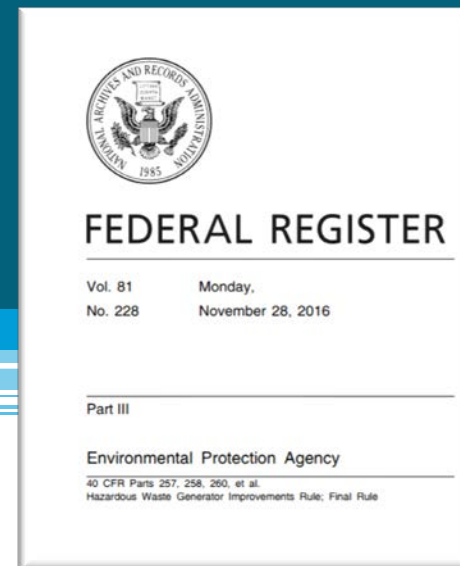


Hazardous Waste Generator Improvements Final Rule



US EPA
Office of Resource Conservation and Recovery

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Background

RCRA Overview

What is the Resource Conservation and Recovery Act (RCRA)?

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.



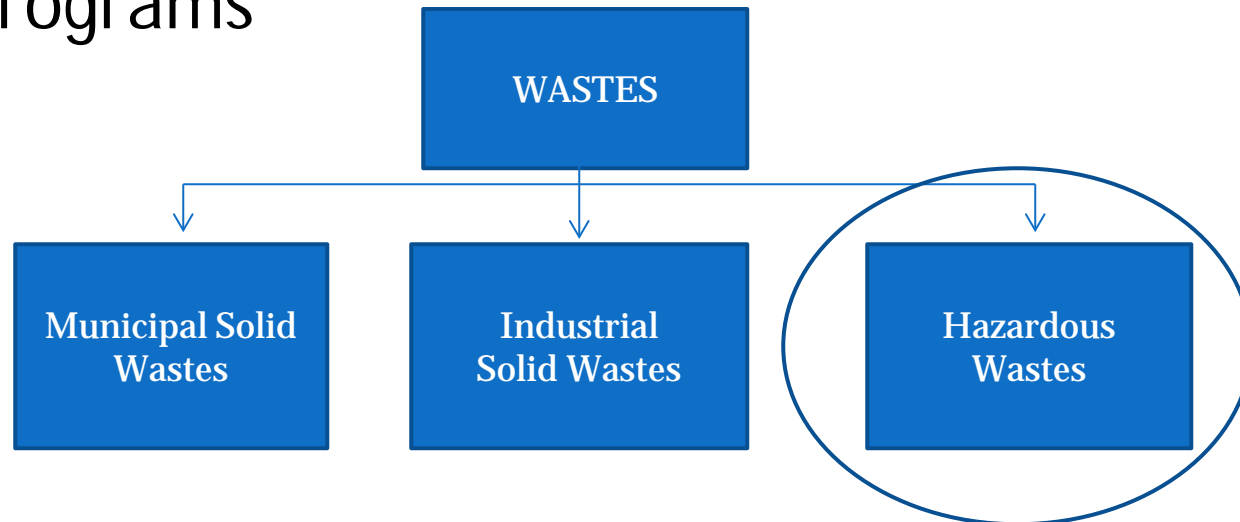
RCRA Program Goals

- 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

RCRA Overview

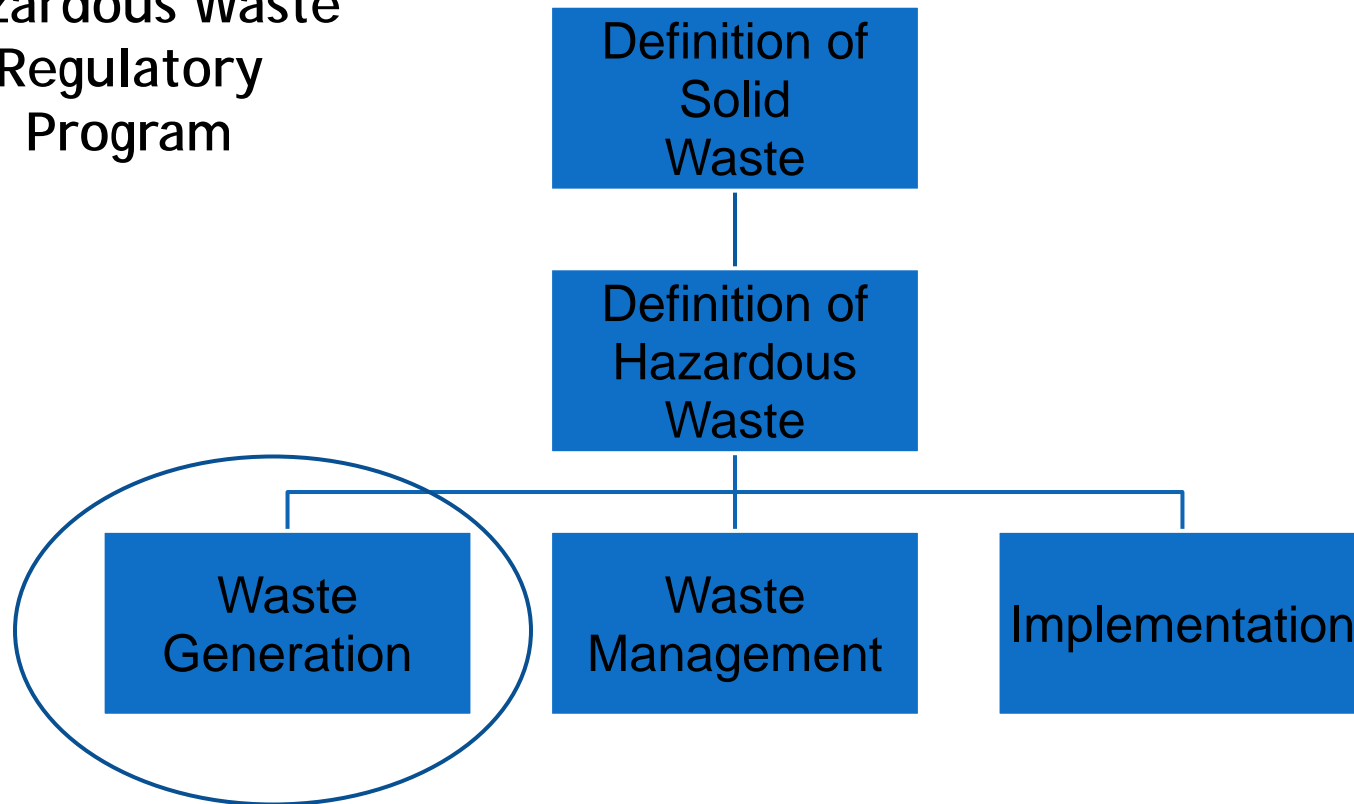
Waste Programs



Background

RCRA Overview

Hazardous Waste Regulatory Program



Background

RCRA Overview

- **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

RCRA Overview

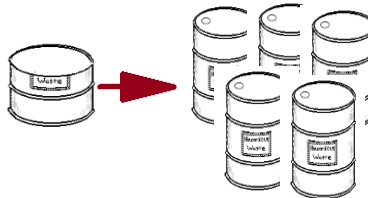
To determine your generator category, count all waste generated in a calendar month:

Very Small Quantity Generator (VSQG)



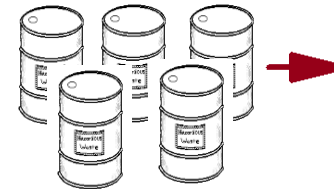
½ Drum or
27 Gal. Or
220 lbs. Or
100 Kg

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.
- Between 2004 and 2014, ORCR conducted several evaluations of the generator program, published an ANPRM (April 22, 2004, 69 FR 21800) and held public meetings soliciting comment on the effectiveness of the generator program.
- After these efforts, ORCR took a number of non-regulatory actions to respond to public comments and to improve the generator program. 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.

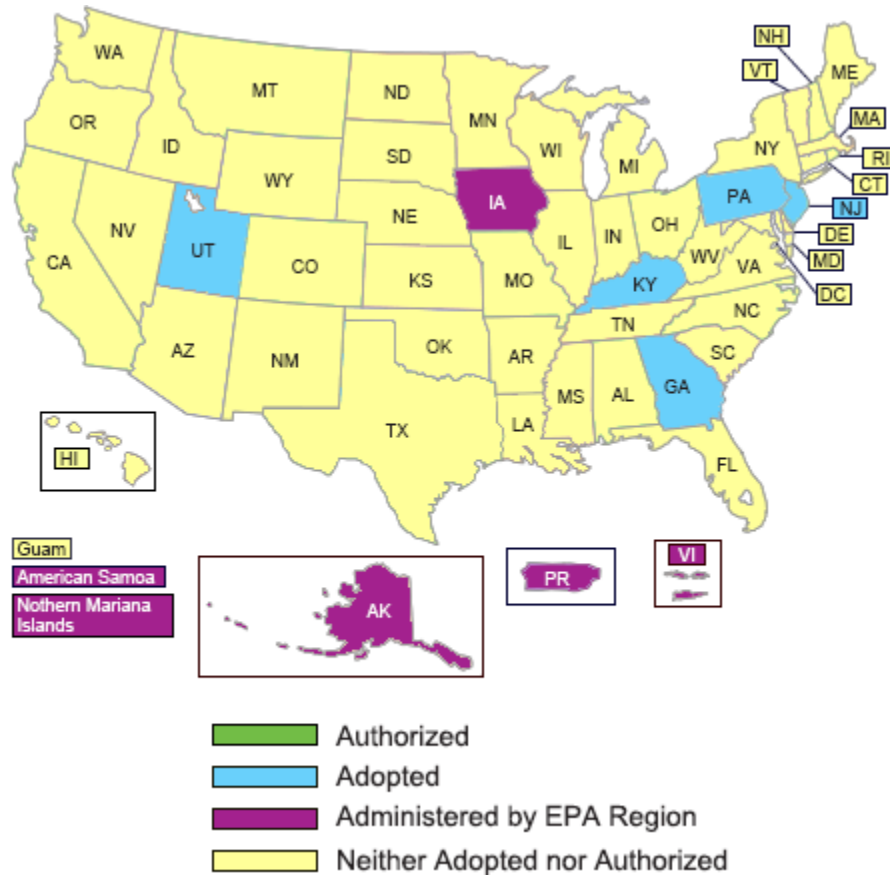
Public Comment on the Proposed Rule

- 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; VSQG consolidation; and episodic generation.

Rule Process & Schedule

- Rule signed on October 28, 2016
- Publication in Federal Register—November 28, 2016
- Effective Date – 6 months from publication—May 30, 2017
- Rule went into effect in IA, AK, the territories, and tribal lands on the effective date
- Authorized states run the RCRA program in their state and thus, will go through the state adoption & authorization process for this new RCRA rule
 - Authorized states will have to pick up the more stringent provisions, typically by July 1, 2018 (or July 1, 2019 if state law change is needed)
 - Authorized states can choose to pick up the less stringent provisions and those provisions that are considered equally stringent

Map of where the Generator Improvements Rule is in effect



Stringency of Final Rule

- **More stringent:**
 - SQG re-notification
 - SAAs subject to incompatibility and emergency preparedness & prevention requirements
 - Identifying hazards of wastes being accumulated on labels and RCRA waste codes added prior to shipment
 - Notification of closure
 - Closure as a landfill for LQGs accumulating hazardous wastes in containers that cannot meet closure performance standards
 - Biennial reporting for whole year, not just months the generator is an LQG
 - Biennial reporting for recyclers who don't store prior to recycling
 - Quick Reference guide for contingency plans
- **Less stringent:**
 - VSQG consolidation
 - Episodic generation
 - Waiver from 50-foot rule

Context

Size of Generator Universe

Generator Status	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:

1. Reorganize the regulations to make them more user-friendly and thus improve compliance by the regulated community
2. Provide greater flexibility for hazardous waste generators to manage waste in a cost-effective manner through episodic generation and VSQG-LQG consolidation provisions
3. Strengthen environmental protection by addressing identified gaps in the regulations
4. Clarify certain components of the hazardous waste generator program to address ambiguities and foster improved compliance

Reorganization of Generator Regulations

Provision	Existing Citation	Final 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 previously referenced § 261.5 and § 262.34

Hazardous Waste Determinations (§ 262.11)

Strengthening Environmental Protection

Documentation

Problem

- 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

Final rule - Not Finalized

We are not requiring documentation of non-hazardous waste determinations (as proposed) but continue to recommend it as a best management practice

Hazardous Waste Determinations (§ 262.11)

Strengthening Environmental Protection

Clarifications that Improve Program Efficiency and Effectiveness

- Confirmed that a generator's hazardous waste determination generator's waste must be accurate and made at its point of generation and at any time during the course of management for wastes potentially exhibiting a hazardous characteristic
- Explained more fully how generators can use generator knowledge and tests in making hazardous waste determinations
- Explained more completely in the regulations at § 262.11 how a generator should evaluate its waste for hazardous characteristics
- Copied waste determination recordkeeping requirements from § 262.40 (c) into §262.11

Hazardous Waste Counting (§ 262.13)

- A hazardous waste generator has always had to count their hazardous waste to determine what category of generator they are (VSQG, SQG, LQG).
- 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.
- This provision also discusses how mixing of hazardous waste with non-hazardous waste impacts generator category.

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

Very Small Quantity Generators (VSQGs)

- Limited requirements under both the previous regulations and the new final rule.
- The new final rule provides new options for flexibility for VSQGs
 - Episodic Generation (part 262 subpart L)
 - Consolidation at an LQG under the same company (§§ 262.14 and 262.17)

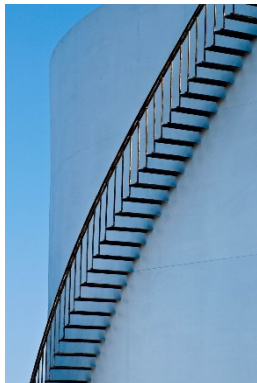


Episodic Generation

Enhancing Generator Flexibility

Problem

- Previous RCRA rules lacked 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)
- Without episodic generation provision, generators would have to comply with more comprehensive set of regulations for short period of time when they are not regular generators of higher levels of hazardous waste



Episodic Generation

Enhancing Generator Flexibility

Final Episodic Generation Provision

- **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 EPA or state at least 30 days prior to initiating a planned episodic event**
 - **Notify EPA or state within 72 hours after an unplanned event**
 - **Conclude the episodic event within 60 days, including getting the episodic waste off-site**

(Part 262 subpart L)

Episodic Generation

Enhancing Generator Flexibility

- **Streamlined Requirements for VSQGs:**
 - Obtain RCRA identification number
 - Use hazardous waste manifest and 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
 - Label episodic waste containers
 - Identify an emergency coordinator
 - Maintain records associated with episodic event

- SQGs need only comply with existing SQG regulations and maintain records associated with the episodic event

(Part 262 subpart L)

VSQG Waste Consolidation

Enhancing Generator Flexibility

Problem

- Some companies wanted to be able to consolidate wastes from their own VSQG sites for more efficient shipping and hazardous waste management
 - Reduces liability for company as a whole by ensuring proper management of hazardous waste
 - Sending to a RCRA-designated facility is the most environmentally sound option
 - Previously an LQG needed a RCRA permit to receive VSQG wastes

VSQG Waste Consolidation

Enhancing Generator Flexibility

Final Consolidation Provision

- Consolidate waste at an LQG under the control of the same person:
 - Person – as defined under RCRA
 - Control – means the power to direct policies at the facility

VSQG

- Marks and labels waste containers with “Hazardous Waste” and the hazards

LQG

- Notifies state on Site ID Form that it is participating in this activity and identifies which VSQGs are participating
- Recordkeeping for each shipment
- Manages consolidated waste as LQG hazardous waste including ensuring final treatment or disposal is at a RCRA-designated facility (TSDF or recycler)
- Reports waste received in Biennial Report

(§ 262.17(f))

Marking and Labeling

Strengthening Environmental Protection

Marking and labeling requirements apply throughout the hazardous waste management regulations.

Problem

- Previous RCRA labeling regulations did not require generators to identify and indicate the hazards of hazardous wastes accumulated in containers, tanks, and containment buildings
 - Resulted in a failure to communicate risks associated with wastes being accumulated/stored in different locations
 - Can impact workers, waste handlers, emergency responders and visitors

- Areas affected 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

Marking and Labeling

Strengthening Environmental Protection

Final Rule

- Container and tank labels must now also indicate the hazards of the contents of the containers
- Flexibility in how to comply with this new provision; can indicate the hazards of the contents of the container using any of several established methods (e.g., DOT hazard communication, OSHA hazard statement or pictogram, NFPA chemical hazard label, or RCRA characteristic)
- For containment buildings, the generator can keep this information in logs or records near the accumulation unit
- Prior to sending hazardous waste off-site to a TSDF, generators must mark their containers with the applicable RCRA waste codes or use a bar-coding system that performs the same function



Satellite Accumulation Areas

Strengthening Environmental Protection, Enhancing Generator Flexibility, Clarifying Regulations

Revisions and 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 “three days” means three consecutive calendar days**
- **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**

(§ 262.15)

SQG Re-Notification

Strengthening Environmental Protection

Problem

- EPA and most states have outdated and inaccurate databases of SQG universe information because there was no requirement to notify after the initial notification
- This makes it difficult to make programmatic decisions, plan or execute inspections effectively

Final Rule

- Requires SQGs to re-notify every 4 years unless states have more frequent re-notification requirements
- Electronic reporting an option
- Compliance date is delayed until 2021 to give states time to update their reporting forms, etc.

(§ 262.18(d))

Emergency Preparedness and Planning

Strengthening Environmental Protection

Making and Documenting Arrangements with Local Emergency Responders

Problem

- Previous regulations required generators to attempt to make arrangements with local emergency responders regarding wastes handled to prepare for a potential emergency
- There was no requirement to document that arrangements had been made (only that local emergency responders declined to enter into arrangements)

Final Rule

- Generators must document that they have attempted to make arrangements with local emergency responders (or that arrangements were sought but not obtained) and keep the documentation in the facility's operating record
- No specific form or type of documentation is required and additional flexibility is provided regarding where documentation can be retained

(§ 262.16(b)(8)(vi) & § 262.256)

Emergency Preparedness and Planning

Strengthening Environmental Protection

Contingency Plan Quick Reference Guide

Problem

- Contingency plans LQGs are required to submit to local emergency responders are lengthy
- At the moment of an emergency, responders want quick access to the most important information in the plan

Final Rule

- Requires new LQGs submitting contingency plans to also include a Quick Reference Guide (described as an Executive Summary in proposed rule) that contains information most critical for immediate response to an event
- Requires existing LQGs to include a Quick Reference Guide when they otherwise update their contingency plan
- Responsive to Executive Order 13650 on Chemical Facility Safety and Security

(§ 262.262)

Emergency Preparedness and Planning

Strengthening Environmental Protection

Contingency Plan Quick Reference Guide

- **Contents of the Quick Reference Guide (eight elements)**
 - Types/names of hazardous waste and associated hazards
 - Estimated maximum amounts of hazardous wastes
 - Hazardous wastes requiring unique/special treatment
 - Map showing where hazardous wastes are generated, accumulated or treated at the facility
 - Map of facility and surroundings to identify routes of access and evacuation
 - Location of water supply
 - Identification of on-site notification systems
 - Name of emergency coordinator(s) or listed staffed position(s) and 7/24-hour emergency telephone number(s)
- **EPA encourages generators to work with local emergency authorities and others to identify additional information that should be included**

Emergency Preparedness and Planning

Generator Flexibility, Clarifying Regulations

Other Clarifications and Areas of Flexibility

- Local Emergency Planning Committees (LEPCs) are not identified as the primary contact (as proposed) – although arrangements may be made with LEPCs if appropriate
- Generators are not required to make arrangements with appropriate local authorities (as proposed) and need only attempt to make arrangements
- Scope of the contingency planning and emergency procedures applies only to areas where hazardous wastes are being accumulated (including points of generation and SAAs)
- LQGs have flexibility to eliminate unnecessary employee personal information in the contingency plan
- SQGs and LQGs may determine the most appropriate locations for emergency equipment
- SQGs have the option to use contractors to address releases (containment/cleanup)
- Large facilities with internal response capabilities may seek a waiver from entering into arrangements with local authorities (final rule specifies waiver procedure)

Waiver to 50-Foot Requirement

Enhancing Generator Flexibility

Problem

- The previous generator regulations required that containers holding ignitable or reactive waste be located at least 15 m (50 feet) from the facility's property line, but meeting this requirement might be impossible, especially in urban areas where properties are less than 100 feet wide

Final Rule

- Allows LQGs to approach the fire marshal to apply for a waiver from the requirement if the fire marshal believes that the precautions taken by the facility make the waiver appropriate and safe



Reporting

Clarifying Regulations, Strengthening Environmental Protection

Final Rule: Biennial Report (BR) Clarifications Consistent with Existing BR Guidance

- Regulations will not list specific data elements to be reported, but instead refer generators directly to the form instructions
- LQGs must report all hazardous waste generated and managed on-site in reporting year; LQGs that generate and manage hazardous wastes off-site must follow existing BR guidance
- LQGs must report hazardous wastes generated throughout the calendar year, even for months when they are an SQG

(§ 262.41)

Closing Regulatory Gap

- Recycling facilities that do not have a RCRA storage permit must now report hazardous wastes being recycled

(§ 261.6)

Recordkeeping

Clarifying Regulations, Strengthening Environmental Protection

Recordkeeping for Tanks

Problem

- How does a generator accumulating hazardous wastes in tanks demonstrate that the tank has been emptied or all the waste has been turned over since first entering the tank?

Final Rule

- Use inventory logs, monitoring equipment or other records to demonstrate that for:
 - **Batch process:** Tank has been emptied every 90 or 180 days.
 - **Continuous flow process:** Estimated volumes of hazardous waste entering the tank daily exit the tank within 90 or 180 days of first entering.

Closure

Strengthening Environmental Protection

Problem

- Previous closure regulations for LQGs accumulating hazardous wastes in tanks, drip pads, and containment buildings require closure of facility as a landfill should it fail to clean close. LQGs accumulating hazardous wastes in containers did not have this requirement
- Numerous documented cases exist where LQGs accumulating in containers abandoned their facilities only to require Superfund removal action, sometimes costing millions of dollars to cleanup
- The Agency and states were not notified when a facility closes



Closure

Strengthening Environmental Protection

Final Rule

- Require closure “as a landfill” if LQGs accumulating hazardous wastes in containers fail to clean close
- Notification
 - Closure of waste accumulation area – Require LQGs to place notice in their operating record within 30 days after closure identifying location of unit within facility; or meet closure performance standards and notify EPA
 - Closure of facility –
 - Notify EPA or authorized state no later than 30 days prior to closing facility, and
 - Notify EPA or authorized state within 90 days after closing facility that it has complied with closure performance standards or notify if it can’t clean close
 - LQG can request extension but must notify EPA or authorized state within 75 days after closing facility

(§ 262.17(a)(8))

Major Changes of Final Rule by Generator Category

New Provision	VSQG	SQG	LQG
Reorganization	X	X	X
LQG Consolidation of VSQG wastes	X		X
Episodic Generation	X	X	
50-foot Waiver			X
Marking & Labeling		X	X
Marking RCRA Waste Codes		X	X
SQG Re-notification		X	
Contingency Plan Quick Reference Guide			X
Closure Notification			X
Closure as Landfill if Can't Clean Close			X
BR Reporting by Recyclers Who Don't Store*		X	X

EPA resources

Main generator website: <https://www.epa.gov/hwgenerators>

Generator Improvements Rule website:

<https://www.epa.gov/hwgenerators/final-rule-hazardous-waste-generator-improvements>

Link to the map of states that have adopted the new rule:

<https://www.epa.gov/hwgenerators/where-hazardous-waste-generator-improvements-rule-effect>

We plan to add FAQs and other implementation materials as needed

We also plan to update existing guidance and resources as much as possible with new terms and citations

Bottom Line:

- The final rule represents a much-needed update of the hazardous waste generator regulatory program
- With this rule, EPA:
 - Finalized approximately 60 changes to the regulations – some small, some big
 - Revisions and clarifications affect practically every component of the generator regulatory program
 - In addition, finalized ~30 additional technical corrections to the RCRA program

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