North Pacific Gyre

The Regulation of Waste

- Resource and Conservation Recovery Act of 1976 (RCRA) provides a regulatory structure for the classification, transportation, storage, and disposal of solid and hazardous waste
- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 provides for the management and cleanup of hazardous waste sites
- These two laws/regulations are tied together. Why?

RCRA Subtitle C Hazardous Waste Management

- Provides for the identification and listing of hazardous wastes
- Requires a cradle-to-grave tracking system for hazardous wastes
- Requires regulation and a permitting systems for hazardous waste generators, transporters, and Treatment, Storage, and Disposal Facilities (TSDFs)

RCRA Hazardous Waste Definitions

- Listed wastes
  - F, K, P, and U Wastes specifically listed in RCRA
- Characteristic Wastes
  - Ignitability
  - Corrosivity
  - Reactivity
  - Toxicity

RCRA Cradle-to-Grave Provisions

- Hazardous wastes are tracked from the point of generation to the point where they are disposed
  - Hazardous waste generators are required to obtain a generator identification number
  - Hazardous waste generators may accumulate hazardous wastes for a period of up to 90 days

Uniform Hazardous Waste Manifest

- Six part document that travels with the hazardous waste
- The manifest is first completed by the generator, then the transporter(s), then the TSDF
- The generator and the TSDF provide copies to the Department of Toxic Substances Control
- The generator is also required to provide the DTSC and the EPA with a biennial report regarding the generation of hazardous waste
**RCRA Subtitle D**

**State Solid Waste Programs**
- Instituted a ban on new open dumps
- Developed federal criteria for Municipal Solid Waste Landfills (MSWLFs)
- Prohibited open dumping except at sanitary landfills
- Required the EPA to provide minimum regulatory standards for MSWLFs

**Hazardous and Solid Waste Amendments of 1984 (HSWA)**

1. Regulates landfills
2. Requires landfill lining
3. Requires leachate collection systems
4. Requires landfill closure plans that ensure that landfills will not fail
5. Banned land disposal of hazardous waste for which alternatives are

**Casmalia Resources Hazardous Waste Management Facility**

**The Comprehensive Response, Compensation, and Liability Act**

- CERCLA was enacted in 1980 to provide mechanisms for environmental response to hazardous waste leaks and spills
- Under CERCLA, a property owner or property user may be held liable for any soil or groundwater contamination found beneath the property
CERCLA – Removal Action

1. A Removal Action occurs when the EPA is alerted to a hazardous release that presents an immediate danger to human health or the environment.
2. The response action is limited to 12 months and $2 million.
3. Remediation is typically required after the Removal Action.

CERCLA – Remedial Response

1. The EPA has developed a hazard ranking system for contaminated sites that considers relative risk to human health and the environment.
2. Sites scoring high enough are placed on the NPL.
3. Once on the NPL, a remedial investigation (RI) is performed to characterize the extent of the contamination.
4. Then a feasibility study (FS) is performed to evaluate remedial alternatives.

CERCLA - Compensation

- The purpose of the Superfund is to be able to initiate a Removal Action or Remedial Response before RPs are identified.
- When the RPs are identified, the idea is that they will replenish the fund.
- Kubasek reports that since 1990, RPs have been performing more than 75% of the long-term cleanups.
- The balance is paid for by the Superfund, which was originally set up as a tax on the petroleum and chemical industries.

CERCLA - Liability

- CERCLA liability may be strict, joint, several, and retroactive.
  - Strict – Liability may be incurred even though the RP was acting in accordance with all local, state, and federal laws; intent or negligence not required.
  - Joint and Several – The EPA may impose liability on multiple RPs or a single RP.
  - Retroactive – The EPA may impose liability even though the waste was deposited prior to the passage of CERCLA in 1980.