VENABLE LLP

Overview of the **Resource Conservation and Recovery Act** (“RCRA”) and **Comprehensive Environmental Response, Compensation, and Liability Act** (“CERCLA”)

Environmental Law Institute
Washington D.C.
June 30, 2009

Dave Feinberg, Venable LLP
Allison Foley, Venable LLP

Overview of Today's Presentation

- 1. Introductions
  - Dave Feinberg (DLFeinberg@venable.com)
  - Allison Foley (ADFoley@venable.com)
- 2. RCRA
- 3. CERCLA

VENABLE LLP

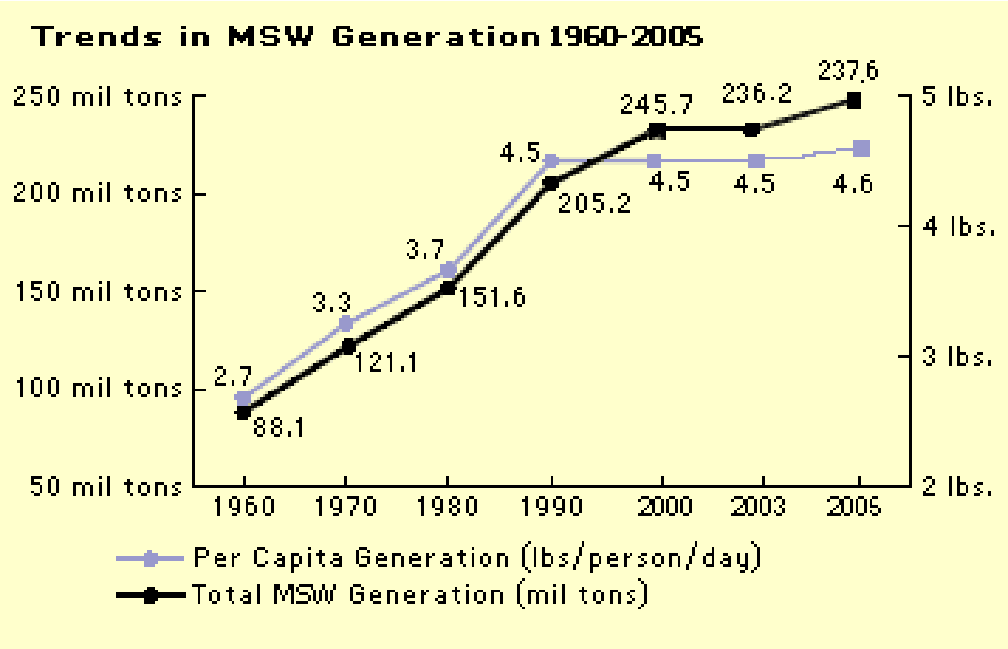
Introduction

- 1965: Solid Waste Disposal Act
- 1970: Clean Air Act
- 1970: U.S. Environmental Protection Agency
- 1970: National Environmental Policy Act and Council on Environmental Quality
- 1972: Clean Water Act
- 1976: Resource Conservation and Recovery Act, amending SWDA
- 1976: Toxic Substances Control Act
- 1980: CERCLA

RCRA

(U.S. EPA)

Municipal Solid Waste in the U.S.*



*The number of landfills in the United States has declined from 8,000 in 1988 to about 1,654 today; capacity has remained level.

(U.S. EPA)

2007 Hazardous Waste Data

- 16,349 generators produced **46.7 million tons** of hazardous waste in the United States in 2007
- By a significant margin, the states generating the most hazardous wastes were Louisiana (nearly 16 million tons) and Texas (over 13 million tons)
  - Michigan was the third-highest generator of hazardous waste (2.4 million)
- Alaska and Vermont generated the least hazardous waste, under 3000 tons each

(U.S. EPA)

2007 Hazardous Waste Data

- California had the most hazardous waste generators in 2007 (2,312), accounting for 14% of the nation's hazardous waste generators

- North and South Dakota had the least (32 combined), each accounting for 0.1% of the nation's total

(U.S. EPA)

2007 Hazardous Waste Data

- In 2007, the top 50 generators of hazardous waste accounted for **83%** of the nation's hazardous waste (38.8 million tons)
  - These are 50 individual sites (not company-wide generation)
- Leading hazardous waste generators (2007):
  - Dow Chemical Company (over 10 million tons from Plaquemine, LA and Midland, MI)
  - Solutia Inc. (over 3 million tons)
  - Occidental Chemical Corp (nearly 3 million tons in Hahnville, LA)

(U.S. EPA)

Hazardous Waste Treatment, Storage, and Disposal Facts

Top methods of hazardous waste management:

Deep well or underground injection	49.7%
Other treatment	9.6
Other disposal	7.8
Aqueous organic treatment	7.6
Landfills/surface impoundment	4.6
Energy recovery	3.9
Aqueous inorganic treatment	3.9
Incineration	3.3

RCRA Overview

- Key Terms: Solid Waste and Hazardous Waste
- Key Concepts:
  - Generation, Transport, TSD (treatment, storage and disposal)
  - Land Disposal Restrictions (LDR)
  - Regulation of Municipal Solid Waste (MSW); open dumps; sanitary landfills
  - Enforcement
  - Underground Storage Tanks (USTs)

42 U.S.C. §§ 6901 et. seq.; 40 C.F.R. §§ 240-282

Assessing RCRA Applicability

Is it a solid waste?

If so, is it a hazardous waste?

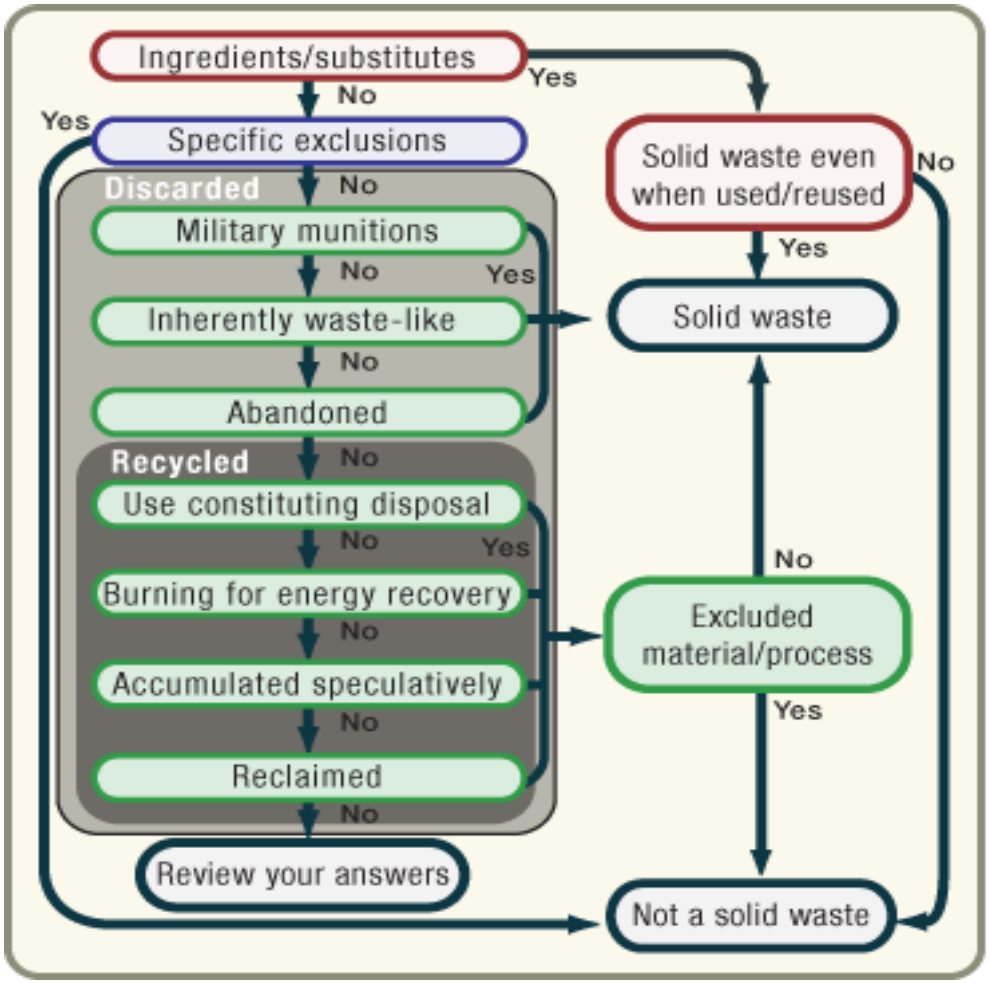
Is it excluded?

- Note: Distinguish Hazardous Waste (RCRA) vs. Hazardous Substance (CERCLA)

Definition of Solid Waste

- 40 CFR §261.2:
  - A *solid waste* is any ***discarded material*** that is not excluded under §261.4(a) or by a variance or non-waste determination
  - A ***discarded material*** is any material which is:
    - Abandoned (§261.2(b))
    - Recycled (§261.2(c))
    - Inherently waste-like (§261.2(d))
    - A military munition (§266.202)
- Solid waste can be garbage, refuse, sludge, or any other discarded material
- Solid waste can be a liquid, gas, sludge, or solid

Definition of Solid Waste – Decision Tree



U.S. EPA (www.epa.gov)

Defining “Discarded”

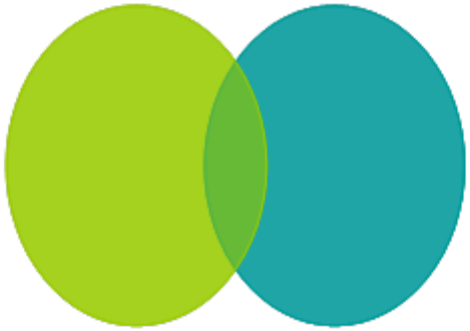
- Unless it is easily reusable with minimal reprocessing, a discarded material may still be considered a solid waste even if it is useful for some other purpose.

Exceptions to the Definition of Solid Waste

- Wastes that are easily reused in another process are not considered solid waste.
- Materials recycled without reclamation, reused (directly) as commercial products, or returned to the original industrial process are not solid wastes.
- Domestic sewage, irrigation waters, certain nuclear wastes are not considered solid wastes.

Defining Hazardous Waste

- Listed (a solid waste listed by the EPA); or
- Characteristic (solid waste having a hazardous characteristic)



Listed Hazardous Wastes

40 C.F.R. §§ 261.31-261.33

- Listed hazardous wastes are very specific, and fall within the following categories:
  - Non-specified/solvents (F-list)
  - Originating from specific processes (K-list)
  - Acute hazardous wastes/commercial chemical products (P-list)
  - Toxic wastes/commercial chemical products (U-list)
  - Also: State-listed wastes

- Examples:
  - Wastewater treatment sludges from electroplating operations (like zinc plating)
  - Wastewater treatment sludges from the production of vinyl chloride

- Note: There are 29 listed wastes that are listed only because they exhibit a *characteristic*; if the waste does not exhibit a characteristic and is not otherwise a characteristic waste, it is not hazardous waste (§261.3(g))

Characteristic Hazardous Waste

- Ignitable
- Corrosive
- Reactive
- Toxic

40 C.F.R. §§ 261.21-261.24

Ignitable (D001)

- Solid with a flash point of less than 140° F
- Liquid that is capable of fire or explosion at standard temperature or exposure to water
- Gas that is ignitable and compressed

Examples: Waste oils and used solvents

Corrosive (D002)

- Aqueous with a pH of < 2 (acidic) or > 12.5 (basic)
- Liquid that corrodes steel at a rate of 6.25 mm per year
- Examples:
  - Battery acid (1)
  - Lye (13)
- Not corrosive:
  - Vinegar (3)
  - Bleach (11.4)
  - Ammonia (12)

Reactive (D003)

- Includes solid wastes that:
  - Are normally unstable and readily undergo violent change without detonation
  - React violently with water
  - When mixed with water create toxic gases
  - Are capable of detonation when heated

- Examples:
  - Lithium-sulfur batteries
  - Explosives

Toxic (D004)

- EPA defines certain concentrations of chemicals for toxic wastes, e.g.:
  - Arsenic: 5.0 mg/L
  - Mercury: 2.0 mg/L

Hazardous Waste/Solid Waste

- Is it **discarded**?
- Is it a **solid waste**?
  - Abandoned, recycled, or inherently waste-like
  - Doesn't fall within any exceptions to definition of solid waste
- Is it **exempt**?
- Is it **listed**?
- Does it exhibit a **characteristic**?

RCRA Applies To

1. Generators

- Quantity Limits
- EPA ID Number
- On-Site Accumulation Limits
- Accumulation Time Limits
- Storage Requirements
- Manifest Requirement
- Biennial Report
- Personnel Training
- Contingency Plan
- Emergency Procedures
- Transport Requirements

(U.S. EPA)

VENABLE LLP

Generator Classes:
Production Thresholds (per month)

- **Large Quantity Generators (LQGs)**
  - At least 1,000 kg non-acute waste,
  - More than 100 kg acute spill cleanup residue, or
  - More than 1 kg (2.2 lb) other acute hazardous waste

- **Small Quantity Generators (SQGs)**
  - Between 100 kg – 1000 kg non-acute waste,
  - No more than 100 kg acute spill cleanup residue, and
  - No more than 1 kg (2.2 lb) other acute hazardous waste

Generator Classes: Production Thresholds (per month)

- **Conditionally Exempt Small Quantity Generators (CESQGs)**
  - No more than 100 kg non-acute waste,
  - No more than 100 kg acute spill cleanup residue, and
  - No more than 1 kg (2.2 lb) other acute hazardous waste

  - To be exempt, MUST:
    1) identify and count all generated hazardous waste
    2) store onsite no more than: 1,000 kg non-acute waste, 100 kg of acute spill cleanup residue, or 1 kg of other acute hazardous waste,
    3) ensure that hazardous waste sent to appropriate offsite treatment/disposal facility

  - 40 C.F.R. §261.5

Determination of Generator Status

- Generators of hazardous waste fall into one of three classes under RCRA:
  - Large Quantity Generator (LQG)
  - Small Quantity Generator (SQG)
  - Conditionally Exempt Small Quantity Generator (CESQG)

- *Generator status is determined monthly.* Wastes must be counted monthly, and status can change monthly.
  - Example: A facility generates 90 kg of non-acute hazardous waste in January and meets other CESQG requirements. In February, the same facility generates 110 kg of non-acute hazardous waste; nothing else changes, but the facility is now an SQG.

- Generator status is based on the amount of waste *generated per calendar month*, and the amount of waste *accumulated onsite at any time*.

RCRA Applies To

2. Transporters

(U.S. EPA)

RCRA Applies To

3. Treatment, Storage and Disposal Facilities (TSDFs)

(U.S. EPA)

Land Disposal Restrictions

(40 C.F.R. Part 268)

- Generally, hazardous waste cannot be disposed of on land (including underground) without prior treatment to *reduce toxicity and/or mobility* of its hazardous waste constituents
- Wastes meeting *treatment standards* may be land disposed
- *Land disposal* includes "placement in or on the land, except in a corrective action management unit," including placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, underground mine or cave, a concrete vault, or bunker intended for disposal purposes. 40 C.F.R. §268.2(c).

- Avoiding Regulation:
  - Dilution?
  - Infinite storage?

CESQG Waste and Household Waste

- CESQGs are **exempt** from the LDRs, but only if they send their waste to:
  - permitted or interim status hazardous waste facilities
  - legitimate recycling facilities
  - other facilities permitted by, licensed by, and/or registered with the state to manage municipal or industrial solid wastes

- 2003 Facts
  - 236 million tons of municipal solid waste was produced in the United States
  - On average, 4.5 pounds of solid waste per day per American

RCRA Enforcement

- Administrative
- Civil
- Criminal
- Citizen Suits
- *Imminent and Substantial Endangerment*
  - RCRA § 7003 (42 USC §6973)
  - Allows EPA Administrator to issue appropriate orders and bring suit in federal court
  - Requires notification to affected State

State Programs

- RCRA allows states to seek authorization to administer RCRA instead of EPA
- State regulation must be *at least as stringent as* the federal regulations
- Currently, 50 states and territories are authorized to implement the initial program
  - Several states have authorization to implement additional parts of RCRA, including Land Disposal Restrictions and Corrective Action

USTs and MTBE

- 640,000 underground storage tanks (USTs) in the United States
- Regulated under 40 CFR Part 280
- EPA approves state-administered UST programs if:
  - its requirements are no less stringent than the federal requirements; and
  - the state can take enforcement actions

(NYS DEC)