# CHAPTER 1

# LEGISLATIVE FRAMEWORK FOR ADDRESSING HAZARDOUS WASTE PROBLEMS

*In this chapter…*



## OVERVIEW

The legislation that serves as the basis for managing hazardous wastes can be divided into two categories:

- Media-specific statutes that limit and monitor the amount of wastes introduced into the air, waterways, oceans, and drinking water
- Other statutes that directly limit the production, rather than the release, of chemical substances and products that may contribute to the nation's wastes.

This chapter summarizes each statute and highlights its interaction with RCRA (see Figure VI-2).

## ENVIRONMENTAL STATUTES

In order to adequately protect human health and the environment from exposure to hazardous waste and contaminants, Congress enacted several regulatory programs to protect the nation's air and water resources, as well as ensure the safety of public health.

### ■ Clean Air Act

The **Clean Air Act** limits the emission of pollutants into the atmosphere in order to protect human health and the environment from the effects of airborne pollution. For six criteria pollutants (sulfur dioxide, particulate matter, nitrogen dioxide, carbon monoxide, ozone, and lead), EPA established **National Ambient Air Quality Standards** (NAAQS). Regulation of these criteria pollutants affords the public some protection from toxic air pollutants. Congress also mandated that CAA control emissions from specific industrial sources. Using this statutory authority, EPA designated hazardous air pollutants and set **National Emission Standards for Hazardous Air Pollutants** (NESHAPs). Primary responsibility for implementing both the NAAQS and NESHAP requirements rests with states.

***Figure VI-2: Major RCRA Interactions with Other Environmental Laws***

| | |
|---|---|
| CAA | • RCRA hazardous waste combustion facilities are subject to CAA permit requirements<br>• Air emissions from RCRA incinerators and other TSDFs must comply with applicable CAA NAAQS and emission limitations<br>• Pollutants and sludges extracted from CAA air emissions control devices are subject to RCRA hazardous waste regulations if hazardous<br>• Hospital, infectious, and medical waste incinerators are subject to NSPS and emissions guidelines under CAA |
| CWA | • Sludges resulting from CWA wastewater treatment and pretreatment are subject to RCRA hazardous waste regulations if hazardous<br>• Discharges from RCRA-permitted facilities must comply with the limitations set forth in NPDES permits<br>• RCRA-regulated USTs may also be subject to CWA SPCC requirements |
| EPCRA | • Some RCRA TSDFs must submit annual reports to EPA detailing releases of chemicals to air, land, and water |
| FIFRA | • FIFRA controls limit the level of toxic pesticides that are produced, and thereby reduce the amount of waste that needs to be managed as hazardous under RCRA<br>• FIFRA requires the registration of pesticides and disinfectants used in medical waste treatment technologies |
| MPRSA | • MPRSA prevents waste from a RCRA generator or TSDF from being deposited into the ocean, except in accordance with a separate MPRSA permit |
| OSHA | • RCRA hazardous waste generators and TSDFs may need to comply with OSHA training and planning standards<br>• RCRA cleanup activities and hazardous waste operations at generator facilities and TSDFs may need to comply with HAZWOPER regulations |
| SDWA | • MCLs may be adopted by the RCRA program as cleanup standards for corrective action<br>• RCRA contains provisions parallel to SDWA that prohibit the underground injection of hazardous wastes, unless such wastes have been treated to meet their respective LDR treatment standards |
| TSCA | • TSCA controls on the disposal methods of certain chemicals, such as PCBs, reduce the amount of waste that needs to be managed as hazardous under RCRA<br>• TSCA controls on the manufacture and use of certain chemical substances also reduce the amount of waste that needs to be managed as hazardous under RCRA |

The major interactions between RCRA and CAA include the following:

- On September 1999, EPA finalized a rule that establish coordinated CAA and RCRA requirements for incinerators, cement kilns, and LWAKs, commonly known as the MACT rule. This rule ensures that these facilities will avoid potentially will avoid two potentially different regulatory compliance schemes by integrating the monitoring, compliance testing, recordkeeping, and permitting requirements of CAA and RCRA (see Section III, Chapter 7 for more information, including regulatory developments).

- EPA has also developed organic air emission regulations for TSDFs and LQGs under RCRA (40 CFR Parts 264/265, Subparts AA, BB, and CC) (as discussed in Section III, Chapter 5). However, these RCRA regulations have been designed to minimize, to the extent possible, any overlap with CAA regulations.

- While medical waste is not subject to federal RCRA regulation (as discussed in Section V, Chapter 2), air emissions from new and existing hospital, infectious, and medical waste incinerators are subject to NSPS and emissions guidelines under CAA.

- Extraction of pollutants from air emissions using CAA controls (e.g., scrubbers) can create hazardous wastes or sludges containing such wastes. Disposal of these materials must comply with RCRA.

## ■ Clean Water Act

The **Clean Water Act** imposes pollutant limitations for all discharges of wastewater from identifiable ("point") sources into the nation's

waterways. These discharges are defined as either direct discharges, indirect discharges, or zero discharges.

**Direct discharges** are discharges from "point sources" into surface water pursuant to a NPDES permit. NPDES permits are granted on a case-by-case basis and limit the permissible concentration of toxic constituents or conventional pollutants in effluents discharged to a waterway. These limits are generally established on the basis of the best available treatment technology and, where necessary, to protect surface water quality standards.

Under **indirect discharges**, the wastewater is first sent to a POTW, and then after treatment by the POTW, discharged pursuant to an NPDES permit. Under these requirements, the generator of the wastes cannot simply transfer the waste materials to a POTW. Rather, the wastes must satisfy applicable treatment and toxic control requirements known as pretreatment standards, where they exist. POTWs that receive hazardous wastes for treatment are also subject to certain RCRA permit-by-rule requirements (as discussed in Section III, Chapter 8), and remain subject to RCRA corrective action.

**Zero discharges** mean that the wastewater is not being discharged to a navigable water, but rather is being land disposed (e.g., through spray irrigation) or are disposed by underground injection. Zero discharge facilities are subject to federal or state regulatory limitations that are as strict as those that apply to direct and indirect dischargers.

CWA also includes provisions intended to prevent oil spills into the navigable waters of the United States. These **Spill Prevention, Control, and Countermeasures** (SPCC) regulations establish spill prevention procedures and equipment requirements for nontransportation-related facilities with certain aboveground or underground oil storage capacities that could reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. The SPCC regulations provide a basic framework for operational procedures, containment requirements, and spill response procedures.

The major interactions between RCRA and CWA include the following:

- Sludge resulting from wastewater treatment and pretreatment under CWA must be handled as a RCRA waste under Subtitle C, if hazardous.
- Discharges to surface waters from a RCRA-permitted facility must comply with the limitations set forth in a NPDES permit. This means that either the facility itself has obtained an NPDES permit, or the wastes meet CWA pretreatment standards and have been transported to a POTW.
- Dredged materials subject to the requirement of a CWA §404 permit are not considered hazardous wastes under RCRA.
- USTs that are subject to the technical requirements of RCRA's UST program may also be subject to CWA SPCC requirements.

## ■ Emergency Planning and Community Right-to-Know Act

Congress amended CERCLA in 1986 with the enactment of the **Superfund Amendments and Reauthorization Act**. These amendments improved the Superfund program and added an important section that focused on strengthening the rights of citizens and communities in the face of potential hazardous substance emergencies. This section, SARA Title III, or the **Emergency Planning and Community Right-to-Know Act** (EPCRA), was enacted in response to the more than 2,000 deaths caused by the release of a toxic chemical in Bhopal, India.

EPCRA is intended to help communities prepare to respond in the event of a chemical emergency, and to increase the public's knowledge of the presence and threat of hazardous chemicals. To this end, EPCRA requires the establishment of state and local committees to prepare communities for potential chemical emergencies. The focus of the preparation is a community emergency response plan that must: 1) identify the sources of potential emergencies; 2) develop procedures for responding

to emergencies; and 3) designate who will coordinate the emergency response.

EPCRA also requires facilities to notify the appropriate state and local authorities if releases of certain chemicals occur. Facilities must also compile specific information about hazardous chemicals they have on site and the threats posed by those substances. Some of this information must be provided to state and local authorities. More specific data must be made available upon request from those authorities or from the general public.

The primary interaction between RCRA and EPCRA is that some RCRA TSDFs treating hazardous waste are required to submit annual reports to EPA of their releases of chemicals to air, land, and water.

## ■ Federal Insecticide, Fungicide, and Rodenticide Act

The **Federal Insecticide, Fungicide, and Rodenticide Act** (FIFRA) provides procedures for the registration of pesticide products to control their introduction into the marketplace. As such, its regulatory focus is different from most of the statutes discussed in this chapter. While the other statutes attempt to minimize and manage waste by-products at the end of the industrial process, FIFRA controls whether (and how) certain products are manufactured or sold in the first place.

FIFRA imposes a system of pesticide product registrations. Such requirements include pre-market review of potential health and environmental effects before a pesticide can be introduced in the United States, reregistration of products introduced prior to the enactment of FIFRA to assess their safety in light of current standards, and classification of pesticides for restricted or general use. Restricted products can be used only by those whose competence has been certified by a state program.

The major interactions between RCRA and FIFRA include the following:

- FIFRA controls limit the level of toxic pesticides that are produced, and thereby reduce the amount of waste that needs to be managed under RCRA.
- FIFRA requires the registration of pesticides and disinfectants used in medical waste treatment technologies (as discussed in Section V, Chapter 2).

## ■ Marine Protection, Research, and Sanctuaries Act

The **Marine Protection, Research, and Sanctuaries Act** (MPRSA) requires a permit for any material that is transported from a U.S. port or by a U.S. vessel for deposition at sea.

There are two major areas of overlap between MPRSA and RCRA. MPRSA prevents waste from a RCRA generator or TSDF from being deposited into the ocean, except in accordance with a separate MPRSA permit. In addition, dredged materials subject to the requirement of a MPRSA §103 permit are not considered hazardous wastes under RCRA.

## ■ Occupational Safety and Health Act

The mission of the **Occupational Safety and Health Act** (OSHA) is to save lives, prevent injuries, and protect the health of employees in the workplace. OSHA accomplishes these goals through several regulatory requirements including the **Hazard Communication Standard** (HCS), and the **Hazardous Waste Operations and Emergency Response Worker Protection Standard** (HAZWOPER).

The HCS was promulgated to provide workers with access to information about the hazards and identities of the chemicals they are exposed to while working, as well as the measures they can take to protect themselves. OSHA's **Hazard Communication Standard** requires employers to establish hazard communication programs to

transmit information on the hazards of chemicals to their employees by means of labels on containers, material safety data sheets, and training programs.

The HAZWOPER was developed to protect the health and safety of workers engaged in operations at hazardous waste sites, hazardous waste treatment facilities, and emergency response locations. HAZWOPER covers issues such as training, medical surveillance, and maximum exposure limits.

The major interactions between RCRA and OSHA include the following:

- Hazardous waste generators and TSDFs may need to comply with OSHA training and planning standards, in addition to RCRA requirements.
- HAZWOPER regulations may be applicable to RCRA corrective action cleanup activities, and to hazardous waste operations at generator facilities and TSDFs.

## ■ Safe Drinking Water Act

The **Safe Drinking Water Act** (SDWA) protects the nation's drinking water supply by establishing national drinking water standards (MCLs or specific treatment techniques), and by regulating UIC wells. The UIC program bans some types of underground disposal of RCRA hazardous wastes. With some exceptions, other materials cannot be injected underground without a UIC permit.

The major interactions between RCRA and SDWA include the following:

- MCLs may be adopted by the RCRA program as cleanup standards for corrective action. Selected MCLs are also used under the RCRA ground water monitoring program for land disposal units.
- RCRA also contains provisions parallel to SDWA that prohibit the underground injection of hazardous wastes, unless such wastes have been treated to meet their respective LDR treatment standards (as discussed in Section III, Chapter 6). RCRA also contains a ban on any injection of hazardous waste into "shallow" wells.

## ■ Toxic Substances Control Act

The primary focus of the **Toxic Substances Control Act** (TSCA) is similar to that of FIFRA in that the statute provides authorities to control the manufacture and sale of certain chemical substances. These requirements include testing of chemicals that are currently in commercial production or use, pre-market screening and regulatory tracking of new chemical products, and controlling unreasonable risks once a chemical substance is determined to have an adverse effect on health or the environment. TSCA controls on such unreasonable risks includes prohibiting the manufacture or certain uses of the chemical, requiring labeling, limiting volume of production or concentration, requiring replacement or repurchase of products, and controlling disposal methods.

The major interactions between RCRA and TSCA include the following:

- TSCA has a direct effect on RCRA through controls on the disposal methods of certain chemicals, such as PCBs. For example, while TSCA regulates PCB disposal, RCRA also regulates PCB disposal when the PCBs are mixed with hazardous waste.
- TSCA also regulates used oil that contains quantifiable levels of PCBs.
- TSCA's indirect effect on RCRA is the same as FIFRA's. TSCA controls the manufacture and use of certain chemical substances, which limits the amount of waste that needs to be managed under RCRA.
- EPA has proposed TSCA standards for the disposal of lead-based paint (LBP) debris to replace RCRA regulations. The new standards would establish disposal standards for LBP

debris and identify recycling and incineration activities that would be controlled or prohibited. To avoid duplicative regulation, the waste that is subject to these new standards would not be subject to RCRA hazardous waste determination.

## SUMMARY

Several major environmental statutes work together to address hazardous waste problems. These include media-specific statutes that limit the amount of waste released into a particular environmental medium, and other statutes that directly control the production of certain products, and protect workers managing hazardous wastes. These statutes are:

- Clean Air Act
- Clean Water Act
- Emergency Planning and Community Right-to-Know Act
- Federal Insecticide, Fungicide, and Rodenticide Act
- Marine Protection, Research, and Sanctuaries Act
- Occupational Safety and Health Act
- Safe Drinking Water Act
- Toxic Substances Control Act.

## ADDITIONAL RESOURCES

Full-text versions of the major environmental laws administered by EPA can be found at www.epa.gov/epahome/laws.htm.