

# Hazardous Waste Generator Improvement Rule

Small and Very Small Quantity Generators

Delaware Department of Natural Resources and Environmental Control  
Division of Waste and Hazardous Substances  
Compliance and Permitting Section



# Acronyms

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- RCRA – Resource Conservation and Recovery Act
- EPA – Environmental Protection Agency
- ORCR – Office of Resource Conservation and Recovery
- LQG – Large Quantity Generator
- SQG – Small Quantity Generator
- VSQG – Very Small Quantity Generator (formerly CESQG)
- CESQG – Conditionally Exempt Small Quantity Generator
- TSDF – Treatment, Storage, Disposal facility
- SAA – Satellite Accumulation Area
- CAA – Central Accumulation Area

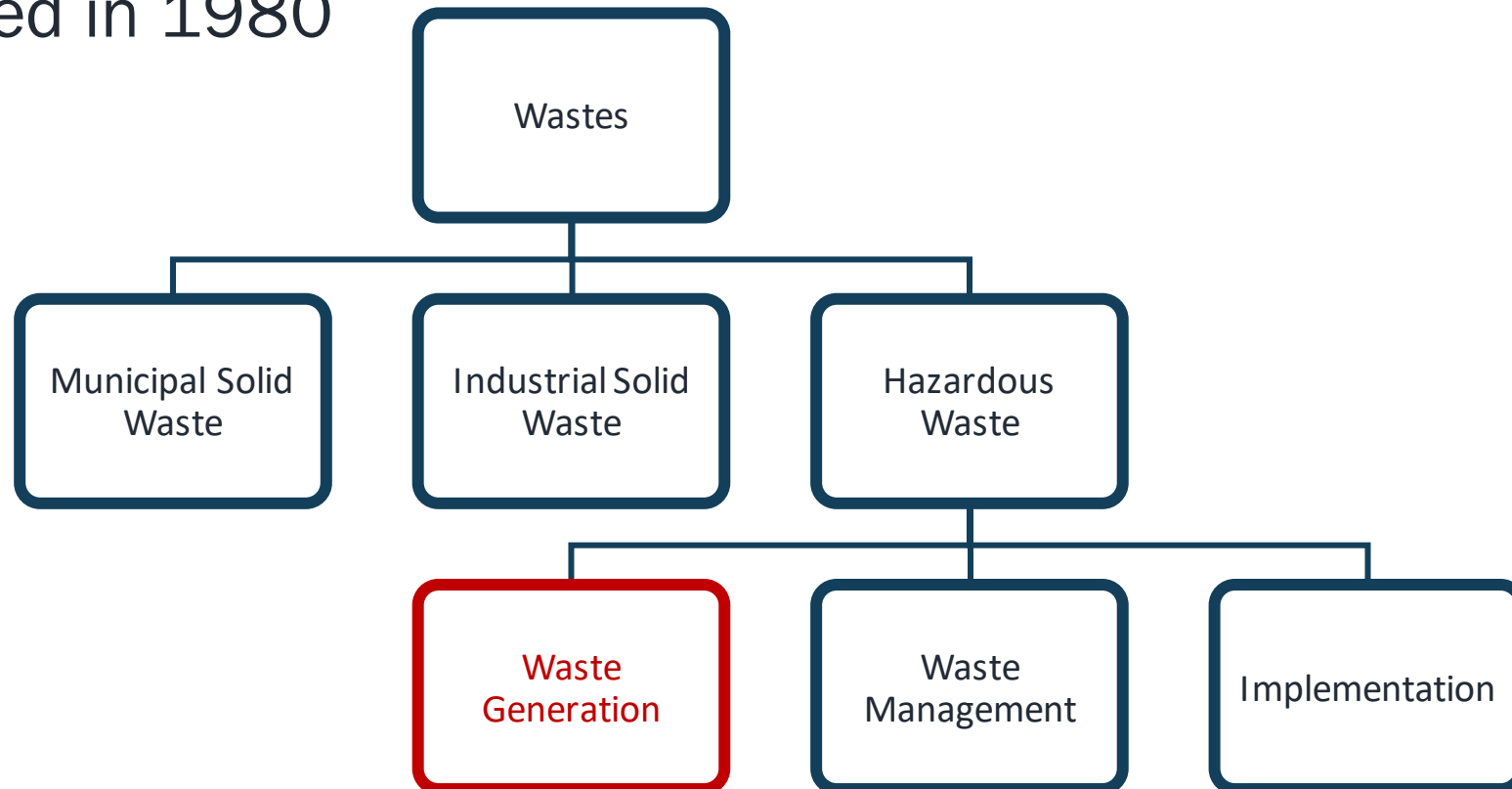
# Rule History and Background

- Resource Conservation and Recovery Act (RCRA) enacted by congress in 1976
- RCRA goals
  - Protect human health and the environment
  - Conserve energy and natural resources
  - Reduce the amount of waste generated



# Rule History and Background

- The hazardous waste generator regulatory program was originally promulgated in 1980



# New Rule

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- In 2004, EPA's ORCR conducted an evaluation of the generator program to improve program effectiveness
  - Response to public comments
  - Additional program evaluations in 2013, 2014
- EPA determined that many of the existing issues with the generator regulations could only be resolved through rulemaking
- EPA's September 25, 2015, proposed rule grew out of these evaluations and presented more than 60 proposed changes to the generator regulations, plus technical corrections, for public comment.

# New Rule Goals

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- Reorganize regulations to make them more user-friendly, improving compliance from the regulated community
- Provide flexibility for episodic generation
- Provide flexibility for VSQG-LQG waste consolidation
- Address identified gaps in the regulations
- Clarify ambiguities in the hazardous waste program to improve compliance

# Citation Changes

Provision	Previous Citation	New Citation
Definition of Generator Categories	§ 260.10, 261.5, 262.34	§ 260.10
Hazardous Waste Determination and Recordkeeping	§ 262.11 and 262.40 (c)	§ 262.11
Generator Category Determination	§ 261.5(c - e)	§ 262.13
VSQG Provisions (formerly CESQG)	§ 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

# Stringency

More Stringent	Less Stringent
SQG re-notification every 4 years	VSQG consolidation
Marking and labeling (identifying hazards, RCRA waste codes)	Episodic generation
Closure notification	
Emergency and preparedness planning for SAA	



# Definition Changes

- § 260.10 The following definitions were added:
  - Acute/non-acute hazardous waste definitions
  - Central accumulation area definition (previously 90-day or 180-day accumulation area)
  - LQG and VSQG generator definitions
  - Clarified SQG definition
- § 262.10
  - Restructured for clarity
  - Remove obsolete provisions
  - Exemption condition definitions

# § 262.11 Hazardous Waste Determinations

- Changes and clarifications:
  - Waste determinations must be **accurate!**
  - When generators are required to make hazardous waste determinations
  - How to determine if a solid waste is either a listed and/or characteristic hazardous waste
  - 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
- “A person who generates a solid waste, as defined in § 261.2, must determine if that waste is a hazardous waste...” (§ 262.11)

# § 262.11(a) Hazardous Waste Determinations

- § 262.11(a) The hazardous waste determination for each solid waste must be made
  - at the point of waste generation (the act or process of producing waste)
  - 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 such that the RCRA classification of the waste may change

Note: Upon generation, if awaiting a final determination, the waste must be managed as hazardous waste pending the determination

## § 262.11(b) Is it a solid waste?

- The first step in making an accurate hazardous waste determination is to determine if it is a solid waste

“Solid Waste’ means any garbage, refuse, rubbish, 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...”

**Statutory Definition of Solid Waste – 7 Del. C. § 6302(12)**

# § 262.11(b) Is it a solid waste?

Regulatory definition - § 261.2

“(a)(1) A solid waste is any discarded material that is not excluded by § 261.4(a) or that is not excluded by variance granted under §§ 260.30 and 260.31”

- A discarded material is any material which is:
  - Abandoned (disposed of, burned, incinerated, accumulated, stored, or treated)
  - Recycled
  - Considered inherently waste-like
  - A “military munition” identified as a solid waste in § 266.202

# § 262.11(b) Is it excluded from regulation?

- Exclusions are outlined in § 261.4 in three sections:
  - § 261.4(a) – materials that are not solid waste (e.g., secondary materials that are reclaimed and returned to the original process)
  - § 261.4(b) – solid wastes which are not hazardous wastes
  - § 261.4(c) – hazardous wastes which are exempt from certain regulations

# § 262.11(c) Is it a listed hazardous waste?

- The generator must use generator knowledge to determine if the waste meets the descriptions of the lists in Part 261 Subpart D
  - Non-specific source wastes (F-Listed) - § 261.31
  - Specific source wastes (K-Listed) - § 261.32
  - Acutely Toxic wastes (P-Listed) - § 261.33(e)
  - Toxic wastes (U-Listed) - § 261.33(f)
  - **Hazardous waste determinations must be made at the point of generation**
- Acceptable generator knowledge:
  - 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.)

# § 262.11(d) Is it a characteristic hazardous waste?



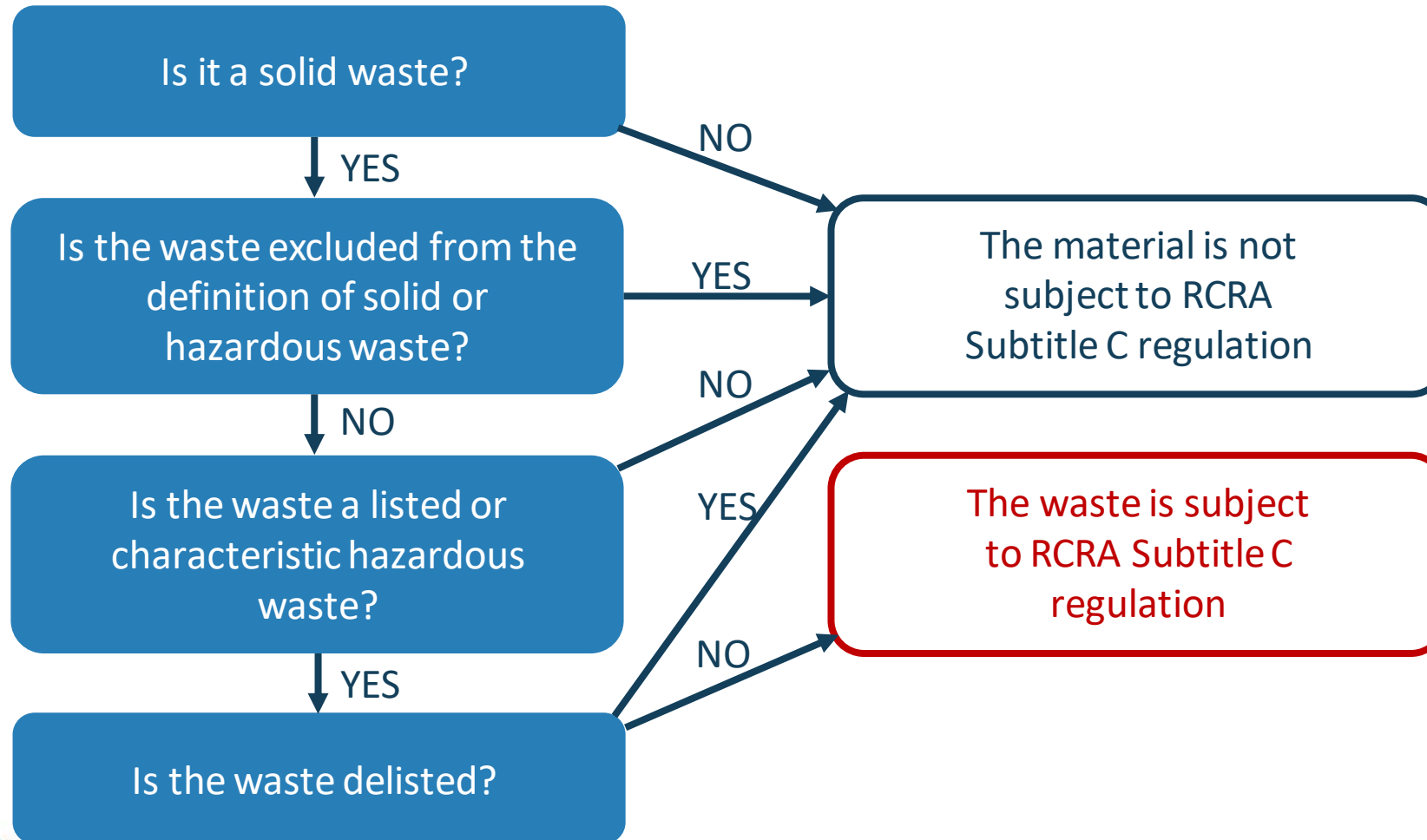


# § 262.11(d) Is it a characteristic hazardous waste?

- Acceptable generator knowledge:
  - process knowledge
  - 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

Note: when limited knowledge is available to make an accurate determination, the waste **must** be tested.

# Hazardous Waste Determination Process



# § 262.11(f) Recordkeeping

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- SQGs must maintain records supporting hazardous waste determinations
  - Includes records that identify whether a solid waste is a hazardous waste
  - While not required, VSQGs are encouraged to keep hazardous waste determination records
- Records must be maintained for at least three years from the date that the waste was last sent for on-site or off-site treatment, storage, or disposal.

# § 262.11(f) Recordkeeping

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- Hazardous waste determination records must include, but are not limited to:
  - Results of any tests, sampling, waste analyses, or other determinations
  - Validation records documenting the tests, sampling, and analytical methods used
  - Records determining the process by which the waste was generated, the composition of the waste, and the properties of the waste
  - Records explaining the knowledge basis for the generator's determination, as described in § 262.11(d)(1).

# § 262.11(g) Waste Codes

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- If the waste is determined to be hazardous, SQGs must identify all applicable EPA hazardous waste codes in Subparts C and D of part 261.
- Prior to shipping waste off site, the generator must mark containers with all applicable EPA hazardous waste codes or use electronic means (such as bar coding) according to § 262.32.
  - Lab packs that will be incinerated are not required to be marked with waste codes, except for heavy metals (D004, D005, D006, D007, D008, D010, and D011)

# § 262.13 Hazardous Waste Counting

- **New rule** clarifies that hazardous waste generators must determine their generator category (VSQG, SQG, LQG)
- Outlines the process of determining hazardous waste generator category for each calendar month
- Includes provision on impact of waste mixing on generator category

# § 262.13 Hazardous Waste Counting

- § 262.13 (a): Procedures for determining generator category if generating only non-acute 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): Materials that do not need to be included when counting hazardous waste
- § 262.13 (e): Statement that a generator uses its determined category to identify which regulations apply

# § 262.13 Acute and Non-Acute Hazardous Waste

- Old rule: contradictory guidance documents on whether a generator could be two different categories for acute and non-acute waste in the same month
- **New rule:** 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

Note: Generator category can change from month to month, but the CAPS cautions that this may lead to difficulty in demonstrating compliance with different regulatory requirements each month



# How do I determine generator category?

**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 kilogram	Any amount	Any amount	<b>Large quantity generator.</b>
Any amount	≥ 1,000 kilograms	Any amount	<b>Large quantity generator.</b>
Any amount	Any amount	> 100 kilograms	<b>Large quantity generator.</b>
≤ 1 kilogram	> 100 kilograms and < 1,000 kilograms	≤ 100 kilograms	<b>Small quantity generator.</b>
≤ 1 kilogram	≤ 100 kilograms	≤ 100 kilograms	<b>Very small quantity generator.</b>

# § 262.13(f) Waste Mixing

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## VSQG Mixing

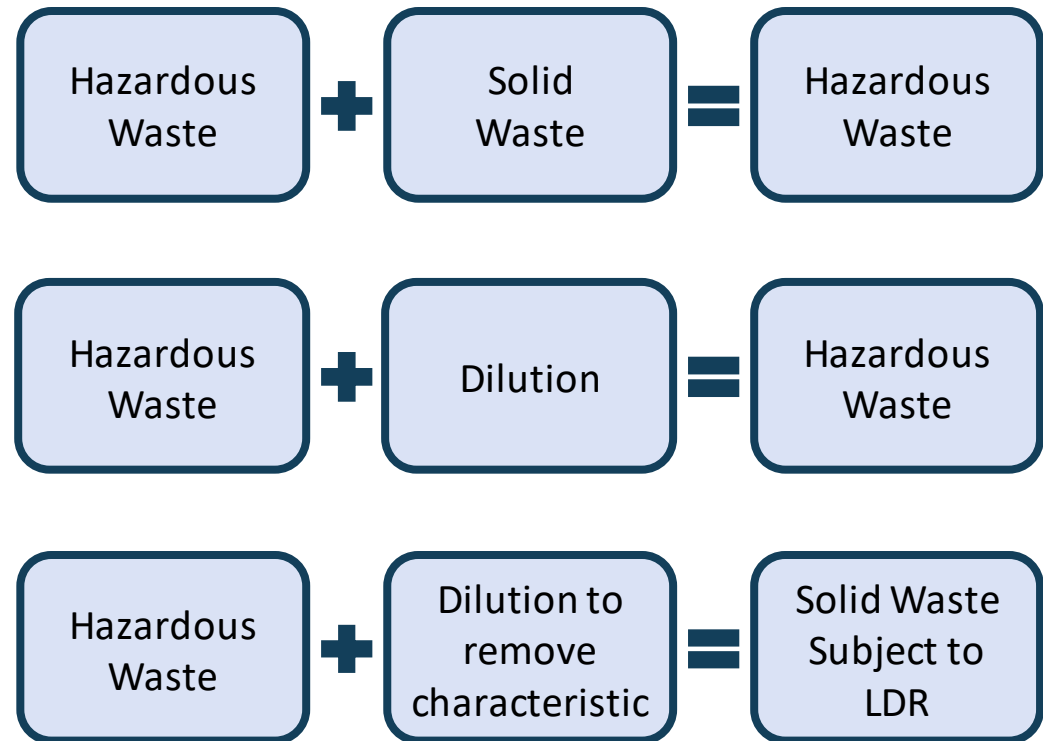
- VSQG mixing hazardous waste with solid waste can remain subject to VSQG requirements (§ 262.14) even though the mixture may exceed the VSQG quantity limits **as long as the mixture does not exhibit one or more of the characteristics of a hazardous waste**
- If the mixture exhibits a hazardous waste characteristic, the mixture is a newly generated hazardous waste and **must be counted with any other hazardous waste generated in the calendar month**

## SQG Mixing

- Mixtures of hazardous waste and solid waste at SQGs are subject to:
  - The mixture rule in §§ 261.3(a)(2)(iv), (b)(2) and (3), and (g)(2)(i);
  - The dilution rule in § 268.3(a);
  - The LDR 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 in § 262.11.

# Waste Mixing vs. Diluting

- § 268.3(a) Generators cannot dilute their hazardous wastes unless it provides a useful and effective contribution
  - i.e., to remove the hazardous characteristic from the hazardous waste
  - Dilution to remove characteristic may be considered treatment, and subject to additional requirements



# § 262.14 Very Small Quantity Generators

- Generates less than or equal to 100 kg ( $\approx$  220 lbs) of hazardous waste each month
- Generates less than or equal to 1 kg ( $\approx$  2.2 lbs) of acutely hazardous waste each month
- Never accumulates more than 1,000 kg ( $\approx$  2,200 lbs) of hazardous waste at any time

# § 262.14 Very Small Quantity Generators

- Previously Conditionally Exempt Small Quantity Generators (CESGQ)
- Limited requirements for VSQG, increased flexibility in new rule
  1. Consolidation at an LQG under the same company (§§ 262.14 & 262.17)
  2. Episodic Generation (Part 262 Subpart L)

# LQG-VSQG Waste Consolidation

- Old rule: LQG require RCRA permit to receive waste from their own VSQG sites for consolidation
- **New rule:** Consolidate waste at an LQG under the *control* of the same *person*
  - VSQG:
    - Marks and labels waste containers with “Hazardous Waste” and the hazards of the contents (§ 262.14(a)(6)(viii))
    - No hazardous waste manifest is required and hazardous waste transporters do not have to be used
  - LQG:
    - Notifies DNREC-CAPS on Site ID Form of the activity and identifies participating VSQGs
    - Recordkeeping for each shipment
    - Adds accumulation start date to VSQG HW labels when arrives at LQG
    - Manages waste as LQG hazardous waste ensuring TSDF disposal/treatment
    - Reports waste received in Annual Report

# Subpart L

## Episodic Generation

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- Old rule: lacks flexibility to address an *episodic* change in a generator's regulatory category:
  - Planned event (i.e., periodic maintenance such as tank cleanouts)
  - Unplanned event (i.e., production upset conditions, spill, acts of nature)
- Generators had to comply with more comprehensive set of regulations for a short period of time.

# Subpart L Episodic Generation

- **New Rule:** Allows generators to maintain their existing category provided they comply with streamlined set of requirements
  - One event per calendar year with ability to petition for second event
    - If first event is planned, the petition for a 2nd event must be for an unplanned event or vice versa
  - Notify DNREC-CAPS at least 30 days prior to initiating a planned event
  - Notify DNREC-CAPS within 72 hours after an unplanned event
  - Conclude the episodic event within 60 days, including shipping waste off-site



# Subpart L

## Episodic Generation

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- Streamlined Requirements for VSQGs:
  - Obtain EPA Identification Number
  - Use hazardous waste manifest and permitted transporter to send episodic waste to RCRA-designated facility (TSDf or recycler)
  - Manage the episodic hazardous waste in a manner that minimizes the possibility of an accident or release
  - Marking and labeling:
    - "Episodic Hazardous Waste", and
    - An indication of the hazards of the contents and the date the episodic event began
  - Identify an emergency coordinator
  - Prohibited from accumulating hazardous waste generated from an episodic event on drip pads, in containment buildings, or in tanks.
  - Treatment is not allowed by VSQGs (except in an on-site elementary neutralization unit)
  - Maintain cradle to grave records for 3 years from completion of event

# Subpart L

## Episodic Generation

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- Requirements for SQGs:
  - Marking and labeling:
    - "Episodic Hazardous Waste", and
    - An indication of the hazards of the contents and the date the episodic event began
    - For tanks, inventory logs or other records as appropriate, but must be accessible
  - All conditions of § 262.16 (e.g., container and tank standards, employee training, emergency preparedness and prevention)
  - Hazardous wastes on drip pads and in containment buildings cannot be managed under subpart L
  - Maintain cradle to grave records for 3 years from completion of event

## § 262.16 Small Quantity Generators

- Generates more than 100 kg ( $\approx$  220 lbs), but less than 1,000 kg (2,200 lbs) of hazardous waste each month
- Generates less than or equal to 1 kg ( $\approx$  2.2 lbs) of acutely hazardous waste each month
- Never stores more than 6,000 kg ( $\approx$  13,200 lbs) of hazardous waste
- Never stores hazardous waste for more than 180 days

# § 262.16 SQG Re-notification

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- Old Rule: No requirement for SQG to notify after the initial notification
- **New Rule:** Require SQGs to re-notify every 4 years
  - EPA Form 8700-12
  - Allows SQG submittal of the Site ID form (in full) anytime within the four years before the deadline to meet this requirement.

# Marking and Labeling

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- Old rule: Generators do not always identify the specific RCRA waste codes associated with the hazardous wastes in a container
  - Receiving TSDFs may not know how to treat the wastes to meet LDR requirements
- **New Rule:** Prior to sending hazardous waste off-site to a TSDF, generators must mark their containers with the applicable RCRA waste codes or use a nationally recognized electronic system, such as a bar coding system, that performs the same function

# Marking and Labeling

- Marking and labeling requirements apply throughout the hazardous waste management regulations
- Old rule: Did not require generators to identify and indicate the hazards of hazardous wastes accumulated in containers, tanks, drip pads and containment buildings



# Marking and Labeling

- **New Rule: Marking and labeling requirements for SQG and LQG Central Accumulation Areas (CAA)**
  - Container and tank labels must now also indicate the hazards of the contents of the containers. Examples include, but are not limited to:
    - The applicable RCRA hazardous waste characteristic (i.e. ignitable, corrosive, reactive, toxic), **or**
    - DOT hazard communication, **or**
    - OSHA hazard statement or pictogram, **or**
    - NFPA chemical hazard label
  - For drip pads and containment buildings, the generator can keep this information in logs or records near the accumulation unit

Note: the labels are not required to include the identity of the contents of the container





**Hazardous  
Waste**

**Accumulation Start Date  
6/29/2020**

Missing indication of hazard



**Hazardous Waste  
Corrosive**



Missing accumulation start  
date



**Hazardous Waste**



**Accumulation Start Date  
6/29/2020**

- Includes accumulation start date
- “Hazardous Waste”
- Indication of Hazard



# Marking and Labeling - Tanks

- How does a generator accumulating hazardous wastes in tanks demonstrate that a tank has been emptied or turned over from when waste first entered the tank?
- **New Rule:** Use inventory logs, monitoring equipment or other records to demonstrate that for:
  - Batch process: Tank has been emptied every 90 or 180 days as applicable
  - Continuous flow process: Estimated volumes of hazardous waste entering tank daily exit the tank with 90 or 180 days of first entering

# § 262.15 Satellite Accumulation Areas

- Clarifications
  - Require that hazardous wastes not be mixed or placed in a container with other hazardous wastes that are incompatible
  - Allow containers to remain open temporarily under limited circumstances, when necessary for safe operations
  - Provided maximum weight in addition to volume for acute hazardous waste limit
  - Clarified that “immediately” means within the same shift
  - Rescinded memo allowing reactive hazardous waste to be stored away from the point of generation
  - Made marking and labeling requirements consistent with central accumulation areas

# Emergency Preparedness and Planning

- Old Rule: Required generators to attempt to make arrangements with local emergency responders (fire, police, or hospital)
- **New Rule:** Generators may choose to make arrangements with the Local Emergency Planning Committee (LEPC) if determined to be the appropriate organization. Generators must document that they have attempted to make arrangements (or that arrangements were sought but not obtained) and keep the documentation in the facility's operating record

# Additional Changes

- § 262.18
  - Every SQG who produces a hazardous waste shall obtain an EPA ID Number from the Secretary using the RCRAInfo Industry Application or the paper Form 8700-12
- § 262.35 Liquids in Landfills Prohibition
  - The placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids is prohibited