

LEGISLATIVE FRAMEWORK FOR ADDRESSING HAZARDOUS WASTE PROBLEMS

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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 pollutants 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.

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. Such pollutants include: sulfur dioxide, particulate matter, nitrogen dioxide, carbon monoxide, ozone, and lead. EPA established the **National Ambient Air Quality Standards** (NAAQS). 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). The states have primary responsibility for implementing both the NAAQS and NESHAPs requirements.

■ Clean Water Act

The **Clean Water Act** (CWA) 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 National Pollutant Discharge Elimination System (NPDES) permit. NPDES permits limit the permissible concentration of toxic constituents or conventional pollutants in effluents discharged to a waterway.

Under **indirect discharges**, the wastewater is first sent to a publicly owned treatment works (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 Chapter III), 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.

■ **Safe Drinking Water Act**

The **Safe Drinking Water Act** (SDWA) protects the nation’s drinking water supply by establishing national drinking water standards (maximum contaminant levels (MCLs) or specific treatment techniques), and by regulating underground injection control (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.

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

Congress amended CERCLA in 1986 with the enactment of the **Superfund Amendments and Reauthorization Act** (SARA). 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.

■ **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.



■ 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.

■ Polychlorinated Biphenyls (PCBs)

The 40 CFR Part 761 regulations define polychlorinated biphenyls (PCBs) as any chemical

substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of PCB-containing substances. PCBs have been demonstrated to cause a variety of adverse health effects. As a result, EPA has developed regulations for the proper use, cleanup, and disposal of PCBs pursuant to TSCA. The management of the TSCA regulations for PCBs has historically been handled by the EPA Office of Prevention, Pesticides and Toxic Substances (OPPTS). However, EPA has transferred the management of the PCB cleanup and disposal program from its current location in OPPTS to the Office of Solid Waste and Emergency Response (OSWER). This transfer was effective on October 1, 2007.

In general, all of the sections of the PCB regulations at Part 761 relating to cleanup and disposal will be administered by OSWER. These regulations include general requirements for the cleanup and disposal of PCBs, as well as specific requirements for managing PCB remediation waste, disposal of PCB bulk product waste, storage and disposal of PCB household waste, and disposal of PCB-containing waste generated during and as a result of research and development activities.

The TSCA PCB disposal regulations set forth a number of basic principles. First, all allowed uses must be disposed at the end of their useful life, and all waste coming out of use must be disposed within one year. Liquids are stringently regulated; non-liquids are less stringently regulated. Some disposal requirements are performance-based and some are risk-based. The risk standard is “no unreasonable risk of injury to health or the environment.” All required disposal must be at facilities approved in the regulations or by EPA. Finally, as with RCRA, states may require more stringent disposal.

Specific requirements for PCB cleanup and disposal that will be administered by OSWER include the following:

- Marking of waste containers, equipment stored for reuse or disposal, and areas used to store PCBs for disposal

- Storage of PCBs for disposal, including a time limitation, criteria for storage facilities, and closure requirements
- Incineration of PCBs, including combustion efficiency criteria, monitoring, procedures for waivers, and notification
- Requirements for high efficiency boilers, scrap metal recovery ovens, and chemical waste landfills
- Coordinated approval for PCB waste management
- Decontamination standards and procedures
- Requirements for import or export for disposal
- PCB spill cleanup policy
- General recordkeeping and reporting requirements, such as annual reports and manifests
- PCB waste disposal records and reports, including the PCB Activity Database (PADS)
- Sampling requirements and procedures

In general, all of the PCB regulations at Part 761 relating to the authorized use of PCBs will continue to be administered by OPPTS. Some sections of Part 761 will be jointly managed by both offices, OSWER and OPPTS, because they deal with the proper use of PCBs, as well as cleanup and disposal. The management of PCB cleanup and disposal under TSCA will continue to be a federally implemented program and will not be delegated to the states. OPPTS will work closely with OSWER and EPA's regional offices to facilitate knowledge transfer of the PCB program's regulatory history and ensure a smooth transfer of current projects.

Updates and information will be posted as they become available at www.epa.gov/pcb.

■ 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 HCS 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.

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

ADDITIONAL RESOURCES

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

