Business & The Environment
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RCRA: Dangerous Waste Fundamentals

Moderator: Jeffrey L. Hunter, Perkins Coie LLP

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Details:

This session will review the basics of hazardous waste regulation. We'll offer an overview of hazardous waste identification and management. Attendees will learn about the potential issues that may trigger an inspection and preparing for an inspection.

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RESOURCE CONSERVATION & RECOVERY ACT (RCRA)

RCRA DEFINES

1. "Solid" Waste
2. Hazardous Waste
3. Risk Prevention
4. Mechanisms for Communicating Risk & Tracking Compliance.

What exactly is that stuff?

1. Is it a Solid Waste?

- Liquids, solids or gases.
- Discarded, disposed, abandoned materials.
- Certain recycled materials, and materials accumulated and stored prior to recycling.

Is that product or waste in those tanks?

It is a Solid Waste, but is there an Off Ramp?

- Exemptions for certain recycling activities, but watch out for shams.
- Exclusions for certain wastes.
- Special requirements for common wastes like used oil, antifreeze, universal wastes, pharmaceuticals, that can be recycled.

2. Is It A Hazardous Waste?

LISTED WASTE (P, U, F, K-Codes)

CHARACTERISTIC WASTE (D-Codes)

- Ignitable
- Corrosive
- Reactive
- Toxic by TCLP

STATE-ONLY

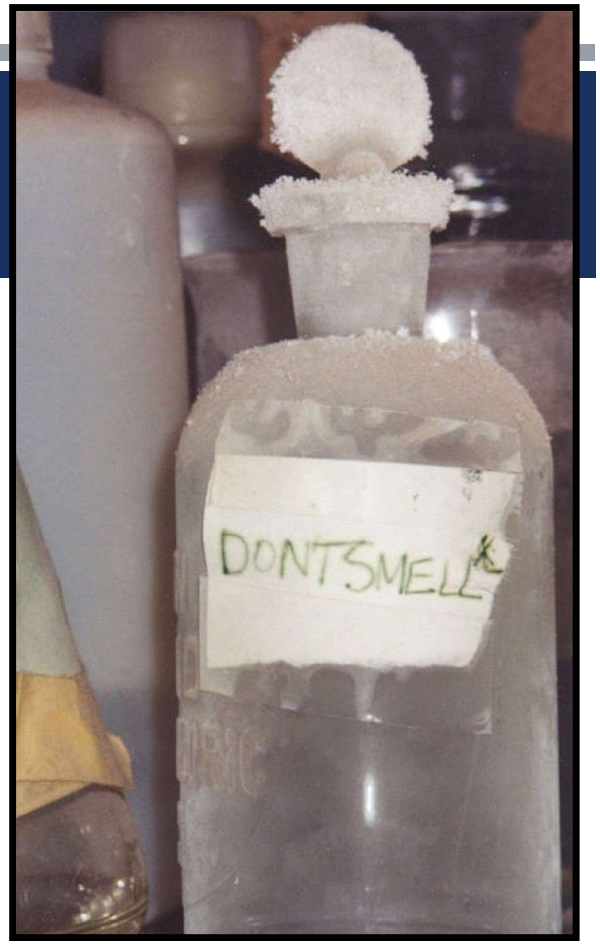
- OR, WA, ID, etc. "We got our own thing."

WASTE DETERMINATION (DESIGNATION)

- Generator Knowledge
  - Safety Data Sheets,
  - Product Labels,
  - Institutional Memory or Industry Knowledge.

- Analytical Data
  - SW846 Sampling & Test Methods!!

Are waste profiles sufficient for the determination?



Not all Safety Data Sheets, Labels, fond memories or knowledge cut it.

LISTED

Discarded Commercial Chemical Products

- Acute P-listed
- Toxic U-listed

Sole Active Ingredient.

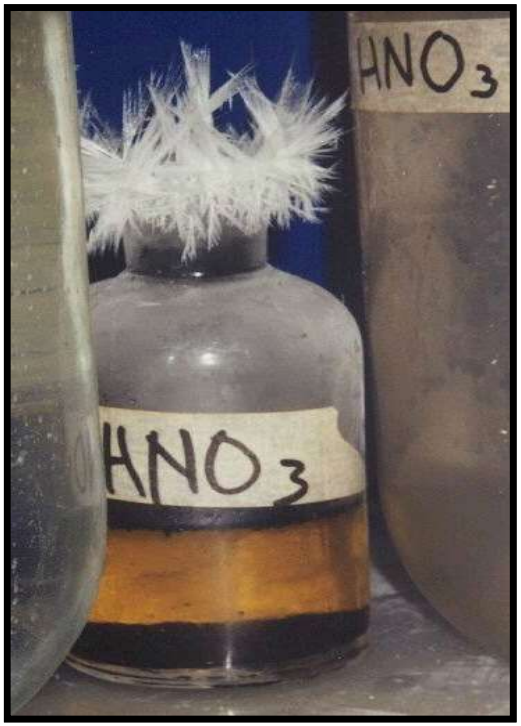
Non-specific sources

- F-listed

Specific sources

- K-listed

!! REMEMBER !!
IF A LISTED WASTE IS MIXED WITH OTHER WASTES, THE ENTIRE VOLUME IS LISTED!



IGNITABLE – D001

- LIQUID with a flash point <140°F
- SOLIDS that can cause a fire and sustain combustion
- COMPRESSED GAS
- OXYDIERS

CORROSIVE – D002

- It is aqueous (20% water of the total volume of the waste) and the **pH** is ≤**2** *or* ≥**12.5**
- It is non-aqueous (aka liquid) and **corrodes carbon steel at >0.25 inch/year**

REACTIVE – D003

- **Unstable** under "normal" conditions
- Can **cause explosions**, toxic fumes, gases, or vapors when heated, compressed, or mixed with water.
- Examples: lithium batteries, fireworks, ammunition, potassium cyanide

TOXIC D004 – D043

Toxicity Characteristic Leaching Procedure (TCLP)

- Test for known or suspected constituents of concern in your waste
- Compare waste concentrations to the list to determine if they're equal to or greater than the TCLP values.
- Examples: Heavy metals, organic pesticides, and other nasty stuff.

Maximum Concentration of Contaminants for the Toxicity Characteristic

Dangerous Waste Number	Contaminant	(Chemical Abstracts Services #)	DW (mg/L)
D004	Arsenic	(7440-38-2)	5.0
D005	Barium	(7440-39-3)	100.0
D018	Benzene	(71-43-2)	0.5
D006	Cadmium	(7440-43-9)	1.0
D019	Carbon tetrachloride	(56-23-5)	0.5
D020	Chlordane	(57-74-9)	0.03
D021	Chlorobenzene	(108-90-7)	100.0
D022	Chloroform	(67-66-3)	6.0
D007	Chromium	(7440-47-3)	5.0
D023	o-Cresol	(95-48-7) /1/	200.0
D024	m-Cresol	(108-39-4) /1/	200.0
D025	p-Cresol	(106-44-5) /1/	200.0
D026	Cresol	/1/	200.0
D016	2,4-D	(94-75-7)	10.0
D027	1,4-Dichlorobenzene	(106-46-7)	7.5
D028	1,2-Dichloroethane	(107-06-2)	0.5
D029	1,1-Dichloroethylene	(75-35-4)	0.7
D030	2,4-Dinitrotoluene	(121-14-2) /2/	0.13
D012	Endrin	(72-20-8)	0.02
D031	Heptachlor (and its epoxide)	(76-44-8)	0.008
D032	Hexachlorobenzene	(118-74-1) /2/	0.13

STATE-ONLY HAZARDOUS WASTE

- WASHINGTON & OREGON HAVE UNIQUE STATE-ONLY WASTES INCLUDING SOLID CORROSIVES, PCBs, CRITERIA TOXICITY AND PERSISTENCE.

- GO TO THE RESOURCES (OFFERED AT THE END) TO GET MORE INFORMATION.

Large

>2,000-lbs/month or
>2.2-lbs EHW

Greater Risk = Greater Regulation

90 Days Accumulation

Report Spills, Meet Container & Tank Standards, Conduct Inspections, Formally Train Staff According to Written Training Plan and Written Contingency Plan, Report HW Generation.

Common Violations

- Failure to Complete a Waste Determination
- Spills & Releases
- Poor Container or Tank Management
- Illegal Disposal

Every problem possible?

INSPECTIONS

- Why do agencies inspect?
  - Scheduled/mandated
  - Complaints
  - Industry sector focus
  - Upon request

BEFORE (WAY BEFORE)

- Know your inspection frequency
- Conduct regular reviews of paperwork and requirements
- Stay organized – paperwork and housekeeping
- Perform in-house inspections – document corrective actions
- Conduct required training
- Designate personnel and plan

THEY'RE COMING

- Announced vs. unannounced
- Gather paperwork
- Establish health & safety expectations
- Assemble designated personnel

THEY'RE HERE

- Arrival and check-in
- Opening conference
- Site walk
- Document Review
- Closing conference

OPENING CONFERENCE

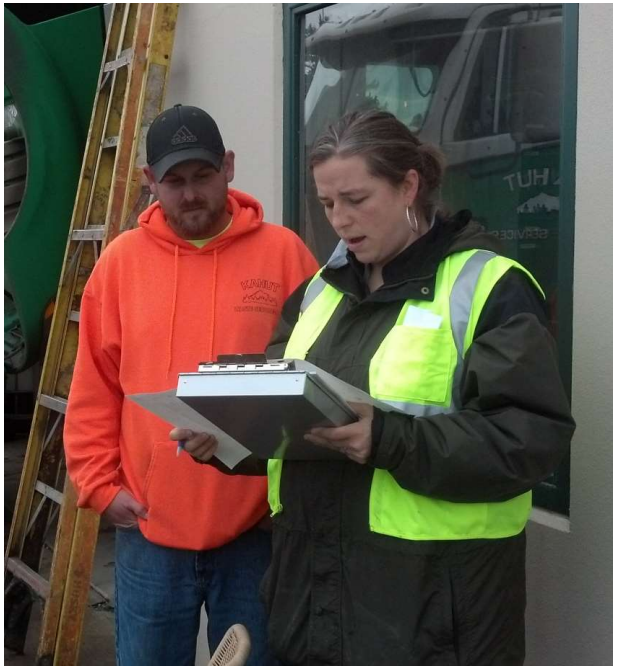
- Introductions
- Establish on-site protocols
- Discuss objectives, areas of interest

SITE WALK

- Flow of process, points of generation
- Evidence of spills
- Satellite accumulation areas
- Container management (closed & labeled)
- Storage areas

PAPERWORK

- Determinations
- Inspection logs
- Manifests (and exception reports)
- Training logs
- Contingency plan



CLOSING CONFERENCE

- Did the inspector note any issues? Initial findings?
- Does the inspector have any questions?
- Any follow-up items from site?
- Ask about next steps from agency and what to expect

BEST PRACTICES

- Don’t underestimate housekeeping and organization
- Follow up and document closing the loop
- Use the inspection as a teaming opportunity with your regulator

HOT TOPICS DURING THE INSPECTION

- Container management, labeling
- Determinations, manifests, training, consistent documentation
- Health and safety risks
- Aisle space
- Satellite accumulation
- Solvent wipes, aerosol cans
- Universal waste accumulation, storage
- Releases, spills, sumps

UPDATES AND HOT TOPICS

- New rule effective in Oregon
- Pharma rule review
- New EPA memo: expired hand sanitizer management
- Upcoming changes for wood treaters
- What's the deal with PFAS?

OREGON HAS ADOPTED DSW!

- Definition of Solid Waste
- Federal rule(s); 2015 & 2018
- Two state-only changes
- Adopted on November 18, 2022
- **Effective January 1, 2023**

Changes:

- No new exclusions for hazardous secondary materials (HSM).
- Modified definition of "contained" to align with pre-existing state regulations, which limit hazardous waste management in land-based units to permitted transfer, storage, and disposal facilities.

PHARMACEUTICAL RULE

- **In effect since January 1, 2022**
- Impacts healthcare facilities such as hospitals, clinics, nursing homes, long term care facilities, pharmacies, and vape shops
- Establishes cost-saving, streamlined standards for handling hazardous waste pharmaceuticals to better fit operations of healthcare sector while maintaining protection of human health and environment
- “Sewering ban” applies to all generators, regardless of status

PHARMA RULE TEST

Ask yourself two questions:

1. Is the facility a healthcare facility, as defined by the rule?

2. Is this a hazardous waste pharmaceutical?

If the answer to both of these questions is not “yes”, exit the pharma rule.

EXPIRED HAND SANITIZER

Did you know that expired alcohol-based hand sanitizer is a hazardous waste?

DATE: November 17, 2022
MEMORANDUM SUBJECT: RCRA Management of Excess Alcohol-based Hand Sanitizer
FROM: Carolyn Hoskinson, Director Office of Resource Conservation and Recovery

Memo addresses regulatory status of five recycling scenarios.

If the hand sanitizer is…		Then…
1. Burned for energy recovery	---	The hand sanitizer is a solid and hazardous waste subject to RCRA Subtitle C regulation (Part 266 Subpart H)
2. Used in a manner constituting disposal (e.g., in a product that is used in or on the land)	---	The hand sanitizer is a solid and hazardous waste subject to RCRA Subtitle C regulation (Part 266 Subpart C)
3. Reclaimed to produce alcohol, and	The alcohol is burned for energy recovery	The hand sanitizer and reclaimed alcohol are solid and hazardous waste subject to RCRA Subtitle C regulation (Part 266 Subpart H)
	The alcohol is used in a manner constituting disposal	The hand sanitizer and reclaimed alcohol are solid and hazardous waste subject to RCRA Subtitle C regulation (Part 266 Subpart C)
4. Reclaimed to produce alcohol, and	The alcohol is used in a product that is not burned for energy recovery and not used in a manner constituting disposal	The hand sanitizer and reclaimed alcohol are not a solid and hazardous waste and are exempt from RCRA Subtitle C regulation, provided the recycling is legitimate per 40 CFR 260.43

CHANGES COMING TO WOOD TREATMENT

- EPA initiated phaseout of pentachlorophenol, also called penta – wood preservative & pesticide
- February 4, 2022: EPA issued final registration review decision requiring cancellation
- Phased out over five years beginning in 2022
- Until February 29, 2024, registrants may continue to produce, sell, distribute while wood treatment facilities transition to alternatives
- After that time, wood treatment facilities will be allowed to use existing stocks to produce treated wood until **February 28, 2027**

WHAT'S HAPPENING WITH PFAS?

- PFAS are widely used, long lasting chemicals, components of which break down very slowly over time, ex. waterproof materials, nonstick materials, cosmetics

- PFAS are found in water, air, fish, soil, and human blood across the nation and the globe

- PFAS Strategic Roadmap: EPA's Commitments to Action 2021-2024

- On Sept 6, 2022, EPA issued a proposed rule to designate two of the most widely used PFAS as hazardous substances under CERCLA, or Superfund

RESOURCES

https://www.oregon.gov/deq/hazards-and-cleanup/hw/pages/hw-rules.aspx

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MORE INFORMATION OR HELP?

- **40 CFR (Electronic Code of Federal Regulations)**

www.gpoaccess.gov/index.html

- **RCRA Online (Q & A)**

www.epa.gov/epawaste/index.htm

- **Oregon DEQ HW Site**

https://www.oregon.gov/deq/Hazards-and-Cleanup/hw/Pages/default.aspx

Washington Department of Ecology HW Site

www.ecy.wa.gov/programs/hwtr/

QUESTIONS?

You ask ‘em, we (try to) answer ‘em!