Chapter 5

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

Roadmap

- Understand the response action process implemented by EPA to respond to hazardous substance contamination.
- Learn who are "potentially responsible parties" (PRPs) that may be liable for the cleanup of facilities contaminated by hazardous substances.
- Comprehend what expenses PRPs may be responsible for.
- Understand how Congress and the federal courts have treated CERCLA liability in cases involving multiple responsible parties.
- Grasp how the tort law concept of contribution has been incorporated in CERCLA cases.
- Learn the substantive and procedural aspects of the statute that guide settlement of CERCLA claims.

I. Introduction

In the late 1970s, a series of highly publicized environmental disasters jarringly introduced the American public to the dangers created by the haphazard disposal of hazardous chemical waste. It quickly became evident that haphazard dumping of hazardous materials into unprotected ditches, pits, ponds, lagoons, landfills, and other places posed a serious threat to drinking water supplies, property, natural resources, and human health. The public reacted to this newly realized peril with anguish and anger. The perceived "hazardous waste crisis" that began in 1978 at Love Canal in New York State created a political uproar that pressured elected and appointed public officials

to respond promptly and effectively to the risks created at abandoned hazardous waste sites. The public further demanded that the individuals or entities responsible for hazardous waste release be held to account.

Following a vigorous 18-month litigation effort by EPA and the U.S. Department of Justice to use the imminent hazard provision of the Resource Conservation and Recovery Act as a legal tool to compel hazardous waste site cleanups, and lengthy congressional debates and negotiations among lawmakers, Congress passed the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA" or the "Superfund Act") in December 1980. This statute was amended several times thereafter—most notably in the Superfund Amendments and Reauthorization Act of 1986—to correct problems with EPA's implementation of the law and clarify ambiguous provisions of the initial statute.

This chapter describes the most important provisions of CERCLA and the government-managed program that implements it. After considering the legal measures established by the statute for responding to hazardous waste spills and hazardous conditions at abandoned dumpsites, it focuses on various aspects of CERCLA's liability scheme. Those include the overall structure and common elements of Superfund liability, the identity of responsible parties and what they are liable for, the liabilities of multiple responsible parties, contribution and private cost recovery lawsuits, and the settlement of CERCLA enforcement actions against responsible parties.

II. The Response Action Process

A crucial feature of CERCLA is the authority it gives to federal authorities to investigate and evaluate facilities at which hazardous substances are located, and to take direct actions to remedy releases of substances that will endanger health or the environment. The statute directed the president (and, by delegation, EPA) to prepare a plan to establish a "national oil and hazardous substances contingency plan" (commonly referred to as the "National Contingency Plan" or the NCP) to guide the implementation of those legal tools. CERCLA § 105, 42 U.S.C. § 9605. EPA complied with Congress's directive by comprehensively revising and extending a preexisting plan for responding to oil spills into the nation's waters. The NCP that resulted provides detailed guidelines for the investigation, evaluation, and cleanup process that are at the heart of CERCLA. *See* 40 C.F.R. pt. 300.

Under the Plan, Superfund response actions begin with the discovery of a release (or threatened release) of hazardous substances at a specific geographic

location. Unless there is an emergency at the site, EPA will evaluate the dangers that it poses to determine whether a short-term "removal action" is needed to protect public health and the environment. Such an action often involves placing a fence around a site, removing and safely disposing of leaking drums of hazardous materials, and/or other measures that can be taken relatively promptly.

Where EPA concludes that a further, long-term response is needed at a facility, the Agency will begin what is known as a "remedial action." The process of remedial action, which can proceed in parallel with or following a removal action, begins with a Preliminary Assessment/Site Investigation (or "PA/SI") where data is gathered to assess the severity of the risks posed by the site. Using those data, EPA employs a so-called "hazard ranking system" as a screening device to assess "the potential for releases of uncontrolled hazardous substances to cause human health or environmental damage . . ." Hazardous substance releases that exceed a given threshold score are eligible to be placed on a National Priorities List ("the NPL") and become a candidate for remedial action funded by the Superfund. *See* 40 C.F.R. pt. 300, Appendix B.

Following the NPL listing of a facility, EPA proceeds to prepare a remedial investigation/feasibility study (an "RI/FS") to assess in greater detail the environmental and health risks posed at the site, and to develop and evaluate potential remedial actions. The Agency then proceeds to select one or more specific long-term remedial measures, applying a set of criteria set forth in the NCP. *See* CERCLA § 121, 42 U.S.C. § 9621 and 40 C.F.R. § 300.430(e)(9)(3). Following public comment, the remedial action the Agency has selected is memorialized in a Record of Decision ("ROD"), and EPA designs and implements its chosen remedy in a Remedial Design/Remedial Action ("RD/RA"). Once all response actions have been carried out, EPA may delete a presumably "clean" site from the NPL. However, at some "de-listed" sites, periods of operation and maintenance activities are still required; and where hazardous substances are left in place at a site, the statute requires the agency to review the completed remedial action every five years to ascertain whether the remedy continues to protect human health and the environment. *See* 42 U.S.C. § 9621(c).

A. Remedies

When the Superfund Act was amended in 1984 by the Superfund Amendments and Reauthorization Act ("SARA"), Congress established the degree of cleanup that must be the result of remedial actions. A product of congressional dissatisfaction with some of EPA's initial remedial decisions, SARA

requires that most cleanups comply with "applicable or relevant and appropriate requirements" established in other federal and state environmental laws. *See* 40 U.S.C. §9621(d), CERCLA §121(d). Those borrowed cleanup standards are generally referred to by the acronym "ARARs." Where no ARARs exist for a particular hazardous substance released at a Superfund site, EPA generally attempts to protect human health and the environment by setting site-specific remedial goals that eliminate exposures that would produce adverse human health effects.

B. Administrative Response Action Orders

Recognizing the benefits of harnessing private resources to remediate ongoing or threatened hazardous substance releases, Congress provided EPA with potent tools to compel private parties to remedy harmful conditions they created. In situations where the Agency determines that "an actual or threatened release of a hazardous substance from a facility" may be creating "an imminent and substantial endangerment to public health or welfare or the environment," EPA is authorized to require the U.S. Department of Justice to file a civil action in federal court seeking equitable relief. *See* CERCLA §106(a), 42 U.S.C. §9606(a). EPA may also issue administrative response action orders to protect public health, welfare, and the environment.

Since the late 1980s, EPA has pursued an "enforcement first policy" in CERCLA matters, relying extensively on administrative orders to secure prompt cleanup actions by responsible parties. Although EPA has a clear preference for reaching negotiated agreements with those parties, it relies on unilateral administrative orders where negotiations fail. Litigation is only rarely initiated to encourage response actions by potentially responsible parties ("PRPs").

Violations of EPA administrative orders can result in severe penalties. The statute provides that a person who willfully violates or refuses to comply with such an order may be liable for civil penalties of up to $25,000 per day—a penalty amount that was increased to $53,907 per day to account for inflation, in accordance with the Federal Civil Penalties Adjustment Act. *See* CERCLA §106(b)(1), 42 U.S.C. 106(b); 42 U.S.C §9606(b)(1), and 28 U.S.C. §2691. Moreover, liable parties that "without sufficient cause" fail to comply with orders that compel them to undertake removal or remedial actions may be liable for punitive damages of up to three times the cleanup costs incurred by the government as a result of their noncompliance. *See* CERCLA §107(c)(3), 42 U.S.C. §9607(c)(3). Though these provisions of the statute have been challenged as inconsistent with the due process clause of the Fifth

Amendment, their constitutionality has been upheld by the courts. *See, e.g., General Electric Co. v. Jackson*, 610 F.3d 110 (D.C. Cir. 2010) (recipients of unilateral administrative orders under CERCLA are not entitled to immediately challenge the constitutionality or substance of those orders).

On the other hand, where a respondent complies with an administrative order, but nonetheless believes the order was unlawful, the respondent may petition EPA for reimbursement of its costs of compliance under Superfund. CERCLA § 106(b)(2), 42 U.S.C. § 9606(b)(2). Petitioners who are dissatisfied with EPA's decision may obtain judicial review in a U.S. District Court. Those parties will prevail if they prove that EPA's decision in selecting the response action in question was "arbitrary and capricious" or otherwise not in accordance with law. Alternately, they may receive reimbursement if they can demonstrate that they were not responsible parties as defined by the statute, CERCLA § 106(b)(2)(D), 42 U.S.C. § 9606 (b)(2)(D).

III. CERCLA Liability

A. The Structure and Common Elements of Liability

At section 107(a), 42 U.S.C. § 9607(a), CERCLA makes four categories of parties liable to reimburse response costs incurred by the government. Those are:

(i) the present owner or operator of a facility,
(ii) a past owner or operator of a facility who owned or operated that facility during a period when hazardous substances were disposed there,
(iii) a person who "arranged for disposal or treatment" of their own hazardous substances by another party or entity, and
(iv) a person who accepts or accepted hazardous substances for transport to disposal or treatment facilities or incineration sites from which there is a hazardous substance release that causes the incurrence of response costs.

The term "person" is broadly defined. It includes "an individual, firm, corporation, association, partnership, consortium, joint venture, commercial entity, United States Government, State, municipality, political subdivision of a state, or any interstate body." CERCLA § 101(21), 42 U.S.C. § 9201(21). However, the U.S. Supreme Court has held that States are entitled

to immunity from suit, under the Eleventh Amendment, unless they have consented to be sued. *Seminole Tribe of Florida v. Florida,* 517 U.S. 44 (1996).

Under CERCLA, responsible parties are liable where there has been a release or threatened release of a hazardous substance from a facility that has caused the incurrence of response costs. The terms "hazardous substance," "facility," "environment," and "release" are all very broadly defined in the statute. *See* CERCLA §§ 101(8)(9) and (22), 42 U.S.C §§ 9601(8)(9) and (22). Moreover, with regard to "arranger" (or "generator") defendants, the statute is satisfied by proof that hazardous substances "like" those contained in the defendant's waste are found at the site. Proof that the specific substance generated by the defendant was present at the site at the time of disposal is not required. *United States v. Monsanto Co.,* 858 F.2d 160 (4th Cir. 1986). CERCLA applies retroactively to pre-enactment conduct that caused a hazardous substance release, even where that conduct was legal at the time it was undertaken. *See ASARCO LLC v. Goodwin,* 756 F.3d 191 (2d Cir. 2014); *United States v. Dico, Inc.*, 266 F.3d 846 (8th Cir. 2001); and *O'Neil v. Picillo,* 883 F.2d 176 (1st Cir. 1989).

Affirmative defenses to CERCLA liability are extremely limited. PRPs may escape liability only where they can establish that the release or threat of a release in question was caused by "an act of God, an act of war, and act or omission of a third party, or any combination thereof." CERCLA §§ 107(a) and (b), 42 U.S.C. §§ 9607(a) and (b). The statute also constrains the "act of a third party" defense by providing that the third party in question must not be an employee, agent, or contractor of the defendant; and the defendant exercised due care with respect to the hazardous substances, and "took precautions against foreseeable acts or omissions of any such third party and the consequences that could foreseeably result from such acts or omissions." CERCLA § 107(b), 42 U.S.C. § 9607(b).

B. Responsible Parties

1. Owners or Operators

CERCLA defines an "owner or operator" of a facility containing hazardous substances very simply as "any person owning or operating a facility." CERCLA § 101(20)(A), 42 U.S.C. § 9601(20)(A). In addition to title holders of record, the term has been held to include some tenants with sufficient authority over the property in question. *See Commander Oil Corp. v. Barlo Equipment Corp.,* 215 F.3d 31 (2d Cir. 2000). An owning stockholder, who manages a corporation holding legal title to contaminated real property, has been deemed

an "owner or operator" for CERCLA purposes. *See New York v. Shore Realty Corp.*, 759 F.2d 1032 (2d Cir. 1985)

However, CERCLA also excludes from liability "a person who, without participating in the management of a facility who holds indicia of ownership primarily to protect his security interest in the facility." CERCLA § 101(20)(A), 42 U.S.C. § 9601(20)(A). The statute defines "participation in management" narrowly, assuring that most common lender activities will not subject lenders to CERCLA liability. It also excludes from the definition of "owner or operator" lenders who take title by foreclosure. CERCLA §§ 101(20)(E) and (F), 42 U.S.C.§§ 9602(20)(E) and (F). The Act further excludes a government agency that "involuntarily acquires title by virtue of its function as a sovereign," such as by escheat or eminent domain, or as a result of tax delinquency. CERCLA § 101(20)(D), 42 U.S.C. § 9601(20)(D).

CERCLA provides limited relief to so-called "innocent landowners," i.e., parties who unwittingly purchased contaminated property. Such owners may escape liability if, at the time they acquired the facility, they did not know and had no reason to know that any hazardous substance had been disposed of "on, in, or at the facility." CERCLA § 101(35)(A), 42 U.S.C. § 9601(35)(A). To establish that the defendant had "no reason to know" of the contamination in question, the defendant must have undertaken, at the time of acquisition, "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice. . . ." *Id.* Moreover, to benefit from the innocent landowner defense, an owner must show that he, she, or it exercised due care and took prudent precautions against the foreseeable acts of third parties.

Another defense from CERCLA liability was created in a set of 2002 amendments to the statute known as the Small Business Liability Relief and Revitalization Act or the Brownfield Amendments of 2002, Pub. L. No. 107-118, 115 Stat. 2356. A major purpose of this legislation was to encourage the redevelopment of "brownfields," i.e., abandoned real property, typically located in urban areas with high unemployment, whose reuse might be complicated by the presence (or potential presence) of a hazardous substance.

Under these 2002 amendments, "bona fide prospective purchasers" are permitted to acquire contaminated brownfield property for redevelopment without incurring CERCLA liability, as long as they satisfy certain conditions. Specifically, they must perform "all appropriate inquiries" prior to purchasing a brownfield site. They must demonstrate that they have no affiliation with a PRP at the site. And they are obligated to comply with applicable land use restrictions, take "reasonable steps" with regard to hazardous substances

that affect the property in question, provide all legally required notices, and comply with information requests and administrative subpoenas.

2. Owners or Operators at the Time of Disposal

CERCLA includes as responsible parties persons who owned or operated a hazardous substance facility in the past, provided that hazardous substances were disposed of at that facility during the time that they owned or operated it. CERCLA § 107(a)(2), 42 U.S.C. § 9607(a)(2). A party that owned or operated a facility before hazardous substances were deposited there would not be liable.

The term "disposal" is expansively defined in the Act as "the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid or hazardous material into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters." CERCLA § 109(29), 42 U.S.C. § 9601(29) (incorporating by reference the definition of disposal from the Resource Conservation and Recovery Act (RCRA)). Any repositioning or other movement of hazardous substances at a facility has been held to constitute disposal. *See, e.g., Tanglewood East Homeowners v. Charles Thomas, Inc.,* 849 F.2d 1568 (5th Cir. 1988); and *United States v. CDMG Realty Co.,* 96 F.3d 706 (3d Cir. 1996). The federal courts have differed, however, with regard to whether a disposal has taken place where previously deposited hazardous substances migrate through environmental media by "leaking" or "spilling" without affirmative human involvement. *Cf. ABB Industrial Systs., Inc. v. Prime Technology, Inc.,* 120 F.3d 351 (2d Cir. 1997) with *Nurad, Inc. v. William E. Hooper and Sons Co.,* 966 F.2d 837 (4th Cir. 1992).

Parent corporations may be held liable as "operators" under CERCLA where they directly operated a facility in lieu of, or in addition to, their subsidiaries. However, to incur liability the parent corporation must "manage, direct, or conduct operations specifically related to a [subsidiary's] facility." *United States v. Bestfoods,* 524 U.S. 51 (1998).

3. Arrangers

CERCLA distinguishes arrangers from both owners or operators and transporters. Arrangers may only be liable where they arrange for disposal or treatment of hazardous substances at facilities owned or operated by *another* party. They can also "arrange" for disposal with a transporter, rather than directly with the owner or operator of a treatment, storage, and disposal facility. CERCLA § 107(a)(3), 42 U.S.C. § 9607(a)(3).

Arranger liability will clearly attach if an entity enters into a transaction for the sole purpose of discarding a hazardous substance that is no longer useful. In contrast, an entity will not be liable as an arranger where it sells a new and useful product to a third party where that third party disposes of the product in a way that causes contamination. *Burlington Northern and Santa Fe Railway Co. v. United States,* 556 U.S. 599 (2009). And a *bona fide* sale of a useful product does not necessarily create arranger liability even if the seller knew that the transaction would result in the disposal of hazardous substances. *Id.; Ekotek Site PRP Comm. v. Self*, 932 F. Supp. 1328 (D. Utah 1996).

In situations where a seller of a hazardous product has some knowledge of its buyer's planned disposal, or where its motives for the sale of a hazardous substance is not clear, courts will conduct a "fact-intensive inquiry" to determine whether the seller falls into the arranger category. *See United States v. Aceto Agricultural Chem. Corp.,* 872 F.3d 1373 (8th Cir. 1989). That inquiry will focus on the extent to which the hazardous product seller entered into the sale of its product with the intention that at least a portion of the product would be "disposed" of within the meaning of the statute. *Burlington Northern and Santa Fe Railway Co. v. United States, supra.*

To be liable as a CERCLA arranger, a person need not arrange for its hazardous substances to be disposed of at the specific facility from which those substances are released. *Ekotek Site PRP Comm. v. Self*, 932 F. Supp. 1328 (D. Utah 1996). Moreover, the hazardous substances in question need not be hazardous waste. *B.F. Goodrich v. Murtha,* 958 F.2d 1192 (2d Cir. 1992). To be a CERCLA arranger, an entity does not necessarily need to actually generate the hazardous substance that was disposed of*, see, e.g., United States v. Bliss*, 667 F. Supp. 1298 (E.D. Mo. 1987), and arranger liability may attach to individual corporate officers or employees who personally make arrangements to dispose of their corporate employer's hazardous substances. *United States v. Northeastern Pharm. and Chem. Co.,* 810 F.2d 726 (8th Cir. 1986).

4. Transporters

Under CERCLA, parties that transport hazardous substances are only liable for releases of those substances from facilities that they themselves have selected. The word "transport" is broadly defined in the statute as "the movement of a hazardous substance by any mode." CERCLA § 101(26), 42 U.S.C. § 9601(26). A person is liable as a transporter not only if it ultimately selects a disposal facility, but also when that party "actively participates in the disposal decision to the extent of having had substantial input into which [disposal] facility was ultimately chosen." *Tippins, Inc. v. USX Corp.,* 37 F.3d 87 (3d Cir. 1994).

C. What Potentially Responsible Parties May Be Responsible For

1. Government Response Costs

CERCLA imposes liability on potentially responsible parties (PRPs) for "all costs of removal or remedial action incurred by the United States Government or a State or an Indian tribe not consistent with the National Contingency Plan" ("NCP"). CERCLA § 107(a)(4)(A), 42 U.S.C. § 9607(a)(4)(A). The statute clarifies the meaning of "costs of removal or remedial action" by specifying that reimbursable governmental response costs include costs to government entities associated with: (i) investigations, monitoring, and testing to identify the dangers posed at a facility and the extent of release or threatened release of hazardous substances; (ii) planning and implementation of a response action; and (iii) enforcement of the provisions of CERCLA, including the costs incurred for the staffs of EPA and the Department of Justice. *Id.*

Consistency with the NCP has been held to be the sole criterion for recovery of response costs under CERCLA. *United States v. American Cyanamid Co.,* 786 F. Supp. 152 (D.R.I. 1992). Once the government has presented a *prima facie* case for response costs, the burden shifts to the defendants to identify a particular provision in the NCP with which a particular response action is inconsistent. Even if such an inconsistency can be demonstrated, however, defendants must still show that the cleanup, because of some variance from the NCP, resulted in such "demonstrable excessive costs" that the government's actions were "arbitrary and capricious"; and where the government has actually acted in accordance with the NCP, PRPs may not raise the defense that the government's costs are unreasonable. *Id.*

In addition to the direct costs of investigating threatening conditions at facilities, and planning and implementing hazardous substance cleanups, EPA and other government entities are also entitled to recover their "indirect costs," i.e., costs that are not incurred specifically for a particular response action but that support the administration of the entire Superfund program. At EPA, cost-accountants have created a formula for distributing a portion of these "overhead" costs—e.g., the cost of writing EPA CERCLA guidance documents—to individual response actions.

2. Response Costs of Nongovernmental Actors

Responsible parties are liable under CERCLA for "any other necessary costs of response incurred by any other person consistent with the National Contingency Plan." CERCLA § 107(a)(4)(B), 42 U.S.C. § 9607(a)(4)(B). The

phrase "other person" (who incurs responsive costs) is obviously a broad term. It includes PRPs who have not been subject to governmental enforcement actions, volunteers who clean up hazardous substances releases even though they would not be liable for failing to do so, and "innocent landowners" who clean up hazardous substances released onto their property by another party or parties.

In contrast to governmental parties, private plaintiffs must affirmatively prove that all cleanup costs they incurred were consistent with the NCP. *See, e.g., Carson Harbor Village v. County of Los Angeles*, 433 F.3d 1260 (9th Cir. 2006); *Union Pacific R. Co. v. Reilly Indus., Inc.*, 215 F.3d 830 (8th Cir. 2000). The NCP itself defines when a nongovernmental response action should be considered "consistent with the NCP." Under 40 C.F.R. §300.700(c)(3)(i), nongovernmental response actions that EPA has neither selected nor supervised will be considered consistent with the NCP if, when evaluated as a whole, those actions are in "substantial compliance with applicable requirements" and result in a "CERCLA-quality cleanup." The "applicable requirements" of the NCP that private parties must follow to recover their response costs include NCP provisions that concern the selection and implementation of response actions and requirements concerning both public participation and worker safety. *Id.*

3. Natural Resource Damages

Under CERCLA, responsible parties are liable for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss resulting from a hazardous substance release. CERCLA §107(a)(4)(C), 42 U.S.C. §9607(a)(4)(C). The term "natural resources" is defined in the Act as "land, fish, biota, air, water, ground water, drinking water supplies, and other resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States. . . . any State or local government . . . foreign nation . . . [or] Indian tribe." CERCLA §101(16), 42 U.S.C. §9601(16). Under the statute, natural resource damage ("NRD") claims are limited to governmental natural resources trustees, i.e., Federal, State, local, or Indian tribe agencies or officials that own, manage, regulate, or otherwise control natural resources that have been injured, lost or destroyed. *Id.* Purely private property is excluded from CERCLA's definition of natural resources. *See Ohio v. U.S. Department of Interior*, 880 F.2d 432 (D.C. Cir. 1989).

Trustees who recover natural resource damages are entitled to retain and use them, rather than depositing them in the general Treasury. However,

the proceeds from a successful NRD lawsuit may only be used "to restore, replace, or acquire the equivalent of" the damaged or lost natural resources in question.

NRD litigation often involves sharp disputes over the extent of the harm to, and lost use of, natural resources, as well as the quantification of damages. With respect to the latter, the U.S. Department of Interior promulgated rules of natural resource damage assessments that set out the methods that natural resource trustees may use to estimate the extent of injury to, loss of, or destruction of natural resources resulting from a release of hazardous substances, and to monetize the resulting damages. *See* 43 C.F.R. pt. 11. Although nominally "not mandatory," natural resource trustees generally rely on those regulations because CERCLA provides that an assessment of damages to natural resources made by a Federal or State trustee within the regulations "shall have the force of a rebuttable presumption on behalf of the trustee in any administrative or judicial proceeding." CERCLA § 107(f)(2)(C), 42 U.S.C. § 9607(f)(2)(C).

4. Health Assessment Costs

The Agency for Toxic Substances and Disease Registry (ATSDR), a federal agency created by CERCLA, is required to conduct a health assessment for every facility listed on the NPL. CERCLA §§ 104(i)(6)(A) and (B), 42 U.S.C. §§ 9604(i)(6)(A) and (B). The ATSDR is also authorized to conduct such a health assessment for other hazardous substance releases. *Id.* And, where warranted, the ATSDR may also conduct a full-scale epidemiological study of the health effects of the release of hazardous substances on an exposed population. Responsible parties are liable for "the costs of any health assessment or health effects study" carried out by the ATSDR. CERCLA § 107(a)(4)(D), 42 U.S.C. § 9607(a)(4)(D). These costs, however, are rarely in dispute in Superfund cost-recovery cases since they are typically relatively small compared with other government response costs.

D. The Liability of Multiple Responsible Parties

Superfund cases very often involve more than one responsible party. Given this, questions often arise as to the scope of liability. Courts must decide whether all of the defendants will be held jointly and severally liable—allowing the plaintiff (at least in theory) to recover the full amount of the liability from any single defendant—or severally liable, making each defendant responsible for only a share of the claim.

In fashioning the compromise that led to the initial enactment of CERCLA in 1981, Congress intentionally reserved this important issue for determination

by the federal courts. Senator Randolph, a co-sponsor of the bill, stated during the congressional debate that preceded the enactment of the statute, "[W]e have deleted any reference to joint and several liability, relying on common law principles to determine when parties should be severally liable." Randolph also told his colleagues on the floor of the Senate that "it is intended that issues of liability not resolved by this act, if any, shall be governed by traditional and evolving principles of common law."

In the early days of the Superfund program, the scope-of-liability question was authoritatively resolved by the widely cited opinion of Chief Judge Rubin in the seminal case of *United States v. Chem Dyne Corp.*, 572 F. Supp. 802 (S.D. Ohio 1983). After reviewing the pertinent portions of CERCLA's legislative history, Judge Rubin reasoned that because Superfund is a federal program implicating the "rights, liabilities, and responsibilities of the United States," the liability features of the Act are appropriate for uniform national treatment by the judiciary. Thus, he determined, federal common law—rather than the diverse substantive rules of individual States—should apply. *Id.*

To find the "evolving principles of common law" that pertain to Superfund liability, the *Chem Dyne* court looked to Sections 433A and 875 of the Restatement (2d) of Torts. Under that broadly accepted formula, where two or more persons cause a single and indivisible harm, each of them is jointly and severally liable. However, where two or more persons acting independently cause a distinct or single harm, for which there is "a reasonable basis for division according to the contribution of each," each such person is severally liable only for the portion of the harm that person has caused. *Id.* And each defendant has the burden of proof with regard to apportionment. *Id.*

Numerous federal district courts, and every U.S. Circuit Court of Appeals that considered the issue, adopted Judge Rubin's analysis in *Chem Dyne*. *See, e.g., United States v. R.W. Meyer, Inc.*, 889 F.2d 1497 (6th Cir. 1989); *United States v. Monsanto Co., supra*. Nonetheless, following *Chem Dyne*, a question remained as to precisely what defendants in CERCLA enforcement cases had to prove in order to demonstrate that apportionment of damages was called for.

Most multiparty Superfund cases involve facilities at which hazardous substances have mixed, or "comingled," into a sort of toxic soup. Federal courts have typically rejected government contentions that all comingled sites are *per se* instances of single, indivisible harm. *See, e.g., United States v. Alcan Aluminum Co.*, 964 F.2d 252 (3d Cir. 1992). Nonetheless, the courts have erected substantial evidentiary obstacles to defendants who wish to demonstrate divisibility of harm at contaminated facilities. Thus, it has been

held that where hazardous substances have comingled, each defendant must introduce evidence of the mobility, toxicity, and interactive characteristics of the hazardous substances contributed by each defendant, along with the volume of hazardous substances that each has contributed, to demonstrate a reasonable basis for apportioning liability. *See, e.g., United States v. Monsanto Co.*, *supra*. Moreover, courts have insisted on "concrete and specific evidence" of the divisibility of harm, even in cases where they have found that the harm at a facility may be reasonably apportioned. *United States v. Hercules, Inc.*, 247 F.3d 706 (8th Cir. 2001).

Notwithstanding these formidable evidentiary hurdles, however, defendants have succeeded in proving divisibility of harm in a small number of CERCLA cases. One example is *United States v. Bell Petroleum Servs.,* 3 F.3d 889 (5th Cir. 1983), where the court imposed several liability based on the length of time each defendant operated the same facility, in a situation where three businesses successively operated the same facility in the same way, and released the same single hazardous substance into the environment. In a more celebrated opinion, a divided U.S. Supreme Court reversed a decision of the Ninth Circuit and reinstated a U.S. District Court opinion that applied a complex formula—based on the total area of a contaminated facility and two other factors—to conclude that CERCLA liability at the hazardous substance facility in question must be apportioned among several parties. *Burlington Northern and Santa Fe Railway Co. v. United States, supra.*

Thus far, however, the lower federal courts have often failed to follow *Burlington Northern* in subsequent CERCLA cases. *See, e.g., United States v. NCR Corp.*, 688 F.3d 833 (7th Cir. 2012). *See also* Steve C. Gold, *Disjointed? Several Approaches to Divisibility after* Burlington Northern, 11 Vt. J. Envtl. L. 307 (2009). Thus, it still appears accurate to observe, as the U.S. Court of Appeals for the First Circuit did in 1989, that "the practical effect of placing the burden on defendants has been that responsible parties rarely escape joint and several liability." *O'Neil v. Picillo*, 883 F.2d 176 (1st Cir. 1989).

E. Contribution and Private Party Cost Recovery Actions

As amended in 1986, CERCLA provides a cause of action for contribution to any person against "any person who is liable or potentially liable [under § 107(a)] during or following any civil action under [§ 106] or under [§ 107(a)]." CERCLA § 113(f)(1), 42 U.S.C. § 9613(f)(1). This provision of the Act essentially adopts a common law doctrine allowing jointly and severally liable parties, aggrieved because they have allegedly paid more than their

"fair share" of a common liability, to recover from other liable parties any additional shares of the money paid by the contribution-action-plaintiff to the plaintiff in the original lawsuit. The statute gives little specific guidance to courts with regard to how to determine the appropriate share of liability to allocate to each party. It merely provides that "in resolving contribution claims, the court may allocate response costs among liable parties using such equitable factors as the court determines are appropriate." *Id.*

Many courts have found it helpful to apply six separate factors—the so-called "Gore factors"—in ruling on CERCLA contribution claims. These factors are: (i) the ability of the parties to demonstrate that their contribution to a discharge, release, or disposal of waste can be distinguished; (ii) the amount of hazardous substances involved; (iii) the degree of toxicity of those substances; (iv) the degree of involvement by the parties in the generation, transportation, treatment, storage or disposal of the hazardous substances; (v) the degree of care exercised by the parties with respect to the hazardous substances in question; and (vi) the degree to which the parties have cooperated with government officials to prevent any harm to public health or the environment. While not universally adopted, these variables have been widely applied by the courts in CERCLA contribution matters.

One question that has arisen is which parties are entitled to pursue CERCLA contribution claims. The U.S. Supreme Court resolved that question by holding that to be eligible to sue another party in a contribution action, a plaintiff must have either been sued by a governmental entity under CERCLA sections 106 or 107, or entered into a settlement with a government requiring the payment of response costs. *Cooper Industries, Inc. v. Aviall Services, Inc.*, 543 U.S. 157 (2004).

The *Cooper Industries* decision left open the issue of whether a responsible party who is barred from bringing a CERCLA contribution case may instead institute a cost recovery action under § 107 of the statute. The Supreme Court subsequently answered that question in the affirmative in *United States v. Atlantic Research Corp.*, 551 U.S. 128 (2007). The Court ruled that any person other than the United States, a State, or an Indian tribe, may recover any money it has expended to clean up a contaminated facility without having first been the target of a CERCLA enforcement action.

CERCLA encourages the prompt settlement of governmental claims against PRPs. However, the statute does impose some substantial limitations and procedures with respect to settlements. The most significant of these requirements involve settlements in which responsible parties agree to conduct remedial actions. First, with regard to RI/FSs, EPA may not delegate their preparation to PRPs unless they are "qualified to conduct the RI/FS."

And the Agency must ensure that a "qualified person" oversees and reviews the preparation of that document. CERCLA § 104(a)(1), 42 U.S.C. § 9604(a)(1). Second, settlements calling for PRP performance of an RI/FS may not contain any general releases of liability. Instead, settling defendants may only be granted a covenant not to sue, conditioned on satisfactory performance of the remedial action, that includes a "reopener provision" if it is later determined that the originally selected remedy is not sufficiently protective of human health or the environment. CERCLA § 122(f), 42 U.S.C. § 9622(f). Remedial settlements must also include stipulated penalties where settling defendants failed to perform their agreed-upon obligations. And settlement agreements must be in the form of a judicial consent decree, subjected to public notice and comment, and later approved by the court.

In deciding whether to approve or reject consent decrees in Superfund remedial matters, courts tend to defer to government estimates of litigation risk and settlement strategies. To gain judicial approval, courts must find that the settlement is fair, reasonable, and faithful to the goals of the statute. *United States v. Cannons Engineering Corp.*, 899 F.2d 79 (1st Cir. 1990). Moreover, appellate courts will typically defer to the decisions of trial judges in these cases unless they reflect a "manifest abuse of discretion." *See, e.g., United States v. Charles George Trucking, Inc.,* 34 F.3d 1081 (1st Cir. 1994).

Checkpoints

- EPA's response action process has multiple steps, including:
  - Preliminary assessment/site investigation at a reportedly contaminated hazardous substance facility.
  - A short-term "removal action" (if necessary).
  - Assessment of risk through a standard "hazard ranking system."
  - Listing on the National Priorities List for remedial action (where appropriate).
  - Preparation of a remedial investigation/feasibility study.
  - Selection of a cleanup remedy that is memorialized in a Record of Decision.
  - Design and implementation of a remedial design/remedial action.
  - Delisting of the facility from the National Priorities List.
  - Continued operation and maintenance activities at the facility (where needed).
- CERCLA creates potential liability for four categories of parties:
  - Present owners or operators of hazardous substance facilities.
  - Past owners or operators of facilities at which hazardous substances were disposed during their period of ownership or operation.
  - Parties that arranged for disposal or treatment of their hazardous substances by another.
  - Persons who accepted hazardous substances for transport to facilities or incineration sites from which there is a hazardous substance release.
- PRPs may be liable for:
  - Response costs incurred by government entities.
  - Response costs of nongovernment parties.
  - Natural resource damages.
  - Health assessment costs.
- In most cases, PRPs are strictly, joint and severally, and retroactively liable for cleanup costs, particularly (though not exclusively) where different hazardous substances have comingled at contaminated facilities.
- In a small minority of cases, PRPs have succeeded in avoiding joint and several liability by proving the divisibility of harm at hazardous substance facilities.
- CERCLA provides a cause of action for contribution for jointly and severally liable PRPs who seek to recover a fairer share of a common liability from other PRPs.

- Courts allocate response costs in contribution suits based upon whatever equitable factors the courts deem appropriate.
- Parties may only sue other parties for contribution where they have themselves been subject to a government enforcement action, or entered into a settlement with a government entity.
- In circumstances where it has not been subject to government enforcement action, any nongovernmental party may recover any money it has expended to clean up a contaminated facility under a separate provision of CERCLA that does not create a statutory right to contribution.
- CERCLA imposes certain substantial and procedural limitations with respect to settlements in remedial actions:
  - Only qualified persons may be permitted to prepare remedial investigation/feasibility studies.
  - Settlements calling for PRP performance of remedial actions may not contain general releases of liability.
  - PRPs may be granted covenants not to sue, subject to "re-opener provisions."
  - Remedial settlements must include stipulated penalties where agreed-upon obligations are not fulfilled by PRPs.
  - Settlement agreements must be in the form of a Consent Decree, to be approved by a federal judge following public notice and comment.
- Courts will typically approve consent decrees in CERCLA remedial cases where the settlement is fair, reasonable, and faithful to the goals of the statute.

Chapter 6

The Resource Conservation and Recovery Act

Roadmap

- Understand the regulation of non-hazardous solid waste.
- Learn how "solid waste" and "hazardous waste" are defined and identified.
- Be able to grasp the requirements that apply to hazardous waste and generators and transporters, and to facilities that treat, store, and dispose of hazardous waste.
- Understand the relative roles of federal and state agencies in administering RCRA.
- Learn how the statute is enforced by federal officials, state agencies, and private citizens.

I. Introduction

The Resource Conservation and Recovery Act ("RCRA") is an important federal statute that has two primary purposes: improving the disposal of non-hazardous solid waste (such as household trash and yard cuttings) and requiring "cradle-to-grave" management of hazardous waste (such as benzene and trichloroethylene). Like other federal environmental statutes, the Act calls upon the U.S. Environmental Protection Agency ("EPA" or "the Agency") to develop and implement regulations that will accomplish both purposes. The second of these goals, however, has proven time-consuming, technically complex, and controversial for EPA. Nonetheless, after a slow start and a sharp prod from Congress—which passed a stringent set of amendments to the act in 1984, reflecting congressional dissatisfaction with the agency's initial performance in developing and implementing a comprehensive program to regulate hazardous waste—EPA ultimately promulgated technical guidelines for state regulation of non-hazardous solid wastes and created voluminous, detailed regulations regarding hazardous waste management.

The remainder of this chapter illuminates the approaches EPA has taken to comply with Congress's demanding legislative directives. We will first consider the Agency's non-hazardous solid waste guidelines for state programs to prohibit open dumping and substitute safer waste disposal practices. We'll then turn to EPA's regulations concerning hazardous wastes. In particular, we will focus on EPA regulations concerning the definition and identification of hazardous waste materials, the Agency's rules pertaining to generators and disposers of such waste, and the tools available to government agencies and private citizens for enforcing hazardous waste requirements.

II. Regulation of Non-Hazardous Solid Wastes under RCRA Subtitle D

Americans generate vast amounts of municipal solid waste—258 million tons in 2014 according to EPA. Our trash includes a wide variety of items, including uneaten food, packaging, grass clippings, sofas, tires, refrigerators, computers and other materials. Although slightly more than one-third of this non-hazardous waste is now recycled or composted, a majority of it is disposed of in municipal solid waste landfills.

Subtitle D of RCRA mainly focuses on what occurs at those local landfills. The statute prohibits the depositing of wastes in "open dumps," which are defined as any facility or site that is neither a "sanitary landfill" nor a facility for the disposal of hazardous waste. *See* RCRA § 1004(14), 42 U.S.C. § 6903(14) and RCRA § 4005(a), 42 U.S.C. § 6945(a). "Sanitary landfills," in turn, are facilities that satisfy EPA-established criteria so that "there is no reasonable probability of adverse effects on health or the environment from disposal of solid waste at such [facilities]." RCRA § 4004(a), 42 U.S.C. § 6944(a). EPA has issued detailed, technical criteria for municipal solid waste landfills. *See* 40 C.F.R. pt. 258. The Agency's criteria for other types of non-hazardous waste landfills are codified at 40 C.F.R. pt. 257.

RCRA contemplates that the collection and disposal of solid waste is to take place at the state and local level, with guidance and assistance from EPA. Under Subtitle D, individual states are required to develop their own solid waste management plans that are to be submitted to EPA for approval. *See* RCRA §§ 4002, 4003, 4004(b), and 4006, 42 U.S.C. §§ 6942, 6943, 6944(b), and 6946. The Agency must approve these plans as long as they meet certain requirements, including the ban on all open dumps referred to above. At least 38 states, two U.S. territories, and one Indian tribe have now received full or partial EPA approval to run their own solid waste programs.

III. Regulation of Hazardous Waste under RCRA Subtitle C

Subtitle C of RCRA is meant to protect human health and the environment from dangers posed by the unsafe handling and disposal of hazardous waste. It directs EPA to establish requirements for three types of participants in the lifecycle of hazardous waste: generators, transporters, and owners and operators of treatment, storage, and disposal facilities ("TSDFs"). EPA's regulations set out how generators, transporters and TSDFs must handle hazardous waste and what records they must keep to track the creation, transport, and disposition of such waste. They also detail the corrective actions that must be taken where hazardous waste is released to the environment; and they indicate how states may obtain authorization to run hazardous waste programs.

A. Defining and Identifying Hazardous Waste

RCRA directed EPA to "develop and promulgate criteria for identifying the characteristics of hazardous waste, and for listing hazardous waste . . . taking into account toxicity, persistence, and degradability in nature, potential for accumulation in tissue, and other related factors such as flammability, corrosiveness, and other hazardous characteristics." RCRA § 3001(a), 42 U.S.C. § 6921(a). The Act also defines the term "hazardous waste" to some extent, stating that it means "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed." RCRA § 1004(5), 42 U.S.C. § 6903(5). Thus, it must be noted, to qualify as hazardous, a waste must first be a solid waste or combination of solid wastes.

1. When Is a Waste a "Solid Waste"?

The statute provides a specific definition of "solid waste." It states that "[t]he term "solid waste" means "any garbage, refuse, sludge from a waste treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities[.]" RCRA § 1004(27), 42 U.S.C. § 6903(27). This

definition also identifies certain types of waste streams that are excluded from the solid waste category because they are regulated under other federal environmental statutes. It thus provides that the term solid waste "does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 1342 of Title 33, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended. . . ." *Id.*

RCRA's solid waste definition thus makes clear that "solid waste" includes a range of types of matter generated by a variety of types of human activities. Counterintuitively, a solid waste need not be solid. Instead, it may consist of "solid, liquid, semi-solid, or contained gaseous material." Similarly, a material may fit the definition of solid waste whether it came from industrial, commercial, mining, agricultural, or community sources.

RCRA also indicates that to be a solid waste a material must be "discarded." This term is somewhat ambiguous and has led to confusion and controversy. Where a pesticide is sprayed into the air over land and water, has it been discarded within the meaning of RCRA? The Second Circuit held that the answer is no, since the pesticide spraying in issue was a purposeful activity, aimed at reaching and killing disease-carrying mosquitoes and their larvae. *See No Spray Coalition, Inc. v. City of New York,* 252 F.3d 148 (2d Cir. 2001). In contrast, however, the U.S. Circuit Court of Appeals for the Second Circuit has also held that spent lead shot and clay targets from a shooting range constituted solid waste under the statutory definition. *Connecticut Coastal Fisherman's Assn. v. Remington Arms Co., Inc.,* 989 F.2d 1305 (2d Cir. 1993).

EPA has established a regulatory definition of discarded materials that has been revised a number of times since its first iteration. (*See* 40 C.F.R. § 261.2 for the most recent definition.) Under the Agency's current regulatory approach, materials are considered discarded if they have been abandoned, are considered "inherently waste-like," have been accumulated in an excessive manner before being legitimately recycled, or have been "sham recycled."

EPA deems a material to be legitimately recycled if it is "used, reused, or reclaimed," and it provides a useful contribution to a recycling process that produces a valuable output. 40 C.F.R §§ 261.1(c)(7) and 260.42. Sham recycling, in contrast, involves using more material than is necessary to produce the output, or using material to produce a useless or ineffective output. The latter is considered a type of "abandonment," and materials that are sham recycled are thus viewed as solid wastes. 40 C.F.R. § 261.2(b)(4) and (g).

2. *When Is a "Solid Waste" Also a "Hazardous Waste"?*

a. *Characteristic and Listed Hazardous Wastes*

EPA's subtitle C regulations established two ways that a solid waste will be considered a "hazardous waste": by having one or more hazardous characteristics ("characteristic hazardous wastes") or by being specifically listed as a hazardous waste by EPA ("listed hazardous wastes").

Characteristic hazardous wastes are wastes with measurable properties indicating that the waste can cause death or injury to humans or lead to ecological damage. EPA established standards for hazardous waste characteristics that can be detected by use of a standardized test method: ignitability, reactivity, corrosivity, and toxicity.

The ignitability characteristic identifies waste that can readily catch fire and sustain combustion, such as paints, cleaners, and other industrial wastes. *See* 40 C.F.R. § 261.21. Corrosive hazardous wastes, such as automobile batteries, are waste materials that are acidic (or, in some case, alkaline) and that can readily corrode or dissolve metal, flesh, or other materials. *See* 40 C.F.R. § 261.22. The reactivity characteristic identifies wastes that readily explode or undergo violent reactions, or react with other chemicals to release toxic gases or fumes. *See* 40 C.F.R. § 261.23. In contrast, waste materials with the toxicity characteristic are wastes likely to leach dangerous concentrations of toxic chemicals into groundwater. EPA has designed a lab procedure, known as the Toxicity Characteristic Leaching Procedure ("TCLP"), to estimate the leaching potential of waste when disposing a municipal solid waste landfill. This procedure requires waste generators to create a liquid leachate from its hazardous waste samples that must be analyzed to determine whether they contain any of 40 toxic chemicals in concentrations that exceed specified regulatory levels. Where that is shown to be the case, those wastes are considered toxic characteristic wastes. *See* 40 C.F.R. § 261.24.

To guide its decision-making regarding which wastes should be listed as hazardous, EPA developed a set of three criteria. These criteria ask whether: (i) the waste typically contains toxic chemicals that could pose a threat to human health or the environment if improperly managed ("toxic listed wastes"); (ii) the waste is fatal to humans and animals even in low doses, and thus could pose a threat to human health or the environment even if properly managed ("acute hazardous wastes"); and/or (iii) the waste typically exhibits one or more of the four specific characteristics of hazardous waste discussed above (ignitability, corrosivity, reactivity, and toxicity). Once identified by EPA as hazardous, the wastes in question are included on one of four lists

promulgated in the *Federal Register* and assigned a waste code for purposes of identification. *See* 40 C.F.R. §§ 261.31, 261.32, and 261.33.

Listed and characteristic categories of hazardous wastes are not mutually exclusive. Thus, a given waste may be specifically listed and also constitute a characteristic hazardous waste if it is ignitable, corrosive, reactive, or toxic as EPA has defined that characteristic and the testing procedures to be used to identify them.

b. The Mixture and Derived-From Rules

In order to prevent generators from evading RCRA Subtitle C requirements by comingling listed hazardous wastes with non-hazardous solid waste, EPA established a rule, generally referred to as "the mixture rule," that provides that waste mixtures containing listed hazardous wastes are to be regulated as hazardous waste—regardless of the actual hazardous properties of the mixture or the proportion of hazardous to non-hazardous waste contained in the mixture. 40 C.F.R. § 261.3(a)(2)(iv). EPA's regulations also defined as hazardous waste any solid waste "derived from" listed hazardous waste, i.e., solid waste that was generated by the storage, disposal, and treatment of a listed waste. *Id.* These rules were upheld on judicial review, even though, in some instances, these mixtures and derived-from wastes may not present the kinds of hazards that RCRA and its regulations were designed to prevent. *See American Chemistry Council v. EPA*, 337 F.3d 1060 (D.C. Cir. 2003).

3. Exclusions from RCRA Hazardous Waste Regulation

EPA's regulations identify 17 hazardous wastes as excluded from the RCRA Subtitle C regulatory scheme. 40 C.F.R. § 261.4(b). The two most significant of these exclusions are the household waste exclusion and the exclusion of certain wastes from mining and mineral processing

Under the Agency's regulations, "household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered . . . or reused," is outside the definition of hazardous waste. 40 C.F.R. § 261.4(b). "Household waste" is specifically defined as "any material (including garbage, trash, and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunk houses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas)." 40 C.F.R. § 264.1(b)(1).

Unfortunately, much household waste does contain discarded materials that are hazardous in nature. Some examples include mothballs, paints, solvents, mercury-containing thermometers, batteries, drain openers and insecticides. Nonetheless, EPA recognized that subjecting household wastes

to strict RCRA waste management regulations would create numerous practical problems. It thus interpreted RCRA as reflecting a congressional intent to exclude those wastes from Subtitle C regulation.

The extraction and processing of usable minerals from the earth generates truly immense volumes of waste materials, a number of which are hazardous. Regulating these wastes in the same manner as other hazardous wastes would create serious problems of cost and practicality. As a result, Congress explicitly provided EPA with the authority to modify various of the subtitle C standards for hazardous waste disposal to take account of the special characteristics of mining wastes, including "the practical difficulties associated with implementation of such requirements, and site specific characteristics, including but not limited to the climate, geology, hydrology, and soil chemistry at the site. . . ." RCRA § 3004(x), 42 U.S.C. § 6924(x).

EPA's current set of regulations exclude from the definition of hazardous waste nearly all solid waste generated by the extraction and "beneficiation" (i.e., preparation for smelting) of ores and minerals. 40 C.F.R. § 261.4(b)(7)(ii)(A).

IV. Implementation of RCRA Subtitle C

A. Requirements for Hazardous Waste Generators

EPA's RCRA regulations define a "generator" as "any person, by site, whose act produces hazardous waste . . . or whose act first causes a hazardous waste to be subject to regulation." 40 C.F.R. § 260.10. The statute directs EPA to establish standards for generators regarding hazardous waste containers and their labels, and for the "use of a manifest system and any other reasonable means necessary to assure that all hazardous waste generated is designated for treatment, storage, or disposal in, and arrives at, treatment, storage, or disposal facilities (other than facilities on the premises where the waste is generated) for which a permit has been issued. . . ." RCRA § 3002(a)(5), 42 U.S.C. § 6922(a)(5). The "manifest" document is defined in the statute as "a form used for identifying the quantity, composition, and the origin, routing, and destination of hazardous waste during its transportation from the point of generation to the point of disposal, treatment, or storage." *Id.* It is designed to ensure that hazardous waste reaches its intended destination, or else to inform governmental authorities whenever hazardous waste does not end up in a permitted treatment, storage, or disposal facility.

EPA's regulations establishing standards for hazardous waste generators can be found at 40 C.F.R. pt. 262; and its specific requirements for hazardous

waste manifests are located at 40 C.F.R. §§ 262.20 to 262.27. Under those regulations, the obligations of generators vary with the amount of hazardous waste they generate in a given month. EPA has created three size categories of generators: large quantity, small quantity, and very small quantity. Not surprisingly, the requirements for large quantity generators are more stringent than those that apply to small quantity generators. Very small quantity generators are exempt from most RCRA hazardous waste generator requirements, though they must still properly characterize and label their wastes and they must have their hazardous waste treated or disposed of at a permitted facility. 40 C.F.R. § 262.14.

As a practical matter, generators must generally hold onto their hazardous wastes before shipping them off-site. However, if they store them for too long a time, their facilities become subject to the stringent requirements applicable to treatment, storage, or disposal facilities discussed below. As a result, EPA allows generators to accumulate certain amounts of hazardous wastes for limited periods without engaging in the "storage" of those wastes. The allowable accumulation limitations and periods vary, depending upon whether the generators in question are classified as large, small, or very small quantity generators.

B. Requirements for Transporters of Hazardous Waste

RCRA directed EPA to promulgate regulations applicable to transporters of hazardous waste, RCRA § 3003, 42 U.S.C. § 6923, and the Agency did so. *See* 40 C.F.R. pt. 263. Transporters, like generators, are subject to recordkeeping requirements. They must use the manifest document that the generator prepared to track each shipment of hazardous waste, and they must comply with the instructions in the manifest by bringing the hazardous waste to the destination that the generator has designated. 40 C.F.R. §§ 263.20 and 263.21. In addition, should a spill occur during hazardous waste transportation, EPA's regulations require transporters to immediately notify government authorities, and to take immediate steps to clean up the spilled materials and protect human health and the environment. 40 C.F.R. §§ 263.30 and 263.31.

C. Requirements Concerning Treatment, Storage, and Disposal Facilities (TSDFs)

1. Key Definitions and the Scope of the Regulations

RCRA directs EPA to promulgate "performance standards" for treatment, storage, and disposal facilities (TSDFs), and to establish "regulations

requiring each person owning or operating an existing [TSDF] or planning to construct a new [TSDF] . . . to have a permit. . . ." RCRA § 3005(a), 42 U.S.C. § 6925(a). The statute provides definitions of the terms "disposal," "storage," and "treatment." *See* RCRA § 1004, 42 U.S.C. § 6903. However, to clarify the meaning of those statutory definitions, and make them easier to apply and enforce in practice, EPA promulgated its own regulatory definitions of the same terms.

As EPA has broadly defined it, "treatment" means "any method, technique, or process, including neutralization, designed to change the physical, chemical or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy of material resources from the waste, or so as to render such waste non-hazardous or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume." 40 C.F.R. §§ 260.10 and 270.2. "Storage," according to the regulations, is "the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere." 40 C.F.R. §§ 260.10 and 270.2.

The regulatory definition of "disposal" simply repeats the statutory definition of that word, with the sole exception of the elimination of the phrase "solid waste." Thus, for purposes of RCRA TSDF permitting, "disposal" connotes "the deposit, injection, dumping, spilling, leaking or placing of any hazardous waste into or on any land or water so that such hazardous waste . . . may enter the environment or be emitted into the air or discharged into any waters, including ground waters." *See* RCRA § 1004(3), 42 U.S.C. § 6903(3) and 40 C.F.R. § 270.2. A "disposal facility" means "a facility, or part of a facility, at which hazardous waste is intentionally placed into or on the land or water, at which hazardous waste will remain after closure. . . ." 40 C.F.R. §§ 260.10 and 270.2. And, for purposes of the RCRA regulatory program, the terms "owner" and "operator" are defined thusly: "Operator means the person responsible for the overall operation of a facility. Owner means the person who owns the facility or part of a facility." 40 C.F.R. § 260.10.

2. TSDF Permit Requirements

Under RCRA, persons who own, operate, or plan to construct a new TSDF must obtain a permit to do so. RCRA § 3005(a), 42 U.S.C. § 6925(a). Permits provide TSDF owners and operators with legal authority to treat, store, and dispose of hazardous waste. They also detail how the facility must comply with applicable regulations.

Facilities that were in existence prior to the enactment of RCRA were allowed to stay in operation in an "interim status," as long as they made

application for a permit and complied with EPA's regulatory requirements for interim status facilities. *See* RCRA §3005(e), 42 U.S.C. §6925(e), and 40 C.F.R. part 265. Interim status standards are somewhat less stringent than the standards that apply to fully permitted TSDFs. Interim status continues while the facility's owner or operator's permit application is pending; and it ends when the application is granted or denied.

Applications for RCRA permits for TSDFs consist of two parts: A and B. Though the Part A application is relatively brief and straightforward, the second application part ("Part B") is lengthy and detailed, and requires a significant investment of time and money. In a Part B application, considerable information must be submitted regarding the facility (or proposed facility), analyses of the hazardous waste to be handled there, contingency plans in the event of spills, upsets, or equipment failures, training procedures, and topographic maps, along with other, specific information that pertains to the particular type of unit in question.

Once a Part B permit application is filed, a dialogue is begun between the TSDF owner or operator and government officials to iron out the specific terms of the permit. These negotiations are open to the public, and members of the public may also actively participate in the permitting process. *See* 40 C.F.R. pt. 124, Subparts A and B.

3. Regulating the Operation of TSDFs

When RCRA was amended in 1984, Congress added a significant number of provisions requiring EPA to prescribe performance standards for TSDFs. These provisions establish requirements for particular types of hazardous wastes, different types of disposal facilities and disposal methods, types of treatment, and other matters. RCRA §3004(b)–(y), 42 U.S.C. §6924(b)–(y). EPA responded to these mandates by promulgating extensive TSDF regulations. The Agency's rules include both requirements that specifically address subjects listed in the statute and regulations pertaining to particular kinds of treatment, storage, or disposal units (TSDFs). *See generally* 40 C.F.R. pt. 264, Subparts B–E.

Owners and operators of TSDFs must test incoming wastes to confirm that they are as described in the manifest document that accompanied the wastes. 40 C.F.R. §264.13(a)(1). They must return a copy of the manifest to the generator of the hazardous waste in question, submit periodic reports to government regulators, and keep a copy of the manifest for themselves.

TSDF owners and operators must also plan to prevent and respond to emergencies, ensure that their employees meet training requirements, and

keep separate from one another wastes that, if mixed, would create risks of fire or explosion. 40 C.F.R. pt. 264, Subparts B–E; and 40 C.F.R. § 264.17.

EPA's Subtitle C regulations also create detailed technical requirements that vary by type of hazardous waste, hazardous waste management facility, and "unit" within such a facility (e.g., containers, landfills, tanks, waste piles, etc.). *See* 40 C.F.R. pt. 264, Subparts I–EE, and pt. 266. In general, these rules require that units holding hazardous waste be designed, constructed, operated, and maintained to prevent the release of hazardous waste into any environmental medium. They also require TSDFs to build secondary containment structures (such as double walls on tanks and double liners under landfill units) that will capture any hazardous waste spills or leaks.

4. Land Disposal Regulations

In 1984, Congress amended RCRA to make land disposal the least favored method for managing hazardous wastes. *See* RCRA § 3004(b)–(m), 42 U.S.C. § 5924(b)–(m). EPA was required to promulgate regulations "specifying those levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." RCRA § 3004(m), 42 U.S.C. § 6924(m). EPA's corresponding regulations — commonly referred to as "the land ban" — prohibit the land disposal of hazardous waste unless it is first treated (without being diluted) to attain concentrations of hazardous constituents that are below standards established in the regulations. 40 C.F.R. § 268.1 and 268.3. These regulations reflect a conclusion by the Agency that "land treatment" should not be considered a permissible treatment technology. That premise was upheld by the D.C. Circuit, which rejected an argument by several trade associations that EPA should have permitted land treatment as the sort of "best demonstrated available technology" that the Agency's regulations expressly encourage. *See American Petroleum Inst. v. EPA*, 906 F.2d 729 (D.C. Cir. 1990).

5. Corrective Action Requirements

RCRA provides that all TSDF permits shall require "corrective action" for all releases of hazardous waste from any solid waste management unit at the permitted TSDF. RCRA § 3004(u), 42 U.S.C. § 6924(u). "Corrective action" must be taken "where necessary to protect human health and the environment," even when such action is needed beyond the boundary of the facility itself. RCRA § 3004(v), 42 U.S.C. § 6924(v).

TSDF permits thus contain affirmative requirements that facility owners or operators undertake measures to clean up all releases of hazardous waste. These cleanup activities must meet the standard of protectiveness prescribed by the statute.

In contrast to most of its other regulations applicable to TSDFs, EPA's corrective action rules tend to be general and procedural rather than prescriptive. This reflects the Agency's understanding that conditions at individual facilities vary widely, and individual corrective action choices must be tailored to those conditions. *See* 40 C.F.R. §§ 264.100 and 264.101.

6. TSDF Closure and Post-Closure Requirements

EPA's Subtitle C regulations impose stringent requirements for safe closure and post-closure care of TSDFs. Closure and post-closure plans for such facilities, along with documentation of financial assurance, must be included in the facilities' Part B permit applications. 40 C.F.R. § 270.14(13) and 15–18. Owners and operators of TSDFs must close their facilities "in a manner that minimizes the need for further maintenance and controls, [and] minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste. . . ." 40 C.F.R. § 264.111. TSDF owners and operators must also provide assurance that sufficient funds will be available to implement their closure and post-closure plans. This assurance must be accomplished through one of a number of prescribed financial mechanisms such as insurance policies, surety bonds, trust funds, and letters of credit. 40 C.F.R. § 264.140–264.151.

D. The Role of the States in RCRA Implementation

As is the case with other federal environmental legislation, states have a critical role in implementing RCRA. The statute allows individual states to apply for and receive EPA's authorization to implement Subtitle C hazardous waste regulation. To be authorized, a state's program must be "equivalent to the Federal program" and "consistent with the Federal or State programs applicable in other states." RCRA § 3006(b), 42 U.S.C. § 6926(b). It must also provide for "adequate enforcement." *See* 40 C.F.R. §§ 271.1–271.27.

To date, some 48 states and the territory of Guam have received authorization to manage all or part of the RCRA Subtitle C program within their borders. States are permitted to impose requirements regarding hazardous waste that are stricter than what federal law would mandate. However, the statute preempts any state or local requirements that are less stringent than

EPA's federal requirements. RCRA § 3009, 42 U.S.C. § 6929. *See also* 40 C.F.R. § 271.1(i).

Notwithstanding the important role of the states in regulating hazardous waste, the federal government retains important responsibilities under RCRA. Thus, even in authorized states, EPA has the authority to conduct inspections of generators, transporters, and TSDFs, and to take enforcement actions on its own against alleged violators after notice to the state. RCRA §§ 3007 and 3008(a)(2), 42 U.S.C. §§ 6927 and 6928(a)(2). And in states where no authorization has been given, EPA's federal regulations apply directly, and the Agency has full responsibility for administering the hazardous waste regulation program.

V. The Enforcement of RCRA Requirements

RCRA contemplates enforcement actions by three different types of parties: the federal government, state agencies, and individual citizens. At the federal level, EPA is authorized to take three distinct types of enforcement: administrative enforcement, and (with the cooperation and assistance of the U.S. Department of Justice) civil enforcement and criminal prosecution.

Administrative enforcement, the most commonly pursued alternative, begins with an EPA administrative order. EPA may issue such an order where it determines that a person is in violation of any RCRA regulatory requirement, or where there has been an environmental release of hazardous waste. RCRA §§ 3008(a) and 3008(h)(1), 42 U.S.C. §§ 6928(a) and 6928(h)(1). The Agency may also issue an order requiring the owner or operator of a TSDF to conduct monitoring, testing, analyses, and reporting at a facility where the presence or release of hazardous waste "may present a substantial hazard to human health." RCRA § 3013, 42 U.S.C. § 6934. Moreover, EPA is empowered to issue an order "necessary to protect public health and the environment" where it has evidence that "the past or present handling, storage, treatment, transportation or disposal of any solid or hazardous waste may present an imminent and substantial endangerment to health or the environment." RCRA § 7003, 42 U.S.C. § 6973.

The statute also allows EPA to bring a civil judicial enforcement action, for injunctive relief and/or civil penalties, in all instances in which it may issue administrative orders. Civil penalties under RCRA can be sizable. Adjusted for inflation, pursuant to the Federal Civil Penalties Inflation Act of 1990, violators of Subtitle C hazardous waste regulations may be compelled to pay

up to $72,718 per day per violation. *See* RCRA § 3008(g), 42 U.S.C. § 6928(g) and 40 C.F.R. § 19.4 Table 2.

In civil judicial imminent and substantial endangerment cases, courts have broadly interpreted the phrase "may present an imminent and substantial endangerment." In defining the risk needed to support the liability standard, they have emphasized the preeminence of the word "may." Moreover, imminence has generally been read to require only that the harm poses a near-term threat, as opposed to an immediate manifestation of actual harm or damage. *See Maine People's Alliance v. Mallinckrodt, Inc.*, 471 F.3d 277 (1st Cir. 2006).

In states that have received authorization to implement the RCRA hazardous waste program, EPA's regulations require that state law provide equivalent administrative civil judicial and criminal enforcement tools. *See* 40 C.F.R. § 271.16. In addition, as noted above, so long as EPA gives the state advance notice, EPA has the power to take administrative or civil judicial enforcement actions against violators in authorized states. RCRA § 3008(a)(2), 42 U.S.C. § 6928(a)(2).

The statute authorizes private citizens to institute imminent and substantial endangerment civil actions against any person whose past or ongoing handling, storage, treatment, transportation, or disposal of solid or hazardous waste that may present an imminent hazard. RCRA § 7002(a)(1)(A), 42 U.S.C. § 6972(a)(1)(A). In addition, RCRA allows citizens to sue any person alleged to be in violation of any effective RCRA permit, standard, regulation, condition, requirement, or order. RCRA § 7002(a)(1)(A), 42 U.S.C. § 6972(a)(1)(A). Citizen plaintiffs must provide advance notice to potential defendants and regulators before they commence a citizen suit. RCRA § 7002(a)(2), 42 U.S.C. § 6972(a)(2). Citizen suits against violators may not be instituted where EPA or a state "has commenced and is diligently prosecuting a civil or criminal action in a court of the United States or a State to require compliance." RCRA § 7002(b)(1)(B), 42 U.S.C. § 6972(b)(1)(B).

Checkpoints

- Subtitle D of RCRA bans "open dumps" and requires that non-hazardous solid waste be deposited in "sanitary landfills," consistent with EPA-established criteria.
- The collection and disposal of solid waste is meant to take place at the state and local level, with guidance and assistance from EPA.
- Subtitle C of RCRA is intended to protect human health and the environment from the risks created by hazardous waste.
- The statutory definition of "hazardous waste" requires that, to be considered hazardous, a waste must first satisfy the statute's definition of a "solid waste." EPA interprets "solid waste" broadly to include materials that are semi-solid, liquid, contained gases, or improperly recycled.
- EPA's subtitle C regulations identify two types of hazardous waste: characteristic hazardous waste (which has one or more hazardous characteristics) and listed hazardous waste (which EPA has specifically identified as hazardous).
- EPA established regulations for hazardous waste characteristics that can be detected by using a standard test method: ignitability, reactivity, corrosiveness, and toxicity.
- Seventeen specific waste types (including household wastes and many mining wastes) have been excluded by Congress and/or EPA from RCRA Subtitle C regulation.
- EPA's RCRA regulations contain specific requirements that apply to generators and transporters of hazardous waste and to owners and operators of treatment, storage, and disposal facilities (TSDFs).
- The statute and EPA's regulations discourage the land disposal of hazardous waste, require "corrective action" where hazardous chemicals escape from TSDFs, and impose technical and financial assurance requirements on regulated facilities.
- Under RCRA, persons who own, operate, or plan to construct a new TSDF must obtain a permit to do so.
- Facilities in existence prior to the enactment of RCRA were allowed to continue to operate temporarily, in an "interim status," so long as they complied with interim status standards and filed a permit application.
- EPA's regulations impose numerous, strict requirements on owners and operators of TSDFs with regard to such matters as hazardous waste sampling and monitoring, recordkeeping, employee training, preventing and responding to emergency events, and closure and post-closure procedures.
- Individual states may be authorized to administer hazardous waste programs that are "equivalent" to the federal program, consistent with other states' programs, and have adequate provisions for enforcement.

- RCRA contemplates enforcement action by three types of actors: the federal government, states, and private citizens.
- EPA is authorized to take three distinct types of enforcement actions: administrative and (through the Department of Justice) civil judicial, and criminal.
- States that have been authorized to implement an RCRA hazardous waste management program must have enacted state laws that provide enforcement tools equivalent to those available to EPA.
- Private citizens may (after giving prior written notice) commence civil judicial actions against violators of RCRA requirements. However, such suits are barred where EPA or a state is "diligently prosecuting" a civil or criminal action to require compliance.