

Marking and Labeling

- EPA is providing flexibility on how to indicate the hazards of the contents of the containers
- Some clarifications:
  - Labeling should occur at the initial point of generation
  - For containers that have small containers inside (e.g., tubes, vials, etc.), generators can mark the outer/secondary container or attach a tag with the required information
  - For wastes that are in a container that already has appropriate marking and labeling (e.g., a commercial chemical product (CCP) in its original container with an intact label), the existing marking and labeling is sufficient, provided it indicates the hazards of the chemical
    - In that case, the generator would just add the words “Hazardous Waste”

Marking and Labeling

- Per §262.32, Generators must add the RCRA waste codes before shipping waste off-site
  - This allows receiving TSDFs to know how to treat the wastes to meet land disposal restriction requirements
  - Generators must mark their containers with the applicable RCRA waste codes or use a bar-coding system that performs the same function



Description of hazards of waste: Corrosive

Waste code

Marking and Labeling

- Areas affected by the new Marking and Labeling standards include:
  - Generator satellite accumulation areas and central accumulation areas
  - Transfer facilities consolidating hazardous wastes from different generators
  - Generator container and tank storage areas at TSDFs
- Did not change the accumulation start date for central accumulation areas