Used Drum Management and Reconditioning Virtual Public Meeting

November 1, 2023

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Outline

- What is an Industrial Container?
- What is a Drum Reconditioner?
- What do the Regulations Say?
- EPA Drum Reconditioner Damage Case Report Recap
- Advance Notice of Proposed Rulemaking (ANPRM) Summary
- EPA's Path Forward
- How to Submit a Written Public Comment
- How to Write an Effective Comment

What is an Industrial Container?

- Industrial containers (such as 55-gallon drums) are used to transport thousands of different types of materials including:
  - Industrial chemicals.
  - Acids (and other corrosives).
  - Oils.
  - Solvents.
  - Paints.
  - Adhesives.
  - Soaps.
  - Food.
  - Wastes and residues.

(Thinkstock Photo)

- Reusable drums or containers can be made of fiber, steel, plastic/high-density polyethylene, or a combination of plastic and steel (intermediate bulk containers). Once used, these containers are discarded in a landfill, recycled, or reconditioned/refurbished for reuse.
- Reconditioning and reusing industrial containers provides important economic and environmental advantages because it uses less energy and resources than making brand new containers. However, if not done in an environmentally safe manner, reconditioning can negatively impact surrounding communities and the environment.

What is a Drum Reconditioner?

- Facilities that specialize in reconditioning industrial containers are often called “drum reconditioners.” These facilities recondition steel and plastic drums and intermediate bulk containers for resale and reuse by cleaning, restoring, testing, and certifying these industrial containers. These containers may have contained hazardous chemicals or other materials listed on the previous slide.

- The two main processes used for reconditioning are:
  - Burning off residuals from metal drums in a drum furnace.
  - Washing metal and plastic drums or containers with water and a caustic solution to clean out residue.

- Operators who manage and ship containers that held hazardous materials or hazardous waste to drum reconditioning facilities must ensure the drums comply with the RCRA empty container provision.

What Do the Regulations Say?

- The RCRA empty container provision (40 CFR 261.7) exempts hazardous waste residues that remain in an emptied drum or other container, as long as certain conditions are met (e.g., emptied as much as possible and no more than one inch of non-acute hazardous waste remains in a drum).
- Despite the empty container provision, drum reconditioners are still receiving non-empty containers and, as such, are likely accepting drums of hazardous waste that are not actually RCRA “empty”.
- Additionally, even if drum reconditioners receive only “RCRA empty” containers, they may still receive and manage significant quantities of cumulative hazardous waste residues because of the sheer volume of containers they process.
- As a result, these facilities are potentially managing large quantities of hazardous waste without a provision in the regulations that allows drum reconditioners to store rejected non-empty hazardous waste containers and without being subject to substantive RCRA hazardous waste regulations.

Drum Reconditioner Report

- ORCR's Drum Reconditioner Damage Case Report was published on September 8, 2022, as the first step in examining the issues at drum reconditioning facilities. Findings from the report indicate a persistent number of damage cases at facilities in the United States.
    - The report can be found at: https://www.epa.gov/hw/drum-reconditioner-damage-case-report

- Of the total 181 drum reconditioning facilities identified (active and inactive), 86 had one or more reported damage cases, representing 47.5% of the industry. Damage cases included fires; groundwater, air, and soil contamination; employee injury; and loss of life.

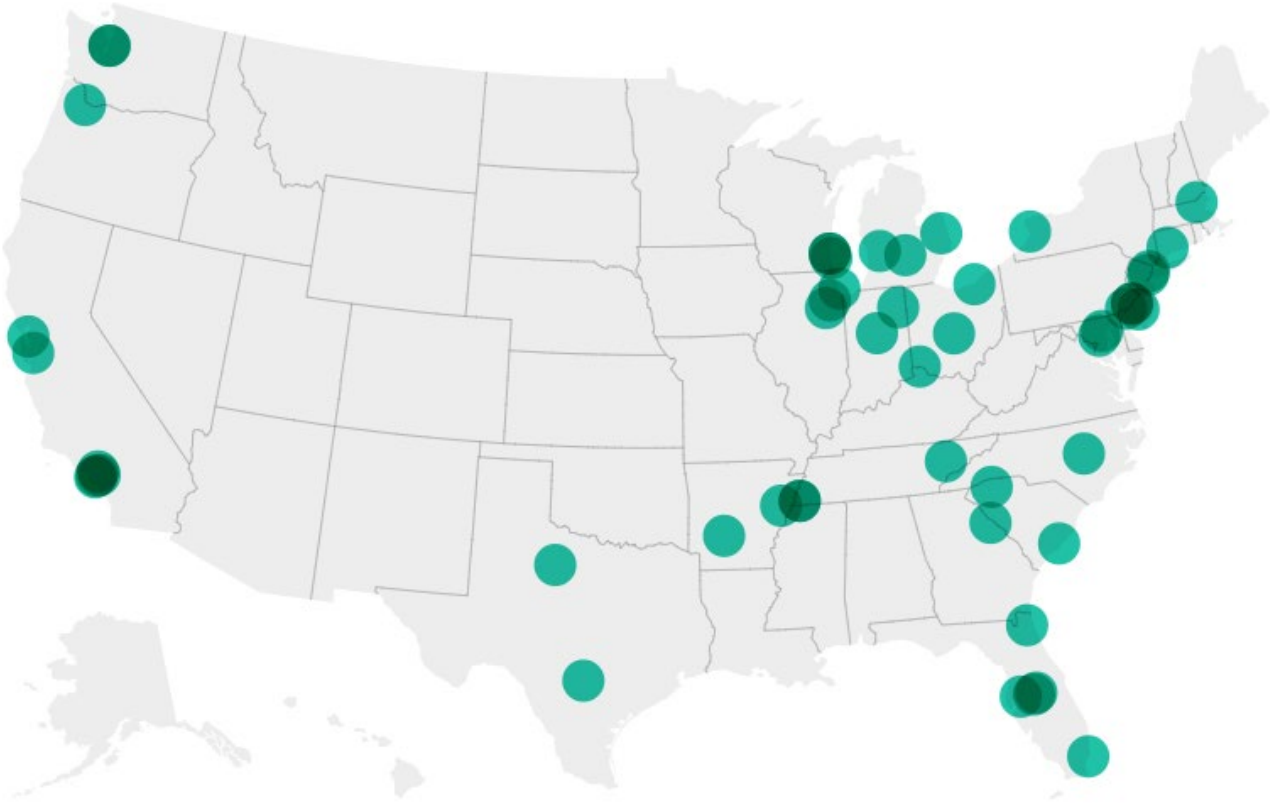
- As part of the report, a preliminary analysis using EPA's EJSCREEN tool also indicated that 94.2% of drum reconditioning facilities with damage cases are located in communities that already bear an environmental burden from other sources of pollution, exhibit characteristics of social vulnerability, or both, with many facilities located in areas where people of color and low-income populations are specifically impacted.

Examples of Damage Cases:

- The mixing of incompatible chemicals caused a fatal explosion.
- Mixing of chemicals at a production line.
- Leaking of abandoned drums.
- Multiple alarm fire at a reconditioning facility in Jessup, PA caused by a 55-gallon drum holding sodium chlorite being punctured.
  - Purple water was was seen running from the facility during firefighting activities.

(EPA Drum Reconditioner Damage Case Report, 2022)

Damage Case Locations



Most damage cases occurred in the Northeast and the Ohio River Valley and close to waterways.

Lighter green symbols indicate a single facility in one area with a damage case and darker symbols indicate multiple facilities with cases.

What's The Risk?

- Nearly all the damage cases in the report included harm to human health (workers or nearby neighborhoods) or the environment (on- and off-site).
- Specific examples of harm include:
  - Shelter in place orders for neighborhoods adjacent to fires due to air contamination
  - Drum explosions killing or burning employees
  - pH, nickel, lead, chromium, zinc and copper exceedances in wastewater discharges and soil
  - Hazardous air pollution discharges from incinerators (aka drum furnaces)
  - Discharges of hazardous waste into municipal storm systems, creeks, rivers, and groundwater supplies
  - Continuous volatile organic compound (VOC) exceedances in air surrounding facilities

Advance Notice of Proposed Rulemaking (ANPRM)

- As a first step, EPA analyzed drum reconditioner facility operations and found and documented damage case incidents at these facilities that caused harm to human health and the environment some of which could be attributed to upstream generators of used drums.

- On August 11, 2023, ORCR published the Used Drum Management and Reconditioning ANPRM to solicit information and request comments to assist in the development of options that would ensure the proper management of industrial containers that held hazardous chemicals or hazardous waste, up to and including the drum reconditioning process.

    - The ANPRM looks at issues across the span of container management, and requests comments on a wide variety of possible regulatory and non-regulatory solutions such as revising RCRA regulations and/or other non-regulatory options, such as best management practices (shown in the charts on the next few slides).

Advance Notice of Proposed Rulemaking (ANPRM) (continued)

Potentially Affected Parties	Issue that would be Addressed	Potential Future Regulatory Action
Used Drum Generators and Transporters	Risks posed by contamination from residues remaining in non–RCRA empty containers	Reduce the “one-inch” regulatory limit for defining non–RCRA empty containers
		Require rinsing for all containers before they would be considered RCRA empty
		Require empty drums to meet structural integrity requirements prior to shipment
	Non–RCRA empty drums being sent to drum reconditioners	Add/strengthen regulatory requirements for used drum generators to ensure all waste has been removed from containers using commonly employed practices prior to being sent to reconditioners, such as: SOPs for drum emptying, certification of empty drums, and employee training
		Add regulatory language further clarifying “commonly employed practices” and distinguishing between pourable and non-pourable wastes
		Require used drum generators to track and/or keep records of shipments of empty drums
	Risk of fires/explosions from incompatible, reactive, or ignitable residues	Require drum labeling or other documentation conveying the hazard posed by the drum residues

Advance Notice of Proposed Rulemaking (ANPRM) (continued)

Potentially Affected Parties	Issue that would be Addressed	Potential Future Regulatory Action
Drum Reconditioners	Non–RCRA empty drums being sent to drum reconditioners	Add regulatory requirements for drum reconditioners that receive non–RCRA empty and/or damaged drums, such as: • SOPs for screening drums prior to acceptance • Designated non–RCRA empty container storage areas • Rejected shipment procedures • Discrepancy reports • Container management plans
	Risks posed by contamination from residues remaining in non–RCRA empty containers	Require waste analysis plans for characterizing rinsate
	Stockpiling and eventual abandonment of drums	Require reconditioners to conduct regular inspections and maintain inventory of drums (RCRA empty and non–RCRA empty)
		Require reconditioners to obtain financial assurance
	Emissions from drum furnaces	Add regulatory requirements for drum furnaces, such as: • Controls or emission factor limits for drum furnaces • Limiting the use of drum furnaces to containers that held non-hazardous residues • Requiring pre-treatment (for example, triple rinsing) of containers prior to burning • Require a RCRA permit for drum furnaces that burn containers with residues that would be considered hazardous waste under 40 CFR part 261 by revising or removing the empty container provision in 40 CFR 261.7
	Environmental releases to soil, groundwater and surface water from contaminants in mismanaged wastewaters	Require wastewaters from rinsing containers to be managed in tanks and containers, rather than in land-based units, and to be discharged only in accordance with sections 301 and 402, or section 307 of the Clean Water Act (CWA)
		Limit discharges to surface impoundments to rinsate from drums that only held non-hazardous materials
		Prohibit sewer disposal of rinsate from drums that previously contained hazardous materials
	Risk of fires/explosions from incompatible, reactive, or ignitable residues	Require contingency planning and employee training in responding to emergencies
	Lack of regulatory oversight and public participation	Require a RCRA Subtitle C Permit or variance

Advance Notice of Proposed Rulemaking (ANPRM) (continued)

Potentially Affected Parties	Issue that would be Addressed	Potential Future Regulatory Action
Drum End-of-Life Management Facilities (e.g., scrap yards and landfills)	Risk from contaminated scrap metal and plastic when recycled or land disposed	Limit 40 CFR 261.7 empty container provision to containers sent to drum reconditioners (possibly coupled with new regulatory requirements for reconditioning)
		Require containers to be truly empty (not just "RCRA empty") before going to scrap recycling or disposal
		Require containers with any amount of hazardous residues (including crushed or shredded containers) to meet the hazardous debris alternative treatment standards in 40 CFR 268.45 prior to being land disposed

Path Forward

- The ANPRM comment period has been extended to November 22, 2023.

- This meeting is an opportunity for members of the public to provide EPA with information so we can better understand issues associated with industrial container reconditioning facilities and to assist in the development and evaluation of options to ensure the safe management and reconditioning of industrial containers, including proper management of residuals from these containers.

- EPA welcomes verbal comments today which will be recorded, and a transcript posted and official written comments online via the docket for the ANPRM. (https://www.regulations.gov/docket/EPA-HQ-OLEM-2023-0320)

How to Submit a Written Public Comment

- Public Comment Period: August 11 to November 22, 2023
- Online: https://www.federalregister.gov/documents/2023/08/11/2023-16752/used-drum-management-and-reconditioning-advance-notice-of-proposed-rulemaking
- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Office of Land and Emergency Management
  Docket ID No. EPA-HQ-OLEM-2023-0320
  Mail Code 28221T
  1200 Pennsylvania Avenue NW, Washington, DC 20460

How to Write an Effective Comment

- When commenting, use a heading that states the rulemaking name and docket ID number.
- Explain your experience in the area you are commenting on, and include in your comment any research, data, or empirical information.
- Be as clear as possible by defining your objectives, using clear organization and formatting, and precise language.
- Pay special attention to requests for data or information, or questions, within the document.
- Cite or include the part or section you are commenting on.
- Also cite or include sources if you refer to outside material in your comment.
- Individual comments that share personal experiences are more helpful than form letters.
- Regulations.gov has a helpful document with more details: https://downloads.regulations.gov/FS-2018-0053-0007/content.pdf