I. INTRODUCTION
As noted in the Overview, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or Superfund) was a legislative response to the U.S. Environmental Protection Agency’s (EPA’s) lack of authority to address significant historical environmental contamination problems in the United States, typified by Love Canal. With the passage of CERCLA in 1980, Congress gave federal and state governments broad authority to respond to environmental contamination (under CERCLA § 104) and the right to recover the costs of such action from certain categories of responsible parties (under CERCLA § 107). This broad response authority, however, is subject to a number of important limitations and prerequisites, which have been extensively litigated. This chapter explores both the reach and limitations of response authority under CERCLA.

II. FEDERAL AGENCIES AND DEPARTMENTS THAT MAY BE INVOLVED IN CERCLA CLEANUPS
Section 104 of CERCLA empowers the president to respond to environmental contamination. Pursuant to section 115 of CERCLA, the president has issued several executive orders that delegate this response authority to a number of federal agencies, but principally to EPA. The
other federal agencies that were delegated response authority included the U.S. Coast Guard, which can respond to releases of hazardous substances that contaminate coastal zones, ports, harbors, or the Great Lakes; the Department of Defense, which is authorized to respond to releases on military bases; and the Department of Energy, which is authorized to respond to releases at facilities within its jurisdiction.\textsuperscript{1} Congress established special procedures for cleanup of federal facilities, the vast majority of which are facilities owned by the Department of Energy and Department of Defense. Under section 120 of CERCLA, federal agencies must enter into interagency agreements with EPA that establish their respective roles in the cleanup of the agencies’ federal facilities. Additionally, section 120 spells out detailed procedures that federal agencies must follow to complete cleanup of federal facilities in a timely manner.\textsuperscript{2}

Another federal agency that has responsibilities under CERCLA is the Agency for Toxic Substances and Disease Registry (ATSDR). Congress established the ATSDR in 1980 (within the Public Health Service), among other reasons, to prepare toxicological profiles of hazardous substances found at Superfund sites and to assess potential health risks at sites being cleaned up by EPA.\textsuperscript{3} Although the ATSDR’s findings may be used by EPA in deciding how to clean up a site, the ATSDR has no authority to dictate how a site should be cleaned up.

**III. STATE AUTHORITY UNDER SUPERFUND**

Response authority under CERCLA is not limited to the federal government. States also have authority to respond to releases of hazardous substances under section 104 of CERCLA.\textsuperscript{4} Indeed, states must


\textsuperscript{2} Cognizant of the fact that military facilities composed the majority of contaminated federal facilities, Congress in 1986 established a separate, stand-alone program for cleanup of military facilities. Specifically, section 211 of the Superfund Amendments and Reauthorization Act of 1986 established the Defense Environmental Restoration Program, which is to be carried out by the secretary of defense. See 10 U.S.C. §§ 2701 et seq.

\textsuperscript{3} See CERCLA § 104(i).

\textsuperscript{4} Indian tribes also possess response authority to address releases within tribal lands. In this section, however, we focus on state authority.
participate in any remedial action within their boundaries—either by cooperating with EPA on cleanup where EPA is the lead agency or by taking the lead themselves.

A. Required State Participation
Before undertaking any remedial action under section 104, EPA is obligated to consult with the affected state or states. EPA must also enter into a cooperative agreement with the state under which the state guarantees the maintenance aspects of the remedial action, as well as the availability of an authorized treatment, storage, and disposal facility for wastes generated as a result of the remedial action. The state must also agree to fund 10 percent of the remedial action, unless the site being cleaned up is owned by the state or a political subdivision, in which case the state must fund 50 percent of the remedial action. The state’s role in remedy selection is discussed in chapter 2.

B. State Authority to Lead Remedial Action
In addition to the foregoing mandatory participation, states may act as the lead agency in responding to releases of hazardous substances within their borders. To that end, EPA is authorized to enter into a cooperative agreement with a state under which the state is designated the lead agency in implementing a remedial action (either at a specific National Priorities List [NPL] site or all NPL sites statewide). State-led cleanups of NPL sites must be conducted in accordance with EPA’s National Contingency Plan (NCP), which, as discussed below, provides procedures for conducting removal and remedial actions. States may obtain reimbursement from the Fund, subject to the above-described cost-sharing provisions of section 104(c)(3) of CERCLA. To the extent a state expends

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5. CERCLA § 104(c)(2).
6. CERCLA § 104(c)(3); see also § 104(c)(9), under which states are required to provide assurances that they have adequate capacity to destroy, treat, or secure disposition of all hazardous wastes that are reasonably expected to be generated within the state during the 20-year period following execution of the cooperative agreement.
7. CERCLA § 104(c)(3)(B) & (C).
8. CERCLA § 104(d).
funds on non-NPL sites, it cannot obtain reimbursement from the Fund, but can recover such response costs from responsible parties.  

IV. THE STATUTORY PREREQUISITES TO GOVERNMENT RESPONSE

Section 104(a) of CERCLA enumerates a number of prerequisites to the federal government’s exercising its authority to remediate environmental contamination. Under section 104(a), the president is authorized “to remove or arrange for removal of, and provide for remedial action relating to” a “release or substantial threat of release into the environment” of a “hazardous substance” or “any pollutant or contaminant which may present an imminent and substantial endangerment.” As discussed below, each of these phrases has been subject to exhaustive judicial interpretation.

A. Release or Threat of Release

Congress defined “release” very broadly to encompass virtually any activity that causes or is likely to cause hazardous substances to enter the environment:

“[R]elease” means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers and other closed receptacles containing any hazardous substance or pollutant or contaminant). . . .

Although the term “release” suggests a sudden rush of contaminants into the environment, courts have construed the term to include the

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10. Although this chapter concerns government response authority and its limitations, we have included references to cases between private parties where relevant to the body of jurisprudence on the meanings of these key terms.

11. CERCLA § 101(22).
gradual seepage or leaching of hazardous substances from storage areas or spills.\footnote{12}

A release need not be the original disposal activity to be subject to CERCLA response authority. Courts have held that subsequent redisposal of released contaminants may likewise constitute a release covered by CERCLA.\footnote{13} Indeed, courts have ruled that the current property owner’s grading of the site constituted “disposal” because it dispersed hazardous substances that a prior owner had released on-site.\footnote{14}

A hazardous substance need not have been actually released for EPA to have response authority under section 104(a). EPA is also authorized to respond to a substantial threat of release. Though “substantial threat of release” is not defined under CERCLA, several courts have interpreted the phrase as being akin to a menace. In \textit{United States v. Northernaire Plating Co.},\footnote{15} for example, the United States commenced a CERCLA action against an owner of a locked plant containing drums and tanks of chemicals. After ruling that an actual release had occurred, the court

went on to discuss whether a “substantial threat of release” had been established as well:

The evidence shows that there were hazardous substances at the Northernaire site and that these substances, individually and collectively, would pose a threat to the population of the Cadillac, Michigan area if they were to be released into the environment. The evidence further demonstrates that none of the defendants were willing to take responsibility for ensuring that no such release would occur. The evidence of the presence of hazardous substances at the facility, when combined with the evidence of the unwillingness of any party to assert control over the substances, amounts to a threat of a release.\textsuperscript{16}

Note that the court does not mention the statutory adjective “substantial.” Regardless of whether the court’s omission of “substantial” was intentional or accidental, the court’s analysis suggests that a “substantial threat of release” need not constitute an imminent threat of release to be actionable.\textsuperscript{17}

On the other hand, the mere presence of a hazardous substance in a building or structure, standing alone, may not be sufficient to qualify as posing a threat of release.\textsuperscript{18}

Congress expressly excluded the following activities and releases from the CERCLA definition of a release:

\textsuperscript{16} Id. at 747.
\textsuperscript{17} Other courts have similarly interpreted the term “substantial threat of release.” See, e.g., Dedham Water Co. v. Cumberland Farms Dairy, 889 F.2d 1146 (1st Cir. 1989) (threatened release of hazardous substances that caused the plaintiff “reasonably” to incur response costs satisfies causation requirement under CERCLA; actual contamination is not a prerequisite to recovery); Emhart, 665 F. Supp. at 559 (PCBs on concrete flooring can “leach into the concrete floor and ultimately the ground”); Amland Props. Corp. v. Aluminum Co. of Am., 711 F. Supp. 784 (D.N.J. 1989).
\textsuperscript{18} Sycamore Indus. Park Assocs. v. Ericsson, Inc. 546 F.3d 847 (7th Cir. 2008) (presence of asbestos insulation in building does not constitute a “threatened release” because any emission would be confined within the building and thus would not reach the “outside environment”).
(A) Any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons,

(B) Emissions from engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine,

(C) Release of source, by-product, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954 . . . and

(D) The normal application of fertilizer.19

These exclusions from the definition of release are narrow, and courts have rarely found a release to fit within them. For example, the exclusion for a release of “source, by-product, or special nuclear material” was at issue in Pennsylvania v. Lockheed Martin Corp.20 In this case, Pennsylvania sought to recover from Lockheed the costs associated with cleanup of radioactive strontium, which had been used in a state-owned facility that manufactured thermoelectric generators in the 1960s. Pennsylvania had performed the cleanup pursuant to a decommissioning plan that had been submitted to and approved by the Nuclear Regulatory Commission. Lockheed sought dismissal of Pennsylvania’s CERCLA cost recovery action on the ground that strontium is excluded radioactive by-product material under CERCLA § 101(22)(c). The district court denied the motion, reasoning that it was unclear under CERCLA’s statutory language and EPA’s implementing regulations whether a release of radioactive by-product material such as strontium could be considered “disposal” subject to CERCLA. The court deferred to EPA’s expertise on this issue, and declined to dismiss the case.21

Another failed attempt to characterize a release as excluded from CERCLA concerned the exclusion for releases that constitute the “normal application of fertilizer.” In City of Tulsa v. Tyson Foods, Inc.,22 the defendant poultry manufacturers filed a motion for summary judgment

19. Id.
21. Id. at 576.
arguing that land application of chicken manure qualified as the “normal application of fertilizer.” The court rejected the motion, concluding that the defendants had failed to provide evidence that their application of manure could be considered “normal” application of fertilizer.23

B. Environment

Under section 101(22) of CERCLA, releases are subject to government response authority only if they reach the environment. Congress defined “environment” very broadly to include

(A) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States . . . and (B) any other surface water, ground water, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States.24

As broadly as Congress defined the environment, courts have gone even further. On the related issue of interpreting “disposal into . . . the environment,” several courts have held that EPA’s response authority extends to releases that remain entirely within a building.25 Similarly, EPA

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24. CERCLA § 101(8).

Government Response Authority under Section 104 of CERCLA

takes the position that hazardous substances have been released into the environment even if they remain entirely on plant or facility grounds.26

C. Hazardous Substance, Pollutant, or Contaminant

Section 104(a) references two categories of substances as to which the government is authorized to perform a response action: (1) hazardous substances; and (2) pollutants or contaminants. As discussed below, there are significant differences between these two categories of substances.

1. Hazardous Substance

Section 101(14) of CERCLA defines “hazardous substance” by reference to lists of hazardous substances developed under a number of other federal environmental statutes, specifically, sections 311 and 307 of the Clean Water Act of 1977, and section 112 of the Clean Air Act. EPA has created a master list of these hazardous substances, which is codified at 40 C.F.R. § 302.4. In addition to these specifically designated hazardous substances, section 101(14)(C) of CERCLA defines hazardous substances to include any waste that EPA has specifically listed as a hazardous waste,27 and any waste that exhibits one or more of the characteristics of hazardous wastes (ignitability, corrosivity, reactivity, and toxicity) established by EPA under the Resource Conservation and Recovery Act (RCRA).28

2. Pollutant or Contaminant

In addition to responding to a release or substantial threat of release of a hazardous substance, the government may respond to the release or substantial threat of release of “any pollutant or contaminant” that

27. EPA has promulgated several lists of hazardous wastes. The so-called “F-List” identifies wastes from common manufacturing and industrial processes, such as solvents that have been used in cleaning or degreasing operations. The F-List of hazardous wastes is set forth at 40 C.F.R. § 261.31. The K-List of hazardous wastes is a source-specific list that identifies the waste by reference to specific industries, such as petroleum refining or pesticide manufacturing. The K-List is set forth at 40 C.F.R. § 261.31. The P-List and U-List are lists of commercial chemical products that are deemed hazardous waste when discarded. See 40 C.F.R. § 261.33.
28. The four hazardous waste characteristics are set forth at 40 C.F.R. §§ 261.21–24.
may present an “imminent and substantial danger to the public health or welfare.” The phrase “pollutant or contaminant” is defined as any material “which after release into the environment . . . may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions . . . or physiological deformations.”

Note that there is a heightened standard applicable to the government’s decision to respond to a release of a pollutant or contaminant that is not a hazardous substance. It may only do so if it determines that the release may present an “imminent and substantial danger to public health [or] welfare.” There is no such requirement for the government to respond to a release of a hazardous substance. Another important difference between a hazardous substance and a pollutant/contaminant concerns liability. Section 107 does not impose liability on responsible parties for a release of a pollutant or contaminant that is not a hazardous substance.

D. Petroleum Exclusion

The response authorities of CERCLA do not extend to releases of petroleum. The CERCLA definition of “hazardous substance” excludes “petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph.” The definition of “pollutant or contaminant” contains parallel petroleum exclusion language. (Both definitions also exclude “natural gas, liquefied natural gas, or synthetic gas of pipeline quality or mixtures of natural gas and such synthetic gas.”)

There have been countless cases examining the scope of the petroleum exclusion, mostly in the context of asserting the exclusion as a defense to liability (rather than as challenges to EPA response authority).

29. CERCLA § 104(a)(1)(B).
30. CERCLA § 101(33).
32. See CERCLA § 101(14).
33. See CERCLA § 101(33).
In most cases, courts have read the exclusion narrowly, and imposed liability on the defendants.34 One of the first successful applications of the petroleum exclusion was Wilshire Westwood Associates v. Atlantic Richfield Corp.35 In this case, two development companies sought to recover cleanup costs associated with a spill of leaded gasoline. The developers asked the Ninth Circuit to interpret the petroleum exclusion narrowly, so that the exclusion did not apply to petroleum containing CERCLA hazardous substances such as lead. The court rejected this approach, noting that the developers’ interpretation “renders the petroleum exclusion a nullity,” and concluded that “the petroleum exclusion in CERCLA [applies] to unrefined and refined gasoline even though certain of its indigenous components and certain additives during the refining process have themselves been designated as hazardous substances within the meaning of CERCLA.”36 A number of courts have followed the reasoning of Wilshire.37

34. See, e.g., Franklin Cnty. Convention Facilities Auth. v. Am. Premier Underwriters, Inc., 240 F.3d 534 (6th Cir. 2001) (affirming lower court’s ruling that there was insufficient evidence to show that a mixture of benzene and creosote was in fact petroleum excluded from the CERCLA definition of hazardous substances); Cose v. Getty Oil Co., 4 F.3d 700 (9th Cir. 1993) (crude oil tank bottoms are not petroleum or petroleum “fractions” because they are not a product of the refining process, but are simply discarded as wastes); United States v. Gurley, 43 F.3d 1188, 1199 (8th Cir. 1994) (exclusion does not apply to waste oil containing PCBs and sulfurous acid); Marrero v. Esso Standard Oil Co., 597 F. Supp. 2d 272, 289–90 (D.D.R. 2009) (oil company’s motion for summary judgment denied because oil company could not show that the release of a refined petroleum product from a corroded tank did not also contain hazardous substances from the corrosion); Acme Printing Ink Co. v. Menard, Inc., 881 F. Supp. 1237 (E.D. Wis. 1995) (exclusion does not apply to waste oil contaminated with substances that are not constituents of petroleum); Licciardi v. Murphy Oil USA, Inc., Civ. A. No. 93-0490, 1994 WL 285051 (E.D. La. June 20, 1994) (waste materials such as refinery sludge do not fall within the petroleum exclusion); United States v. W. Processing, 761 F. Supp. 713, 721 (W.D. Wash. 1991) (“tank bottom sludge is a contaminated waste product, and not a petroleum fraction, as that term is used in [CERCLA]”).

35. 881 F.2d 801, 804 (9th Cir. 1989).

36. Id. at 810.

There is a split of authority on the question of whether used oil is covered by the petroleum exclusion when there is no evidence that the oil was contaminated with hazardous substances. In *Marmon Group, Inc. v. Rexnord, Inc.*,38 the district court held that, because cutting oil is a form of oil that is covered by the petroleum exclusion, so too is “waste cutting oil.” The decision was reversed on other grounds by the Seventh Circuit, but in its opinion the Seventh Circuit recites the fact that the “district court had dismissed the CERCLA count on the ground that the cutting oil was not a substance regulated by CERCLA.”39 A number of other courts have similarly deemed used oil to be covered by the petroleum exclusion.40 These courts appear to presume that used oil does not contain nonindigenous hazardous substances.

Several courts, however, appear to presume precisely the opposite—namely, that used oil is contaminated with nonindigenous substances as a result of use and thus is not covered by the petroleum exclusion absent contrary evidence.41

that are covered by the petroleum exclusion, such as kerosene, does not remove the product from the scope of the exclusion). See also *Niecko v. Emro Mktg. Co.*, 769 F. Supp. 973, 982 (E.D. Mich. 1991), aff’d, 973 F.2d 1296 (6th Cir. 1992) (petroleum exclusion applies to gasoline leaking from gas station underground storage tank); *Bunger v. Hartman*, 797 F. Supp. 968, 972–73 (S.D. Fla. 1992) (same).


39. 822 F.2d at 33.

40. See, e.g., *S. Pac. Trans. Co. v. Cal. Dep’t of Transp.*, 790 F. Supp. 983 (C.D. Cal. 1991) (holding that used petroleum products mixed with soil are within the petroleum exclusion, noting that “EPA has consistently maintained that used petroleum products are covered by the petroleum exclusion,” but also noting EPA’s position that hazardous substances added to petroleum products that become more concentrated during use are not covered by the petroleum exclusion); *Niecko*, 769 F. Supp. at 982 (same).

41. See, e.g., *Esso Standard Oil Co. v. Rodriguez Perez*, No. 01-2012, 2004 WL 2238894 (D.P.R. Oct. 1, 2004) (petroleum exclusion not applicable where defendants had disposed of waste oil containing hazardous substances at levels above what would be considered indigenous to a petroleum product); *Ekotek Site PRP Comm. v. Self*, 881 F. Supp. 1516 (D. Utah 1995) (petroleum exclusion does not cover used oil containing nonindigenous hazardous substances or indigenous substances, which are present at elevated concentrations); *W. Processing Co.*, 761 F. Supp. 713 (absent evidence to the contrary, there is a presumption that oil sludge from petroleum storage tanks contain hazardous substances from walls of tanks); see also *City of New York v. Exxon Corp.*, 766 F. Supp. 177, 186 (S.D.N.Y. 1991) (“By its plain language, this exclusion for petroleum does not include waste oil,” but also finding that levels of lead, cadmium, and chromium had increased in the oil emulsion because of industrial processes).
E. Other Limitations on Response Authority

Under section 104(a)(3) of CERCLA, the government is prohibited from responding to a release or threat of release:

- (A) of a naturally occurring substance in its unaltered form, or altered solely through naturally occurring processes or phenomena, from a location where it is naturally found;
- (B) from products which are part of the structure of, and result in exposure within, residential buildings or business or community structures; or
- (C) into public or private drinking water supplies due to deterioration of the system through ordinary use.\(^{42}\)

Notably, however, if EPA determines that a public health or environmental emergency exists, and no one else will respond to the emergency in a timely manner, EPA is authorized to respond to these otherwise excluded releases.\(^{43}\)

V. GOVERNMENT RESPONSE AUTHORITIES

Where the statutory prerequisites to response action are satisfied—that is, where EPA has evidence of a release or substantial threat of release into the environment of a hazardous substance, pollutant, or contaminant—EPA is authorized to act, consistent with the NCP,\(^ {44} \) to take short-term “removal” actions that enable it to respond quickly, as well as to take longer-term “remedial” actions that are intended to be a permanent solution to the contamination.\(^ {45}\)

Before EPA may take the longer-term remedial action at a contaminated site, it must place the site on its master list of sites eligible for funding by the Hazardous Substances Superfund. This list is known as the NPL.\(^ {46}\)

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\(^{42}\) CERCLA § 104(a)(3)(A)–(C); 40 C.F.R. § 300.400(b).

\(^{43}\) CERCLA § 104(a)(4); 40 C.F.R. § 300.400(b).

\(^{44}\) 40 C.F.R. pt. 300.

\(^{45}\) CERCLA § 104.

\(^{46}\) CERCLA § 105(a)(8)(B).
Each of the procedural and substantive elements of EPA’s response authority is discussed below.

A. National Contingency Plan (NCP)

The NCP was originally established under the Clean Water Act to address and respond to oil spills affecting waters of the United States. Section 105(b) of CERCLA directs the president to revise and republish the NCP to reflect CERCLA’s new removal and remedial authorities in a new section of the NCP referred to as the National Hazardous Substance Response Plan.

The NCP has been referred to as the “road map” for the government’s hazardous waste cleanup program. The NCP provides guidelines and procedures for discovering hazardous waste sites, for identifying the most hazardous among those sites and creating a priority list for action (the NPL), and for selecting and implementing removal and remedial actions. Set forth below is a summary of key aspects of the NCP.

1. Site Identification

Obviously, before EPA can respond to a release or threatened release of a hazardous substance, it must identify or learn of the release. The release reporting provisions of CERCLA are the primary source of this information. Section 103 requires responsible parties to report the existence of hazardous waste sites and releases from hazardous waste facilities to EPA, as discussed in chapter 11. Based on this information, EPA determines which sites to include on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) computer list—the national inventory of potential NPL sites. CERCLA also authorizes private persons who are, or may be, affected by a release or threatened release of a hazardous substance, pollutant, or contaminant to petition the president to perform a risk assessment on any release or threatened release.47

47. CERCLA § 105(d); 40 C.F.R. § 300.405(a)(6).
2. National Priorities List
Once a potential site has been identified, it is subjected to a series of investigations and reviews to determine if the site should be placed on the NPL. The first of these is the preliminary assessment (PA), which is a review of available information to assess the site and the hazardous substances present, and to determine if any potentially responsible parties (PRPs) can be identified. The second step is a site inspection (SI), which consists of a visual inspection of the site and routinely includes collection of samples.

The results of the PA/SI are used by EPA to rank the site under the agency’s Hazard Ranking System (HRS). Pursuant to section 105(a)(8) of CERCLA, EPA developed the HRS (which is described in Appendix A to the NCP) to assess the risk or danger to public health or the environment posed by a site. Using criteria identified in the statute, EPA uses the HRS to assign a numerical value to a given site, which represents the risks posed by the site. By regulation, EPA has established that sites with an HRS score of at least 28.50 are eligible for inclusion on the NPL. Based on the HRS score assigned to a site, EPA proposes the site for inclusion on the NPL. Following receipt of comments, the site is listed on the NPL or dropped from further consideration for remedial action.

There are two other mechanisms for placing a site on the NPL. First, each state has a one-time opportunity to include on the NPL a site that presents “the greatest danger to public health or welfare or the environment among the known facilities in such State.” Second, EPA may list a site on the NPL if (1) the ATSDR issues a health advisory that recommends removing individuals from the vicinity of the release; (2) EPA determines that the release poses a significant threat to public health; and

48. See 40 C.F.R. § 300.420(b).
49. See 40 C.F.R. § 300.420(c).
50. See 40 C.F.R. § 300, App. A.
51. EPA promulgated an original NPL list of 406 sites. 48 Fed. Reg. 40,658 (Sept. 8, 1983). The NPL must be—and has been—updated at least once annually by EPA. A complete listing of the NPL sites can be found at EPA, Superfund, NPL Site Status Information, http://www2.epa.gov/superfund/npl-site-status-information.
52. CERCLA § 105(a)(8)(B); see also 40 C.F.R. § 300.425(c)(2).
(3) EPA further determines that it will be more cost-effective to use its remedial authority than its removal authority to respond to the release.53

Once a site has been included on the NPL, it has proven very difficult to successfully challenge its inclusion.54 That is not to say that NPL listings are immune from challenge. For example, in *Mead Corporation v. Browner*,55 the D.C. Circuit vacated the NPL listing of the “Tennessee Products” site, which included three noncontiguous areas, one of which was a mile away from the others. The court stated that the inclusion of each area must be individually justified, and that the agency’s aggregating a low-risk site with high-risk sites under the agency’s so-called “Aggregation Policy” was unlawful. (Chapter 6 provides a comprehensive discussion of judicial challenges to NPL listings.) Only sites listed on the NPL qualify for Superfund-financed remedial action. Inclusion on the NPL, however, is not a precondition either for Superfund-financed removal action or for agency action under section 106, as discussed in chapter 3.

3. Remedial Investigation/Feasibility Study

Following addition of a site to the NPL, the government must perform a remedial investigation/feasibility study (RI/FS).57 The purpose of a remedial investigation (RI) is to verify the existence of a release

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53. 40 C.F.R. § 300.425(c).
54. See, e.g., U.S. Magnesium, LLC v. EPA, 630 F.3d 188 (D.C. Cir. 2011) (challenge to NPL listing based on argument that HRS scoring artificially inflated the site’s score rejected because argument was in essence a challenge to underlying regulation, which could no longer be asserted); RSR Corp. v. EPA, 102 F.3d 1266 (D.C. Cir. 1997) (challenge to NPL listing ruled untimely because it was raised three years after listing); Eagle-Picher Indus., Inc. v. EPA, 822 F.2d 132 (D.C. Cir. 1987) (upholding NPL listing of sites at which mining wastes and power plant ash were disposed, as well as uranium mills, notwithstanding that such wastes are expressly excluded from the CERCLA definition of hazardous substance, because EPA may respond to releases of “pollutants and contaminants”).
55. 100 F.3d 152 (D.C. Cir. 1996).
57. A detailed discussion of the various steps involved in the RI/FS process is beyond the scope of this book. The regulations governing the performance of an RI/FS may be found in the NCP at 40 C.F.R. § 300.430. In addition, EPA elaborates on the procedural requirements in its interim final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA, Directive No. 9355.3-01, Office of Emergency and Remedial Response, EPA (Oct. 1988).
and to document its environmental and health effects. During the RI, a full characterization of the site is performed. Field investigations are conducted to evaluate the physical characteristics of the site, including soils, geology, and hydrogeology; contamination of air, surface water, and groundwater; nature of the wastes disposed on-site; and the potential exposure pathways. A baseline risk assessment is conducted that includes an assessment of the toxicity of chemicals at the site and the potential for exposure. Based on the foregoing information, the government identifies the standards that the selected remedy must be designed to achieve. (Remedy selection standards are discussed in chapter 2.)

The RI is also designed to provide information necessary to perform the feasibility study (FS). Through the FS, the government develops and screens potential remedial alternatives, ranging from a treatment alternative that, to the degree possible, would eliminate the need for long-term management at the site, to a containment option that involves little or no treatment, to a “no action” alternative. The most promising of these remedial alternatives are analyzed and compared against one another based on their relative strengths and weaknesses as measured against specific remedy selection criteria, also discussed in chapter 2. Thus, the RI/FS is the fundamental document on which EPA bases its decision to select a specific remedial action for a site.

B. Removal Actions versus Remedial Actions

As already noted, response actions implemented at a contaminated site can take two forms: removal action or remedial action. As discussed in more detail below, each term has a specific statutory definition. Conceptually, a removal action should be thought of as a short-term, interim response action taken to prevent imminent harm or, as some courts have held, an action “taken in response to an immediate threat.” By contrast, a remedial action is the long-term, permanent solution or remedy for the contamination.

Examination of the definitions of removal and remedial action, however, reveal that there is no bright-line distinction in terms of timing or even permanence. Case law has shown that removal actions can last decades and embody the permanent remedy for a site. The blurred distinction between removal and remedial action has engendered litigation. Different statutes of limitation apply to actions for recovery of costs of removal and remedial action. Moreover, different procedural requirements must be satisfied for costs of removal and remedial action to be recoverable from liable parties. Thus, improper characterization of an action as removal or remedial action can have significant consequences for a party seeking recovery of the associated costs. We begin our discussion by examining the underlying statutory definitions of removal and remedial action.

1. Definitional Differences between Removal and Remedial Actions
The text of the definitions of removal action and remedial action follow a similar pattern. Each begins with a general statement of principle, and follows that with examples. The principles of each definition are clearly different, but the examples provided after the principle statement appear to overlap. In this regard, a “removal action” is defined as

the cleanup or removal of released hazardous substances from the environment, such actions as may be necessary taken [sic] in the event of the threat of release of hazardous substances into the environment, such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances, the disposal of removed material, or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release. The term includes, in addition, without being limited to, security fencing or other measures to limit access, provision of alternate water supplies, temporary evacuation and housing of threatened individuals not otherwise provided for, action taken under [section 104(b)] of this
Thus, the definition of “removal” includes not only actions needed to address the immediate threat posed by a release, such as providing “temporary evacuation and housing” and “alternate water supplies,” but also actions that may prove to be the long-term remedy, such as removing and disposing of contaminated material.

By contrast, CERCLA defines the terms “remedy” or “remedial action” as meaning “those actions consistent with permanent remedy taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment.” The reference to “permanent remedies” embodies the broad principle, but the examples provided thereafter in the definition include some of the very same actions found in the definition of removal:

The term includes, but is not limited to, such actions at the location of the release as storage, confinement, perimeter protection using dikes, trenches, or ditches, clay cover, neutralization, cleanup of released hazardous substances and associated contaminated materials, recycling or reuse, diversion, destruction, segregation of reactive wastes, dredging or excavations, repair or replacement of leaking containers, collection of leachate and runoff, onsite treatment or incineration, provision of alternative water supplies, and any monitoring reasonably required to assure that such actions protect the public health and welfare and the environment. The term includes the costs of permanent relocation of residents and businesses and community facilities where the President determines

59. CERCLA § 101(23).
60. CERCLA § 101(24).
that, alone or in combination with other measures, such relocation is more cost-effective than and environmentally preferable to the transportation, storage, treatment, destruction, or secure disposition offsite of hazardous substances, or may otherwise be necessary to protect the public health or welfare; the term includes offsite transport and offsite storage, treatment, destruction, or secure disposition of hazardous substances and associated contaminated materials.  

As is apparent, the definitions of removal action and remedial action both refer to the “cleanup of released hazardous substances” and encompass off-site disposal or destruction of the hazardous substances. There are other areas of overlap (e.g., both definitions refer to “providing alternative water supplies”), but the most significant overlap is that both definitions refer to “cleanup” actions. These overlapping definitions create the possibility of a response action being characterized as either a removal or a remedial action. For example, the excavation of buried drums may be deemed a removal because it “may be necessary to prevent, minimize or mitigate” the spread of contamination that would occur if the drums remained buried. On the other hand, excavating buried drums may be the only action required to clean up a site, and thus would be the permanent remedy, the hallmark of a remedial action. Similarly, depending on the circumstances, installing a cap over contaminated soil could qualify as either a removal action where “necessary to prevent, minimize, or mitigate” the spread of contamination, or a remedial action where it constitutes the permanent remedy selected for a site.  

As discussed below, there are significant substantive and procedural differences between the requirements applicable to removal actions and remedial actions. Thus, it is commonplace for parties to disagree over

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61. CERCLA § 101(24).
62. See, e.g., Versatile Metals, 693 F. Supp. at 1576 (cap could be either removal or remedial depending on whether its purpose was abatement or permanent cover).
the characterization of an action as a removal or remedial action, which often can be dispositive of a cost recovery claim.\(^{63}\)

2. Regulatory Differences under the NCP

As already noted, the regulatory implications of the distinction between removal and remedial actions are not trivial. The NCP establishes when EPA may initiate a removal or a remedial action. Removal actions are authorized whenever EPA determines that there is a threat to public health or welfare or the environment, based upon a review of the following factors:

(i) [A]ctual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations, animals, or food chain;

(ii) [A]ctual or potential contamination of drinking water supplies or sensitive ecosystems;

(iii) [H]azardous substances or pollutants or contaminants in drums . . . or other bulk storage containers, that may pose a threat of release; [and] . . .

(iv) [T]hreat of fire or explosion. . . .\(^{64}\)

On the other hand, Superfund-financed remedial actions may only be undertaken after a site has been listed on the NPL.\(^{65}\) Accordingly, the universe of sites at which EPA itself may initiate remedial action is vastly smaller than the universe of sites at which it may initiate removal action. However, EPA can require PRPs to initiate remedial actions at non-NPL sites, including through the issuance of unilateral orders under section 106 of CERCLA.

The procedural requirements applicable to a remedial action are far more demanding than those applicable to a removal action. The NCP

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\(^{63}\) See, e.g., Gen. Elec. Co., 920 F.2d at 1419 (“Any distinction between ‘excavation’ of contaminated soils [listed as a remedial action] and ‘removal’ of contaminated soils is one that eludes us.”).

\(^{64}\) See 40 C.F.R. § 300.415(b)(2).

\(^{65}\) 40 C.F.R. § 300.425(b)(1).
establishes a detailed procedural framework for selecting a remedial action for sites on the NPL. As noted earlier, before any remedy may be selected, an RI/FS must be conducted in which the nature and extent of contamination is determined, the health risk posed by the contamination is quantified, and the remedial alternatives for mitigating those health risks are judged comparatively, using remedy selection criteria. Remedial actions must be cost-effective, while removals need not be. Moreover, the public must be provided with an opportunity to comment on the proposed remedy selection for NPL sites. By contrast, removal actions need only comply with the relatively simple NCP requirements, specifically (1) undertake a removal site evaluation; (2) select the appropriate removal action based on the site evaluation; and (3) determine whether responsible parties “can and will perform the necessary removal action promptly and properly.” Of particular significance to PRPs, removal actions are to be terminated after $2 million has been obligated for the action or 12 months have elapsed from the date of initial response, unless certain requirements are met. (This limitation is not applicable to investigations and monitoring done pursuant to section 104(b) of CERCLA.) EPA often uses those circumstances to justify longer-term and more expensive removal actions.

3. Different Statutes of Limitation
Another difference between removal and remedial actions is that each has a different statute of limitation for recovery of response costs from liable parties. For a remedial action, the statute of limitations for recovery of
response costs is “6 years after initiation of physical on-site construction of the remedial action.” By contrast, for a removal action the statute of limitations for recovery of response costs is “3 years after completion of the removal action,” except that removal costs may be recovered as part of a cost recovery action for remedial costs if the remedial action is commenced within three years of completion of the removal action.

The differing limitation periods for removal actions and remedial actions are at the heart of a broad, deep vein of CERCLA case law in which courts adjudicating cost recovery actions have had to decide whether the response was a removal action subject to a three-year limitations period or remedial action subject to a six-year limitations period.

One group of these cases have focused on the question of when “physical on-site construction” commences, which is the event that triggers the six-year limitations period for a remedial action. In a second, larger group of cases, the plaintiffs attempt to link a series of cleanup actions that may span decades as one long removal action, because the three-year limitations period for a removal action commences upon “the completion of a removal action.” The question in these cases is whether the limitations period applies to each response action individually or to all actions collectively. For example, in Kelly ex rel. Michigan v. E.I. du Pont de Nemours & Co., the initial removal action—namely, excavation and disposal of drums and contaminated soil—was completed in 1986. The contractor was paid, and state officials announced that the removal action was finished. More than a year later, four more drums were uncovered during the RI/FS, and were excavated. Although this

73. CERCLA § 113(g)(2)(B).
74. CERCLA § 113(g)(2)(A); see also Agere Sys. Inc. v. Advanced Envtl. Tech. Corp., 602 F.3d 204, 229–33 (3d Cir. 2010).
75. See, e.g., United States v. Akzo Nobel Coatings, Inc., 990 F. Supp. 897, 905 (E.D. Mich. 1998) (six-year limitations period for filing cost recovery action was not triggered by construction of storage pads, drum excavations, and delivery of equipment since none of those actions were “an initiation of physical on-site construction”); United States v. Atl. Richfield, 147 F. Supp. 2d 214 (S.D. Tex. 2001) (six-year limitations period was not triggered by installing a fence, clearing the site, and widening the access road, or by installing temporary trailers, electrical generators, and air monitoring stations; each activity was part of the removal action, not a remedial action).
76. 17 F.3d 836 (6th Cir. 1994).
later drum removal was performed by a different contractor, the court held that it was part of the original removal. Thus, the removal was not complete and the statute of limitations did not begin to run until the last drum was removed. This is just one of a number of cases involving the “never-ending removal.”

In yet another group of removal versus remedial action cases, the court had to decide whether a response action was properly characterized as a removal where there is a question as to whether the release in question posed an emergency.

In sum, despite decades of jurisprudence, courts continue to struggle with the distinction between a removal action and a remedial action.

C. Ancillary Response Authorities

As noted, EPA’s removal and remedial authority authorize EPA to permanently relocate residents, businesses, and community facilities in those cases in which it determines that relocation is (1) more cost-effective than, and environmentally preferable to, off-site disposal of the hazardous substances, or (2) necessary to protect the public health or welfare.

A related response authority was added to section 104 of CERCLA by the Superfund Amendments and Reauthorization Act of 1986. Under section 104(j), EPA may use Superfund money to acquire interests in real

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78. See, e.g., United States v. Horne, No. 05-0497-CV-W-NKL, 2006 WL 2506447 (W.D. Mo. Aug. 29, 2006) (three-year limitation period for removal applied because EPA sought an “emergency” waiver of removal requirements); OBG Tech. Servs., Inc. v. Northrop Grumman Space & Mission Sys. Corp., 503 F. Supp. 2d 490 (D. Conn. 2007) (plaintiff’s action characterized as remedial action because it did not involve an emergency situation, there was no threat of release off-site, no imminent danger to the public, and the action taken was the permanent, long-term remedy; consequently, plaintiff’s claim was dismissed as untimely).

79. Additional cases adjudicating the applicable limitation period on the basis of an analysis of a response action as removal or remedial are summarized in chapter 9, note 37.

80. CERCLA § 101(24); 40 C.F.R. § 300.6. EPA used this authority in the cleanup of the Times Beach, Missouri, Superfund site, where waste oil mixed with dioxins had been sprayed on rural roads as a dust suppressant.
estate where a response action would constitute a taking of property. Land may be acquired where it is needed to carry out remedial actions, but only on condition that the state takes title to the property upon completion of the remedial action. Notably, section 104(j) expressly excludes any private right of action to force the government to acquire property.

CERCLA also authorizes EPA to place a lien on property to recover amounts spent on its cleanup. This lien is established by operation of law, and becomes effective upon EPA’s filing a notice of lien. Notably, however, in Reardon v. United States, the First Circuit held this lien provision unconstitutional on the ground that it deprived property without due process. (We discuss this case in more detail in chapter 6.)

VI. INFORMATION-GATHERING AUTHORITY

A. Information Requests
Before EPA can exercise its response authority, the agency must have evidence of a release or threatened release sufficient to satisfy the statutory prerequisites. For this reason, Congress gave EPA extensive authority to obtain information and records from any person it believes may have a relationship to a site. EPA is empowered to require detailed information that is relevant to the following:

(A) The identification, nature, and quantity of materials which have been or are generated, treated, stored, or disposed of at a vessel or facility . . .

(B) The nature or extent of a release or threatened release of a hazardous substance . . . [and]

(C) Information relating to the ability of a person to pay for or to perform a cleanup.

81. CERCLA § 107(l).
82. 947 F.2d 1509 (1st Cir. 1991).
83. CERCLA § 104(e).
84. CERCLA § 104(e)(2).
EPA generally exercises this authority through information requests. Typically, such requests are extremely broad. The recipient must identify the nature and amount of wastes sent to the site, the transporters utilized to convey such wastes to the site, and generally must provide EPA with “all documents in your possession relating to the site.” Failure to comply with an information request can result in substantial penalties—up to $37,500 for each day of noncompliance. An extreme example of the potential financial exposure for resisting an EPA information request is United States v. Gurley, in which the court upheld EPA’s imposition of a $1.9 million civil penalty against the defendant for a seven-year delay in responding to a 1992 information request.

EPA is also authorized to collect information by entering a PRP’s facility for purposes of inspecting and copying documents or records relating the three above-referenced types of information bearing on the existence, nature, and quantity of hazardous substance releases.

A company receiving an information request from EPA must carefully consider its response, with regard both to timing and content. Regarding the timing of response, EPA information requests generally allow 30 days for compiling and submitting the requested information. Given that information requests often contain scores of “interrogatories,” the first order of business upon receiving an information request is for the PRP to assess the level of effort necessary to comply with the request, including the search for old, often difficult to locate records. In many instances, a PRP may need—and should request—an extension of time to respond.

As to information a PRP provides to EPA, the PRP must understand that the information may be made public. Accordingly, the PRP should

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86. 384 F.3d 316 (6th Cir. 2004).
87. See also United States v. 718 W. Wilson Ave., Glendale, Cal., 778 F. Supp. 2d 1067, 1073 (C.D. Cal. 2011) (civil penalties awarded against landowner who provided a tardy, inadequate response to an EPA information request).
88. See CERCLA § 104(e)(2) & (3).
determine whether any of the information is protectable as a trade secret. A PRP may assert a claim of confidentiality over data if it can establish that (1) it has not released the information to anyone other than specified government officials under a confidentiality agreement; (2) the information is not “required to be disclosed . . . to the public under any other Federal or State Law”; (3) if the information sought is a specific chemical identity, it is “not readily discoverable through reverse engineering”; and (4) disclosure of the information is likely to cause “substantial harm” to the claimant’s “competitive position.”

B. Entry and Access

In addition to EPA’s authority to obtain information from PRPs through information requests, EPA has broad power to enter private property to a site to determine if the hazardous substances on property pose a threat to public health. Specifically, EPA may enter private property on which a hazardous substance may be or has been generated, stored, treated, disposed of, or transported from; any place a hazardous substance has been or may have been released; any place that is or may be threatened by the release of a hazardous substance; or any place where entry is needed to determine the need for a response action, including property adjacent to the actual site. Pursuant to this authority, EPA may enter private property for the purpose of taking samples at “any location of any suspected hazardous substance or pollutant or contaminant.” If EPA takes samples, it must provide a receipt, offer to split the samples, and provide a copy of the analytical results to the property owner.

In addition to entering private property to determine if hazardous substances pose a threat, courts have confirmed that the United States may access private property for the purpose of beginning response activities. In United States v. Charles George Trucking Co., the court held that

89. CERCLA § 104(e)(7)(E)(ii), (iv).
90. CERCLA § 104(e)(3)(A)–(D).
91. CERCLA § 104(e)(4)(A).
92. CERCLA § 104(e)(4)(B).
where the owner of a hazardous waste site refuses to grant permission for EPA to enter the site and adjacent property for the purpose of beginning a remedial action, section 104(e)(5) of CERCLA allows the United States to come directly to the district courts to enjoin interference with EPA’s entry on the property.95 Alternatively, EPA may issue an administrative order requiring the property owner to allow entry and then seek court enforcement of that order.96 The court also ruled that the right of entry under section 104(e) of CERCLA extends equally to adjacent property and is not limited to the boundaries of the hazardous waste site, so long as the entry is necessary to effectuate the response action.97

Before EPA may enter private property, EPA must have a “reasonable basis to believe there may be a release or threat of release.”98 Moreover, courts may require EPA to spell out its intended actions relating to entry with a reasonable degree of specificity.99 Once a release has been identified and EPA has specified the response actions it intends to take, the agency enjoys a broad right of access to implement the response actions.

EPA’s broad right of access to implement response actions, however, is not without limits. EPA exceeded those limits in United States v. Omega Chemical Corp.,100 where the agency had requested written consent for unconditional access from the owner of contaminated property to implement the cleanup. When the owner refused, EPA sought civil penalties. The Ninth Circuit held that the owner was not subject to civil penalties because the owner had consistently allowed EPA to enter its facility and conduct investigative activities during the period for which penalties were assessed. Moreover, the court held that neither the statute nor its implementing regulations contain language requiring unconditional written consent. Accordingly, the owner’s refusal to sign a formal written consent giving EPA unconditional access to its facility did not constitute a violation of the statute.

95. Id. at 1267.
96. Id.
97. Id. at 1273.
98. CERCLA § 104(e)(5).
100. 156 F.3d 994 (9th Cir. 1998).
By the same token, property owners cannot impose restrictive conditions before permitting EPA to access property being remediated. In *United States v. Iron Mountain Mines, Inc.*, the court held that defendant property owners could not require representatives of EPA to sign waivers of liability or a code of conduct as a condition of gaining access to the property.

An open and important issue is whether EPA's access authority can be used by PRPs that have agreed to implement a remedial action. The language of section 104 does not expressly allow EPA to use its access authority to secure entry for third parties. In *B.F. Goodrich Co. v. Murtha*, EPA sought access to a site on behalf of a group of generator PRPs who were obligated to conduct EPA's selected remedy pursuant to the terms of a consent decree that the PRPs and EPA had entered. The court avoided the section 104(e) issue by premising its ruling—requiring the landowner to permit access—on EPA's injunctive authority under section 106.

**C. Responding to EPA Notice Letters**

If EPA determines that there has been a release of a hazardous substance from a facility, and identifies PRPs associated with that facility, the agency will often contact the PRP through a notice letter. There are two varieties of notice letters: “general notice” letters and “special notice” letters. The procedural distinctions between general and special notice are addressed in chapter 5. Both kinds of notice, however, will state:

1. The company has been identified by EPA as potentially responsible for the release or threatened release of hazardous substances at a particular site;
2. the government is prepared to take remedial action;

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103. *Id.* at 93–94.
3. the company should indicate within a specified period of time whether it is willing to undertake part or all of the response actions; and

4. the recipient may wish to contact other PRPs who have been identified by the agency to coordinate a cleanup effort.

A notice letter often includes an information request, discussed above, to elicit further information regarding the nature and amount of hazardous substances sent to the site by the PRP, as well as the identity of other PRPs.

Upon receipt of a notice letter, a PRP must decide how to respond. In light of both the broad array of the government’s response authorities, as discussed above, and of the statute’s liability provisions, discussed in chapter 4, it is incumbent upon the PRP to develop a broad response strategy. The PRP should first inform itself as to the facts relating to liability by gathering and organizing company data relating to the generation and shipment of wastes to the site. In this regard, the company should consider:

1. appointing counsel to supervise document retrieval and internal investigations to perfect the attorney-client and work-product protection over such documents, to the extent they may apply;
2. identifying and interviewing personnel (both current and former) responsible for relevant facility waste management;
3. collecting and analyzing documents pertaining to shipments of waste to the site;
4. determining the volume of material sent to site, the nature of material, and the contractual provisions relating to off-site transport of materials; and
5. identifying and reviewing insurance policies and contacting carriers.

In addition, the PRP should devise a strategy for communicating with other companies identified by EPA as PRPs at the site. In this regard, a PRP must consider whether to participate in a PRP group. The numerous considerations relating to this decision are discussed in chapter 7.
Occasionally, albeit infrequently, a PRP will discover exculpatory information demonstrating at some level of proof that no hazardous substances were sent to the site. Upon discovery of such information, the PRP may wish to consider a proactive strategy designed to convince EPA that the company should be deleted from the site list of PRPs. To that end, upon discovering exculpatory information, the PRP should consider an informal meeting with EPA regional personnel to bring this information to the agency’s attention.