

Too Much Waste: A Proposal for Change in the Government's Effort to Clean Up the Nation

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INTRODUCTION

The more society advances, the more economists argue for private ownership of property. In fact, private-property-based economies now dominate the world market. Notwithstanding that all of these private owners have been able to reap the benefits from their property, until relatively recently, they have been able to externalize one of their largest costs—land-based toxic waste. Because most industrial property owners have had very little incentive to clean up spills or incur significant waste storage costs, a significant amount of land has become contaminated. Often, the contamination does not remain within the property lines of the industrial owners, but leaks into the surrounding property and into aquifers and water tables.

These costs continued to be externalized until the mid-1970's and early 1980's when the U.S. Government stepped in to try to balance the scales. Of the resulting statutes, two stand out both for their comprehensive nature and their often mind-boggling complexity—the Resource Conservation and Recovery Act of 1976 (“RCRA”)¹ and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (“CERCLA” or “Superfund”).² Congress envisioned these statutes as complementary, hoping that RCRA would force industry to take more care in disposing of the waste it generated, and that CERCLA would force all landowners and other polluters to clean up any waste on their land regardless of who generated it.³ But a failure to grasp the extent of the hazard blurred Congress' vision. Cleanup costs under CERCLA skyrocketed in the 1980's largely due to the litigation that Superfund's complex scheme generated. As cleanup became more and more cumbersome under CERCLA, the Environmental Protection Agency (“EPA”), which was given the power to enforce the provisions of both acts,⁴

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1. Pub. L. No. 94-580, 90 Stat. 2795, amended by Pub. L. No. 96-482, 94 Stat. 2334 (1980), amended by Pub. L. No. 98-616, 98 Stat. 3221 (1984) (codified as amended at 42 U.S.C. §§ 6901-6991i (1988)).

2. Pub. L. No. 96-510, 94 Stat. 2767, amended by Pub. L. No. 99-499, 100 Stat. 1613 (1986) (codified as amended at 42 U.S.C. §§ 9601-9675 (1988 & Supp. V 1993)).

3. See generally Kyle E. McSarrow et al., *A Decade of Superfund Litigation: CERCLA Caselaw From 1981-1991*, 21 *Env'tl. L. Rep. (Env'tl L. Inst.)* 10,367 (1991) (providing an overview of CERCLA's development); Timothy E. Shanley, Comment, *Applying a Strict Limitations Period to RCRA Enforcement: A Toxic Concept with Hazardous Results?*, 10 *PACE ENVTL. L. REV.* 275 (1992) (discussing the development of RCRA).

4. Under the language of the acts, Congress granted the power to enforce their provisions to the President, who in turn delegated this power to the EPA.

began to look toward RCRA and its more limited retroactive provisions as a more time- and cost-effective method for achieving environmental sanctity.

In August, 1993, the Third Circuit held in *United States v. Rohm & Haas Co.*⁵ that the EPA could not recover under either act certain oversight costs it incurred while monitoring a private-party cleanup at a Pennsylvania site. The EPA could approach this ruling as a setback. But instead of trying to persuade Congress to amend RCRA and make these costs recoverable, the EPA could turn it into an advantage for society. Cleanups performed by private parties typically cost far less than cleanups performed by the Government (or by private contractors hired by the Government). This is simply a result of incentives—the private party who will have to pay the cost of the cleanup has strong incentive to keep costs low, whereas the Government must simply follow the National Contingency Plan and may recover any costs it incurs.⁶ When the costs of an inefficient cleanup are internalized, one can expect that they will be kept as low as possible. *Rohm & Haas* might be seen as the icing on the cake for landowners who perform their own cleanups—not only can they keep the costs of the cleanup itself low, but they do not have to reimburse the EPA for a significant expense.

Generally, society has little concern for cost allocation. Society is concerned, however, with efficiency, and any cost shifting that will decrease the depletion of societal resources will be welcomed. By refusing to allow the EPA to recover oversight costs, the Third Circuit made compliance with EPA orders under RCRA and CERCLA § 106 less expensive for responsible parties. This decrease in cost will make private party cleanup under CERCLA and corrective action under RCRA more attractive to industry, and should lead to an overall decrease in costs and an increase in efficiency of environmental cleanups.

Increased efficiency will result from a movement away from CERCLA and toward RCRA. CERCLA has proven to be cumbersome, confusing, and inefficient. CERCLA's breadth—which has been cautiously applauded by environmentalists mainly because it provided the EPA with a plethora of pockets to pick and an enforcement scheme with which to perform the picking—has forced potentially responsible parties ("PRP's") (CERCLA's term for polluters) to spend most of their time bickering over the distribution of costs rather than performing actual cleanups. This may be the Act's downfall. RCRA is becoming more attractive to the EPA because it avoids many of these difficulties by focusing on one responsible party—the actual owner/operator of the site requiring remedial action. Now that the Third Circuit has made private party cleanups more attractive to industry, RCRA seems to be the obvious choice for the EPA, industry, and society.

This Note's underlying argument is that the EPA should prefer RCRA over CERCLA, and should amend CERCLA to encourage private party cleanup

5. 2 F.3d 1265 (3d Cir. 1993).

6. CERCLA § 107(a)(4)(A), 42 U.S.C. § 9607(a)(4)(A) (1988); see *infra* notes 57-61 and accompanying text.

whenever possible. In RCRA, Congress made private party cleanup mandatory in nearly every case, while in CERCLA, Congress provided the EPA with the option to mandate private party cleanup. The Third Circuit's opinion in *Rohm & Haas*, with its obvious beneficial repercussions for industry, should help the EPA use these tools efficiently, which typically leads to cooperation among the EPA, industry, and other property owners.

These beneficial repercussions, however, will not be enough to encourage large numbers of private parties voluntarily to clean up those sites remediable only under CERCLA. In order to provide the proper incentives, Congress must amend CERCLA. The amendments must go further than the recent proposals considered by Congress.⁷ Congress must not simply encourage private parties to perform the cleanup, it must reward those who do. This Note posits a system by which Congress, through the EPA, could reward private remediators by using the governmental takings power to condemn land contaminated with hazardous waste; telling private parties that if they clean up the condemned land, then they can take either that piece of property or another similar property that another entity has cleaned; and finally, giving this "reward" without regard to any money that the private party receives in its contribution action against the site's PRP's.

Part I of this Note provides a brief overview of RCRA and CERCLA. Part II and Part III discuss RCRA and CERCLA respectively and the specific provisions of each Act that are particularly relevant to private party cleanups. Part IV considers the two statutes' conflicting incentives and the costs of typical cleanups under each. It goes on to address the merit of the EPA's stated policy of preferring RCRA over CERCLA. Part V briefly analyzes *Rohm & Haas* and its implications for polluters. Part VI then sets forth the aforementioned proposal, encouraging Congress and the EPA to help industry take more responsibility for land-based cleanup by using incentives instead of penalties.

I. OVERVIEW OF RCRA AND CERCLA

This Part provides a brief overview of the purposes behind each Act. Each subpart introduces an Act and discusses what Congress intended to address with that Act. Parts II and III contain further detail on the implementation schemes of each Act.

A. RCRA

Congress passed RCRA in 1976 for the primary purpose of creating a regulatory framework for the storage, transportation, and disposal of hazardous waste.⁸ Congress hoped to "eliminate[] the last remaining loophole in environmental law, that of unregulated land disposal of discarded materials

7. See *infra* notes 195-97 and accompanying text for a discussion of the recent proposals.

8. See *Rohm & Haas*, 2 F.3d at 1269.

and hazardous waste,"⁹ having found that solid waste was being generated in larger quantities than ever before; that the country's environmental health was needlessly eroding; and that "millions of tons" of recyclable material were being wasted each year.¹⁰ In fact, before RCRA was enacted, up to ninety percent of all hazardous waste was disposed of improperly.¹¹ This led Congress to concentrate on regulating generators, transporters, and hazardous waste treatment, storage, and disposal ("TSD") facilities.¹² It did so by promulgating prospective methods,¹³ hoping at least to stem the flow of improperly disposed waste and to "promote the protection of health and the environment."¹⁴ RCRA was intended to be "a cooperative effort among the Federal, State, and local governments and private enterprise,"¹⁵ but for several reasons the level of cooperation has not been maximized.¹⁶

B. CERCLA

CERCLA was passed in the early morning hours of December 3, 1980, by the outgoing Democratic Congress and signed by President Jimmy Carter. "[A]lmost certainly . . . the most expensive environmental program in the history of the United States, or of any other nation,"¹⁷ CERCLA was rushed through Congress and the Oval Office in anticipation of the probable environmental policies of the soon-to-be-inaugurated Reagan administration.¹⁸ Even though the statute has been controversial almost from the outset, more than 2700 emergency removals of hazardous materials have taken place under its provisions.¹⁹ Nevertheless, because of its slow pace, high costs, and the fact that only the tip of the hazardous waste iceberg has been addressed in the thirteen years of its existence, CERCLA has been a less-than-satisfactory solution to the country's waste reduction problem for parties on all sides of the environmental debate.²⁰

9. H.R. REP. NO. 1491, 94th Cong., 2d Sess., pt. 1, at 4 (1976), *reprinted in* 1976 U.S.C.C.A.N. 6238, 6241.

10. RCRA § 1002(a)-(c), 42 U.S.C. § 6901(a)-(c).

11. ROGER W. FINDLEY & DANIEL A. FARBER, *ENVIRONMENTAL LAW IN A NUTSHELL* 231 (3d ed. 1992).

12. RCRA §§ 3002(a), 3003(a), 3004(a), 42 U.S.C. §§ 6922(a), 6923(a), 6924(a).

13. *See* THOMAS W. CHURCH & ROBERT T. NAKAMURA, *CLEANING UP THE MESS: IMPLEMENTATION STRATEGIES IN SUPERFUND 4* (1993) (characterizing RCRA as future-oriented).

14. RCRA § 1003, 42 U.S.C. § 6902. Congress did not begin to concentrate on retroactive measures, such as clean ups, until 1980 and the passage of CERCLA. *See infra* part I.B.

15. RCRA § 1003(8), 42 U.S.C. § 6902(8).

16. *See infra* part II.

17. CHURCH & NAKAMURA, *supra* note 13, at 3.

18. KATHERINE N. PROBST & PAUL R. PORTNEY, *ASSIGNING LIABILITY FOR SUPERFUND CLEANUPS: AN ANALYSIS OF POLICY OPTIONS* 1 (1992).

19. *Id.* (citing the testimony of William K. Reilly, administrator, U.S. EPA).

20. Environmentalists and community groups are dissatisfied with the pace of most remediations and the use of what they view as short-term remedies at many sites. Manufacturers and other PRP's are unhappy with several provisions, including retroactive liability for practices that were legal when used, which leave them saddled with large bills that typically include substantial legal fees and other transaction costs resulting from Superfund-related complex litigation and settlement negotiations. These PRP's are also dissatisfied with the incentives CERCLA creates for certain PRP's to free ride by laying

CERCLA, amended by the Superfund Amendments and Reauthorization Act of 1986 ("SARA"),²¹ was designed "[t]o provide for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive hazardous waste disposal sites."²² The statute provides the EPA with a trust fund, capitalized by a one-time payment from the U.S. Government and financed by taxes on petroleum, petroleum products, and certain chemicals.²³ As CERCLA's title and this language suggest, "the act provides for a federal *response* to clean up inactive, and often abandoned, hazardous waste sites."²⁴ The EPA has also used the statute to compel hazardous waste cleanups at sites not specifically designated as hazardous waste disposal sites, including factories that are still in operation.²⁵ The main purpose of CERCLA, however, remains the same:

[Superfund] was explicitly designed to remedy the *present* effects of *past* behavior—by defining the parties responsible for cleaning preexisting (and typically inactive) toxic waste sites, by providing mechanisms by which the EPA can compel . . . private action, and by authorizing the government to conduct and fund the cleanups itself, should PRP intransigence, a lack of viable PRP's, or emergency conditions make such actions necessary.²⁶

low while the EPA and PRP's with more substantial exposure decide whether to risk incurring even higher litigation costs by suing the free riders for their involvement in a particular site. (Note that the lion's share of the costs created by the free rider problem will always be borne by the PRP's with the most exposure, because the EPA will shift any cost it incurs in attempting to implead the free riders to the final group of PRP's through the cost-recovery provisions of Superfund.) Finally, certain tertiary players such as municipalities, banks, other lending institutions, and insurers—many of whom wrote comprehensive general liability policies years ago with high coverage limits for low premiums—are concerned about their potential exposure to Superfund liability. *Id.*; see also Brent Nicholson et al., *Lenders Seeing a New Green*, 14 WHITTIER L. REV. 639 (1993) (discussing CERCLA's implications for lenders); Irene A. Sullivan et al., *Hazardous Waste Litigation: Comprehensive General Liability Insurance Issues*, in I INSURANCE, EXCESS, AND REINSURANCE COVERAGE DISPUTES 267 (PLI Litig. & Admin. Practice Course Handbook Series No. 494, 1994) (discussing insurer exposure to cleanup costs).

21. Pub. L. No. 99-499, 100 Stat. 1613 (codified in scattered sections of 42 U.S.C.) (extending CERCLA's life span and boosting its budget from \$1.6 billion to more than \$9 billion). CERCLA was originally given a five-year life but SARA reauthorized it and made certain amendments. On November 5, 1990, Congress extended the program another three years with no substantive revisions. Pub. L. No. 101-508, 104 Stat. 1388-320 (codified at 42 U.S.C. § 9611 (Supp. V 1993)). The 103d Congress reviewed several proposed changes but failed to reauthorize CERCLA before the close of the 1993-1994 session. See Adam Clymer, *Rancor Leaves Its Mark on 103d Congress*, N.Y. TIMES, Oct. 9, 1994, at 1, 16. CERCLA must be reauthorized by early 1995 or it will expire. Exactly what form that reauthorization will take remains to be seen.

22. Pub. L. No. 96-510, 94 Stat. 2767 (1980) (preamble). As noted, RCRA was originally only prospective in nature, but the 1986 additions and amendments gave the statute retroactive bite similar to that of CERCLA. See *infra* notes 36-51 and accompanying text.

23. CERCLA §§ 211, 221 (1980) (current version at 42 U.S.C. § 9507 (1988)).

24. CHURCH & NAKAMURA, *supra* note 13, at 4 (emphasis in original).

25. Robert W. McGee, *Should Superfund Be Wasted? The Case to Trash the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)*, 11 GLENDALE L. REV. 120, 122 (1992). Although CERCLA is now being applied to municipal landfills and some military bases, *id.*, this Note focuses on CERCLA's application to those sites which implicate non-governmental entities.

26. CHURCH & NAKAMURA, *supra* note 13, at 4-5 (emphasis in original).

II. RCRA

A. The Permit Scheme

RCRA regulates the treatment, storage, and disposal²⁷ of solid and hazardous waste through the use of a permit system.²⁸ This system, which became effective on November 19, 1980,²⁹ obligates all TSD facilities to obtain permits—often a difficult and time-consuming process.³⁰ TSD facilities closed or abandoned prior to the effective date are not subject to the permit requirements, but all facilities remaining in operation on that date and all those opening after that date must obtain permits or be subject to heavy sanctions.³¹ Most importantly, all TSD facilities holding permits are subject to the RCRA corrective action program.³²

27. This Note focuses on TSD facilities because RCRA requirements applicable to TSD facilities are much more onerous and comprehensive than those applicable to transporters and generators. Richard G. Stoll, *The New RCRA Cleanup Regime: Comparisons and Contrasts with CERCLA*, 44 Sw. L.J. 1299, 1302 (1991). Most of these differences occur because only TSD facilities and not transporters or generators are required to obtain permits. *Id.*

28. As originally written, RCRA was organized into subtitles. The 1980 reauthorization reorganized the Act into subsections; however, most environmental lawyers still refer to the most important subsections by their original subtitle names: subtitle C, governing hazardous waste, and subtitle D, governing solid waste. RCRA defines solid waste as

any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but 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 [Clean Water Act], or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954

RCRA § 1004(27), 42 U.S.C. § 6903(27).

The EPA's solid waste definition, limited in scope to subtitle C, states that any discarded material that is not specifically excluded by RCRA or by regulation, any materials which are incinerated or burned, or any materials that are "accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned" by disposal, burning, or incineration are solid waste. 40 C.F.R. § 261.2(b) (1994). Certain recycled or "inherently wastelike" materials may also be solid waste. *Id.*

RCRA defines hazardous waste as a subset of solid waste. A hazardous waste is a solid waste, or combination of solid wastes, which 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); see also J. Stanton Curry et al., *The Tug-of-War Between RCRA and CERCLA at Contaminated Hazardous Waste Facilities*, 23 ARIZ. ST. L.J. 359, 362-63 n.18 (1991); Shanley, *supra* note 3, at 279.

29. 45 Fed. Reg. 33,073 (1980), amended by 51 Fed. Reg. 40,636 (1986) (codified as amended at 40 C.F.R. pt. 260 (1994)).

30. Stoll, *supra* note 27, at 1302. To obtain a permit, a TSD facility must satisfy certain requirements for notice and public hearings and, in the process, invite public opposition. *Id.*

31. 40 C.F.R. pts. 264-65 (1994); see also Curry et al., *supra* note 28, at 364. Facilities that close after November 19, 1980 may have substantial closure and post-closure duties and may be required to obtain a post-closure permit. *Id.* at 364 n.32; see also Stoll, *supra* note 27, at 1303 (outlining the EPA requirement that a facility be "clean closed" and the catch-22 that results from a failure to do so).

32. Stoll, *supra* note 27, at 1302. The RCRA corrective action program has become the main rival for remedial action under CERCLA and is discussed *infra* at Part IV.

B. The Corrective Action Program

1. The Early Years

The evolution of RCRA's corrective action program can be broken down into two phases: pre-1984 and post-1984. Before the passage of the Hazardous and Solid Waste Amendments ("HSWA") in 1984,³³ the EPA's corrective action authority under RCRA was limited severely by the amount of land it could order cleansed, the types of TSD's that were covered, and the effective dates of the regulations.³⁴ For the most part, the pre-1984 program ensured that none of the TSD's disposed-of waste in any way that threatened to violate groundwater protection standards.³⁵ HSWA's expansion of RCRA corrective action authorities³⁶ greatly increased the number of sites and types of releases mandating RCRA corrective action.³⁷ Even so, RCRA remains more limited than CERCLA—while becoming almost as complex.

2. The Modern Formulation

In passing HSWA, Congress sought to broaden RCRA by directing the EPA to promulgate regulations that require "corrective action for all releases of hazardous waste or *constituents* from any *solid waste management* unit at a [TSD] facility seeking a permit . . . *regardless of the time* at which waste was placed in such unit."³⁸ The amendments even extended the EPA's reach beyond the borders of the TSD facility "where necessary to protect human health and the environment,"³⁹ provided that the owner of the affected property does not object to the remediation. The final new provision authorizes the EPA to order corrective action by any interim status facility⁴⁰

33. Pub. L. No. 98-616, 98 Stat. 3221 (1984) (codified as amended in scattered sections of 42 U.S.C.).

34. Curry et al., *supra* note 28, at 365 & nn.34-36.

35. Stoll, *supra* note 27, at 1303-04. Stoll summarizes the pre-1984 program:

a. Corrective action is not triggered by all [TSD's], but only by the narrower subset of [TSD's] with land-based units for hazardous waste disposal, and even the narrower subset of such units that received hazardous waste after July 26, 1982.

b. If triggered, corrective action addresses only releases from those regulated hazardous waste land-based units.

c. The only environmental medium covered is groundwater affected by those particular releases.

Id. at 1304 (footnotes omitted).

36. HSWA expanded RCRA corrective action authorities primarily by adding §§ 3004(u), 3004(v), and 3008(h), and by amending § 7003.

37. Curry et al., *supra* note 28, at 365-66.

38. RCRA § 3004(u), 42 U.S.C. § 6924(u) (emphasis added).

39. RCRA § 3004(v), 42 U.S.C. § 6924(v).

40. Interim status allowed TSD facilities in existence on November 19, 1980 (the effective date of the permit scheme) to continue to operate without a permit. *See supra* note 29 and accompanying text. To qualify for interim status, a facility had to (1) exist on November 19, 1980, or on the date that statutory or regulatory amendments subjected the facility to the RCRA permit requirement for the first time; (2) file a hazardous waste activity notification; and (3) file part A of the hazardous waste permit application. Curry et al., *supra* note 28, at 364. Interim status TSD facilities are treated as having a RCRA permit until final administrative disposition of their permit applications. *Id.*

that releases hazardous waste into the environment.⁴¹ As amended, § 7003 allows the EPA to use the courts to prevent current waste management practices (or compel ameliorative ones) by a present (or past) generator, transporter, or owner or operator of a TSD facility that present "an imminent and substantial endangerment to human health or the environment."⁴² Except for this rather limited exception, RCRA corrective action, even after the HSWA amendments, applies only to TSD facilities that are operating with a permit (or on an interim basis) or are seeking to close.⁴³

Taken together, the three new provisions and the amended § 7003 make RCRA nearly as comprehensive and complicated as CERCLA; but because most RCRA corrective actions will involve only one easily identifiable party, the high identification costs⁴⁴ that usually accompany CERCLA remedial actions can be severely reduced by using RCRA.

On July 27, 1990, a full six years after the HSWA amendments, the EPA announced its proposed regulations under those amendments ("1990 rulemaking" or "rulemaking").⁴⁵ These regulations, specifically designed to mirror CERCLA,⁴⁶ provide a detailed road map for TSD facility owners and operators (and others potentially liable under RCRA) to follow or review in order to understand the extent of their liability or to avoid liability altogether. Nearly 200 pages in length, the proposed regulations are well organized and thorough—a combination that CERCLA lacks. Many commentators have noted that CERCLA has scant legislative history to consider when disputes arise.⁴⁷ The EPA has provided Congress with the analysis it needs in order to develop an adequate "legislative history" if or when it chooses to make the 1990 corrective action proposal into law, thus avoiding extensive litigation aimed at simply defining terms.

Liability under RCRA for TSD facilities runs from each facility's operation of one or more solid waste management units ("SWMU's").⁴⁸ Each TSD

41. RCRA § 3008(h), 42 U.S.C. § 6928(h).

42. RCRA § 7003, 42 U.S.C. § 6973(a).

43. Section 7003 does apply to *past* or present generators, transporters, or owners or operators of TSD facilities, but only if those releases present "an imminent and substantial endangerment to human health." *Id.*

44. See *infra* Part IV.B.1 for a discussion of how this Note defines "costs" in the context of hazardous waste remediation.

45. 55 Fed. Reg. 30,798 (1990) (to be codified at 40 C.F.R. pts. 264, 265, 270 and 271) (proposed July 27, 1990). The EPA will perform additional economic impact studies before it finalizes these regulations, but the program has been implemented in the interim. The regional offices have been instructed to follow the proposed regulations in addressing ongoing corrective actions as if they had been fully implemented. Stoll, *supra* note 27, at 1304.

46. 55 Fed. Reg. 30,798, at 30,852.

47. Entire law review pieces have been written attempting to define some of the terms CERCLA left undefined. See, e.g., Keith M. Lyons, Jr., Comment, *Everyone Pays to Clean Up America: A Discussion of CERCLA Section 107(a)(3) and the Term "Arranged For Disposal"*, 28 WILLAMETTE L. REV. 589 (1992).

48. The July 27, 1990, proposal defines a "solid waste management unit" as "[a]ny discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released." 55 Fed. Reg. 30,798, at 30,808 (1990). The rulemaking goes on to provide guidance for the interpretation of "systematically released," noting that one-time spills and passive, non-human-caused leaks will not be considered systematic releases. *Id.* at 30,808-09.

facility⁴⁹ that the EPA finds to have levels of hazardous constituents⁵⁰ too high for current or future uses of the site will be required to perform a corrective action.⁵¹ A RCRA corrective action could involve a short-term interim measure, a corrective action measure, or both. This Note focuses on corrective action measures because they are the most comprehensive and expensive RCRA remedial provisions, and, most importantly, because they shadow CERCLA remedial actions.

III. CERCLA

CERCLA provides the EPA with a complex set of options for effecting cleanup of a particular site. Section 107(a) provides a list that the EPA (as well as other parties, both governmental and private) can use to target parties responsible for the release⁵² of toxic waste into the environment. Congress expected the EPA to use this section to generate a list of PRP's who, Congress hoped, would pay for, if not also perform, the necessary remedial work. The fact that Congress intended for private parties to conduct the cleanups themselves is evident from the Act, which provides the EPA with the authority to conduct investigations, to request court orders compelling cleanup by responsible parties, and to issue unilateral administrative orders accomplishing the same result. Failure to comply with these orders is punishable by substantial daily fines⁵³ and treble damages.⁵⁴

A. The National Contingency Plan

Realizing that many sites in need of cleanup were contaminated by a myriad of different parties⁵⁵ over the course of several years (sometimes decades),⁵⁶ Congress included provisions that allow the EPA to perform the

49. The rulemaking defines facility "to mean all contiguous property under the control of the owner/operator of a facility seeking a permit." *Id.* at 30,808.

50. The pre-HSWA RCRA corrective action program was implemented only for releases of hazardous wastes; any release of non-hazardous waste was exempted from the program. With the appearance of HSWA and the 1990 rulemaking came a blurring of that once-clear distinction. Now, corrective action is mandated for the release of non-hazardous materials with "hazardous constituents" as well as for hazardous materials. Stoll, *supra* note 27, at 1303.

51. *Id.* at 1304-05.

52. Section 101(22) defines "release" as "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment." CERCLA § 101(22), 42 U.S.C. § 9601(22) (1988). The definition goes on to exclude workplace releases leading to employer-employee disputes, various types of engine exhausts, and releases covered by the Atomic Energy Act of 1954. *Id.*

53. *See id.* § 106(b)(1), 42 U.S.C. § 9606(b)(1) (1988).

54. *See id.* § 107(c)(3), 42 U.S.C. § 9607(c)(3) (1988); *see also* CHURCH & NAKAMURA, *supra* note 13, at 5.

55. *See* McGee, *supra* note 25, at 131-33 (citing several cases, each of which involved well over 100 parties).

56. *See, e.g.,* CPC International, Inc. v. Aerojet-General Corp., 731 F. Supp. 783 (W.D. Mich. 1989) (involving an ongoing contamination of land since 1959).

cleanup first and ask questions later.⁵⁷ Authority for such action can be found in § 104, which outlines the situations mandating an EPA "response."⁵⁸ The National Contingency Plan ("NCP" or "the Plan")⁵⁹ is to be used by the EPA (or anyone else performing a CERCLA cleanup who intends to recover costs) as a guide for conducting response actions. For anyone, including the EPA, to recover cleanup costs, these actions must conform to the requirements of the NCP.⁶⁰ Thus, compliance with the NCP is extremely important. The cleanup of just one site can, and often does, cost millions of dollars.⁶¹ Hence, defining what it means to be "consistent" with the Plan has led to significant litigation. It has been and continues to be a challenge for the courts, mainly due to the ever-changing nature of the Plan.⁶² The current NCP is the least formalistic version to date, since minor deviations from the scheme do not prevent cost recovery as long as a "CERCLA-quality" cleanup is achieved.⁶³ This increased flexibility also benefits private parties performing the cleanup by making it easier for them to recover their costs.⁶⁴ The degree of the benefit may be tempered by the timing of the response because the date on which the cleanup costs are incurred can determine which version of the NCP the court will follow. Several courts have discarded the idea of defining "consistency" by the version of the NCP in effect when the response action commences or when the claims for costs are evaluated, and instead look to the NCP that is in effect when the response costs are incurred.⁶⁵

57. For a detailed analysis of this process, see JAN P. ACTON, UNDERSTANDING SUPERFUND: A PROGRESS REPORT 11-17 (1989).

58. 42 U.S.C. § 9604. CERCLA defines "respond" or "response" as meaning "remove, removal, remedy, and remedial action." CERCLA § 101(25), 42 U.S.C. § 9601(25) (1988).

59. CERCLA § 105 orders the President (by delegation, the EPA) to "revise and republish the [NCP] for the removal of oil and hazardous substances, originally prepared and published pursuant to section [311 of the Federal Water Pollution Control Act], to reflect and effectuate the responsibilities and powers created by this Chapter." *Id.* § 105, 42 U.S.C. § 9605 (1988). The current version of the NCP can be found at 40 C.F.R. pt. 300 (1994). For a detailed analysis of the revised NCP, see Joseph Freedman, *Proposed Amendments to the National Contingency Plan: Explanation and Analysis*, 19 *Env'tl. L. Rep. (Env'tl. L. Inst.)* 10,103 (1988), and Lawrence E. Starfield, *The 1990 National Contingency Plan: More Detail and More Structure, but Still a Balancing Act*, 20 *Env'tl. L. Rep. (Env'tl. L. Inst.)* 10,222 (1990).

60. CERCLA § 107(a)(4)(A), 42 U.S.C. § 9607(a)(4)(A) (1988).

61. See McGee, *supra* note 25, at 125 n.138.

62. See McSlarrow et al., *supra* note 3 (reviewing CERCLA litigation during the period from 1981-1991).

63. Jerry L. Anderson, *Removal or Remedial? The Myth of CERCLA's Two-Response System*, 18 *COLUM. J. ENVTL. L.* 103, 107 (1993).

64. The EPA hopes that this will lead to more private party cleanups. Such hopes may be thwarted, however, because although the courts are likely to give the EPA's interpretation substantial deference, a significant amount of judicial review will remain necessary. *Id.* at 107 n.30.

65. See, e.g., *Wickland Oil Terminals v. Asarco, Inc.*, 792 F.2d 887, 891 (9th Cir. 1986); *Versatile Metals, Inc. v. Union Corp.*, 693 F. Supp. 1563, 1575 (E.D. Pa. 1988); *Artesian Water Co. v. New Castle County*, 659 F. Supp. 1269, 1294 (D. Del. 1987), *aff'd*, 851 F.2d 642 (3d Cir. 1988).

B. The Removal/Remedial Distinction

EPA-performed cleanups take two forms: short-term, quasi-emergency "removal,"⁶⁶ and long-term, comprehensive "remedial action."⁶⁷ Commentators debate the relative value of this distinction, claiming that it adds little to the process other than confusion and delay.⁶⁸ The distinction remains important, however, inasmuch as the EPA often attempts to circumvent the more burdensome procedural requirements of a remedial action by stretching the definition of removal.

Removal actions are intended for use only in emergency situations at sites that pose an "imminent and substantial" danger to public health and the environment. The EPA uses resources from the trust fund to effectuate these emergency cleanups, but CERCLA places a \$2 million cap on expenditures from the fund for any single removal action.⁶⁹ All non-emergency cleanups must take place under the remedial action scheme, which differs from the removal action in three important ways: (1) removals and remedies are subject to different requirements under the NCP; (2) remedial actions performed by the EPA, which are usually financed by Superfund, require listing on the National Priorities List ("NPL")⁷⁰ prior to action, while removals do not; and (3) the limitations period for cost recovery actions is different under each scheme.⁷¹

66. CERCLA § 101(23) defines "remove" or "removal" as the cleanup or removal of released hazardous substances from the environment, such actions as may be necessary taken 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 the release or threat of release. . . .

42 U.S.C. § 9601(23) (1988).

67. CERCLA § 101(24) defines "remedy" or "remedial action" as 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. . . .

42 U.S.C. § 9601(24) (1988). The definition goes on to explain exactly which types of actions Congress intended, including "storage, confinement, perimeter protection using dikes, trenches, [and] . . . clay cover," and the types of actions for which costs may be recovered and those that may not be recovered. *Id.*

68. See, e.g., Anderson, *supra* note 63.

69. 42 U.S.C. § 9604(c)(1) (1988). Church and Nakamura note that these requirements sometimes have been honored in the breach. By bending of the dangerousness criterion, and by creative accounting practices, sites arguably inappropriate for removals have managed to meet removal requirements, and thus avoid the more cumbersome and time consuming procedures necessary in nonemergency remedial cleanups.

CHURCH & NAKAMURA, *supra* note 13, at 6 n.7.

70. The NPL is the EPA's list of hazardous waste sites determined to be in greatest need of remediation. PROBST & PORTNEY, *supra* note 18, at 2. As of September 2, 1991, there were 1300 sites on the list. McGee, *supra* note 25, at 122 & n.12. This can be compared to the 33,834 sites considered potentially hazardous at the end of 1990. *Id.* at 122 n.13.

71. Anderson, *supra* note 63, at 106.

Most costs associated with CERCLA are incurred by the relevant parties when performing remedial actions. Although the EPA has used the removal action to speedily clean up some of the nation's worst hazardous waste dangers, given the now-strict requirements for handling hazardous waste, it is unlikely that removal actions will play a large role in the future. There are strong arguments for eliminating the distinction altogether.⁷² For these reasons, and because RCRA corrective action was modeled after CERCLA remedial action and not CERCLA removal action, this Note will discuss in-depth only the remedial plan and how it compares to RCRA corrective action.

IV. CERCLA REMEDIAL ACTION AND RCRA CORRECTIVE ACTION COMPARED

Although RCRA corrective actions and CERCLA remedial actions are similar, significant differences remain. This Part studies the merits and drawbacks of each scheme. It compares the two and concludes that RCRA corrective actions are more efficient and therefore should be preferred.

The corrective action process under RCRA will parallel the process established for CERCLA remedial actions. This process includes preliminary assessments and site investigations to evaluate the need for remediation at specific sites, selection of remedies where needed to protect human health and the environment, remedial design and implementation of remedial action, and operation and maintenance to ensure continued effectiveness of the remedy. Procedurally, the activities under the two statutes may differ somewhat, since the permittee implements corrective action under RCRA, whereas the regulatory Agency, for the most part, does so under CERCLA. (*In some cases CERCLA cleanups are conducted by responsible parties according to the terms of an order or consent decree and with Agency oversight*). Nonetheless, EPA anticipates that the two programs will arrive at similar solutions to similar environmental problems, and that actions undertaken by one program will be adopted by the other program in cases where the programmatic responsibility for a site shifts from one to the other.⁷³

Subpart A outlines the mechanics of a RCRA corrective action and a CERCLA remedial action and draws comparisons. Subpart B analyzes each program's costs. Subpart C asserts that when a site can be cleaned up under either scheme, RCRA corrective action should be the preferred method.

72. For a detailed discussion of why the distinction should be eliminated the next time CERCLA is amended, see *id.* at 146-50.

73. 55 Fed. Reg. 30,798, at 30,852 (1990) (to be codified at 40 C.F.R. § 264) (emphasis added).

A. The Mechanics

1. Jurisdictional Issues

As noted above, RCRA has several qualifications before a site will require corrective action.⁷⁴ CERCLA's jurisdiction is triggered whenever there has been a "release or threatened release" of hazardous substances into the environment. Because CERCLA defines "release" broadly,⁷⁵ "[a]nyone who contributes to the pile of garbage might be held liable."⁷⁶ Notably, the release need not even involve a waste;⁷⁷ a simple spill or even a non-human-caused leak of a hazardous substance—such as a leak due to natural corrosion—is enough.

The Government uses CERCLA to hold parties liable for the cleanup of hazardous substances, spilled or deposited legally (many of the current PRP's are being held liable for waste handling practices that were legal when they were used) or otherwise. Courts have helped the EPA's cause by holding that CERCLA liability is joint and several,⁷⁸ and that it can be applied retroactively (by the EPA or private parties) for any response costs incurred as a result of hazardous waste releases that occurred at any time, even before CERCLA was enacted.⁷⁹ Only a minimum causal link need be established.⁸⁰

2. Chronological Skeletons of Each Program

Once the EPA decides that a site may be ripe for cleanup, it will perform either a RCRA Facility Assessment ("RFA")—if the facility falls within RCRA jurisdiction (usually because it has a RCRA permit)—or a CERCLA Preliminary Assessment/Site Investigation ("PA/SI"). The RFA includes:

- (1) A desktop review of available information on the site;
- (2) a visual site inspection to confirm available information on [SWMU's] at the site and

74. See *supra* part I.B.2. One commentator summarized the four conditions that must be met: [T]he facility must have (a) since November 19, 1980, (b) stored, treated, and/or disposed of (c) a material that fits the definitions of both solid and hazardous waste and (d) failed to obtain a certified RCRA closure for such storage/treatment/disposal by January 26, 1983. Thus, facilities that stopped managing such wastes before November 19, 1980 are exempt. Further, facilities that ceased managing such wastes after 1980 and, before January 26, 1983, [and] obtained certified closure of T/S/D status . . . are exempt. Moreover, facilities that merely generated hazardous waste (without becoming T/S/D facilities or seeking a permit for T/S/D facilities) are exempt. Note that none of these factors would exempt a facility from CERCLA.

Stoll, *supra* note 27, at 1305-06 (footnotes omitted).

75. 42 U.S.C. § 9601(22); see *supra* note 52.

76. McGee, *supra* note 25, at 136.

77. Stoll, *supra* note 27, at 1306.

78. See, e.g., *United States v. Monsanto*, 858 F.2d 160 (4th Cir. 1988), *cert. denied*, 490 U.S. 1106 (1989); *United States v. South Carolina Recycling & Disposal*, 653 F. Supp. 984 (D.S.C. 1984); *United States v. ChemDyne*, 572 F. Supp. 802 (S.D. Ohio 1983).

79. See *United States v. Northeastern Pharmaceutical & Chemical Co.*, 810 F.2d 726 (8th Cir. 1986), *cert. denied*, 484 U.S. 848 (1987); *State of New York v. Shore Realty Corp.*, 759 F.2d 1032 (2d Cir. 1985).

80. Roseann Oliver, *The Intersection of CERCLA and RCRA: What Companies Should Know*, 42 FED'N OF INS. & CORP. COUNS. Q. 445, 449-50 (1992).

to note any visual evidence of releases; and (3) in some cases, a sampling visit, to confirm or disprove suspected releases.⁸¹

After the RFA, the EPA can choose to do nothing, to develop a schedule of compliance for the permittee to follow, or to issue an order compelling corrective action.⁸² If the release is significant, a RCRA Facility Investigation ("RFI") must be undertaken, which is usually followed by a Corrective Measures Study ("CMS").⁸³

By contrast, a PA/SI consists of the EPA's on-scene coordinator conducting a preliminary assessment using existing information—"an armchair assessment of data on each site to determine whether further action is needed."⁸⁴ Like RCRA, if the on-scene coordinator fails to find a release the process ends and the EPA removes the site from the remedial evaluation process. As with RCRA, however, if a release is a possibility, then a physical site inspection—"a visual inspection with occasional sampling of areas of suspected release"—is ordered.⁸⁵ If a site scores high enough on the EPA's hazard ranking system after the PA/SI, then the site is proposed for placement on the NPL. After giving the public a chance to comment on the proposed placement, the EPA places the site on the NPL. A Remedial Investigation and a Feasibility Study ("RI/FS") is the next step after NPL placement.⁸⁶ Unlike RCRA's "schedule for compliance" which is part of the permit scheme, CERCLA contains no provision for the middle ground—no solution for sites that cannot be corrected by removal actions or remedial actions because they are non-emergency, non-NPL sites.

The purpose of the RFI⁸⁷ is to characterize the nature and extent of contamination at the TSD facility.⁸⁸ In its 1990 rulemaking, the EPA stressed that the "nature and scope of [RFIs] . . . will be tailored to the specific conditions and circumstances at the facility."⁸⁹ The rulemaking frequently refers to the cost savings advantages that are built into the RFI process.⁹⁰ The results of the RFI are given to the EPA which determines whether a cleanup will be necessary. If the EPA mandates a cleanup, the owner/operator of the site—not the EPA—must conduct the CMS. The CMS identifies

81. 55 Fed. Reg. 30,798, at 30,801 (1990).

82. *Id.* This decision will depend on the extent of the release, if indeed there was a release.

83. *Id.* at 30,801-02.

84. Curry et al., *supra* note 28, at 373.

85. *Id.*

86. *Id.* at 374.

87. The RFI is conducted by the owner/operator of the facility and typically focuses on the specific concerns uncovered by the RFA in order to avoid unnecessary costs. 55 Fed. Reg. 30,798, at 30,810 (1990).

88. *Id.*

89. *Id.*

90. See, e.g., *id.* (noting that RFI's will be phased "to avoid unnecessary investigations where a concern can be quickly eliminated"); *id.* at 30,802 (pointing out the typical RFI "will be focused on specific concerns identified in the RFA and will be staged to avoid unnecessary analysis").

possible remedies and evaluates their costs and relative effectiveness.⁹¹ The EPA generally oversees RFI's and CMS's conducted by private parties.⁹²

The CERCLA RI, an assessment of the geography, geology, and hydrology of the site and surrounding area, maps the location and toxicity of the various contaminants found. The FS is an engineering report developed in tandem with the RI⁹³ that sets out the estimated costs and benefits of various cleanup options.⁹⁴ This process can take from several months to several years to complete and usually is conducted by an environmental consulting firm hired by the EPA.⁹⁵ Although the EPA usually notifies all of the then-known PRP's of their potential liability and offers them the opportunity to perform the RI/FS themselves,⁹⁶ CERCLA places certain conditions on private party investigations.⁹⁷ If the private party agrees to perform the RI/FS, it is common for the terms of that agreement to be memorialized in a Consent Order signed by the EPA and the private party.⁹⁸ If no PRP agrees to perform the investigation, the EPA may still issue an administrative order requiring the PRP's to conduct the investigation or face stiff fines or punitive damages.⁹⁹ It is important to note that in the early years of CERCLA remedial actions, the EPA preferred "fund-led" response actions.¹⁰⁰ Under this scheme, the EPA used CERCLA trust fund dollars to perform (or hire contractors to perform) and pay for each stage of a remedial action before seeking PRP input, either by settlement or § 106 court order. The EPA seeks to impose liability on and recover money from private parties only after the fact.¹⁰¹ Unhappy with this "public-works" scheme, Congress has encouraged the EPA to place greater emphasis on enforcement actions and thereby increase the number and dollar value of PRP settlements.¹⁰²

Thus far, the parallels between the two schemes are evident. Most of the differences have arisen because CERCLA attempts to "capture" all of the possible polluters at a site while RCRA is designed to "capture" only the permit holder, leaving that polluter to find others with whom to share the cleanup expense. Other than this major schematic distinction, the two statutes are quite similar in that the EPA performs the initial assessment and the polluters perform the investigation under the watchful eyes of the EPA. The

91. Stoll, *supra* note 27, at 1310.

92. *United States v. Rohm & Haas Co.*, 2 F.3d 1265, 1271 (3d Cir. 1993).

93. In fact, the two studies usually are collapsed into one document called an RI/FS.

94. CHURCH & NAKAMURA, *supra* note 13, at 6.

95. *Id.*

96. *Id.* at 7.

97. A private party can conduct the RI/FS only if the "EPA determines that the party is qualified to do so, if the EPA 'contracts with or arranges for a qualified person to assist [it] in overseeing and reviewing the conduct of such RI/FS,' and if the party agrees to reimburse the government for any cost incurred with oversight of the RI/FS." *Rohm & Haas*, 2 F.3d at 1272 (quoting 42 U.S.C. § 9604(a)(1) (1988)).

98. *Id.* at 1272 n.9 (citing CERCLA §§ 104(b), 122(a), and 122(d)(3) (1988)).

99. CHURCH & NAKAMURA, *supra* note 13, at 7.

100. Eugene P. Brantly, Note, *Superfund Cost Recovery: May the Government Recover "All Costs" Incurred Under Response Contracts?*, 59 GEO. WASH. L. REV. 968, 973 (1991).

101. PROBST & PORTNEY, *supra* note 18, at 21.

102. Brantly, *supra* note 100, at 973.

methods each statute uses to arrive at a remedy, however, have more subtle and significant differences.

After reviewing the CMS or the RI/FS, the EPA chooses a remedy based on criteria set out in the relevant statutes and regulations. The differences between the CERCLA criteria and the RCRA criteria are significant. First, CERCLA has nine criteria to RCRA's five. Although those five closely parallel five of CERCLA's, a few differ slightly.¹⁰³ In proposing these factors, the EPA decided which of the CERCLA factors would be important for RCRA purposes and which might impede efficient cleanups. It should be noted, however, that at least one of the factors not listed among the RCRA five—that the remedy must “[b]e protective of human health and the environment”—was not ignored by the EPA. Instead, the EPA elevated it to the status of an overarching general standard that must be a factor in all remedial decisions.¹⁰⁴ There are also several requirements that the remedy attain various cleanup standards which are analogous to CERCLA's applicable or relevant and appropriate standards (“ARAR's”) requirements.¹⁰⁵ Thus, in effect, the only two CERCLA criteria that do not have RCRA parallels are the last two—that the remedy meet state and community standards. Instead, the EPA outlined a much more flexible approach in the 1990 rulemaking:

One of the more controversial issues related to corrective action is the cleanup goals for contaminated media, or “how clean is clean.” EPA has not attempted in this rule or elsewhere to establish specific cleanup levels for different hazardous constituents in each medium. Instead, EPA believes that different cleanup levels will be appropriate in different situations, and that the levels are best established as part of the remedy selection process. Generally, however, the cleanup must achieve protective levels for future as well as current uses.¹⁰⁶

Significantly, however, the EPA notes that the public will have opportunities for direct involvement in remedial decision-making at two crucial points in the life of a TSD: (1) during the permit development process; and (2) during

103. The nine CERCLA criteria, [with the RCRA “general decision factors,” 55 Fed. Reg. 30,798, at 30,824 (1990), in brackets] are as follows:

- a. Overall protection of human health and the environment. [Not one of the five corrective action criteria.]
- b. Compliance with ARARs (applicable or relevant and appropriate standards from other federal and state environmental laws). [Not one of the five corrective action criteria.]
- c. Long-term effectiveness and permanence. [Corrective action analog: long-term reliability and effectiveness. *Permanence* deleted in corrective action criterion.]
- d. Reduction of toxicity, mobility, or volume through treatment. [Corrective action analog: reduction of toxicity, mobility or volume. *Through treatment* deleted in corrective action criterion.]
- e. Short-term effectiveness. [Corrective action analog: same.]
- f. Implementability. [Corrective action analog: same.]
- g. Cost. [Corrective action analog: same.]
- h. State acceptance. [Not one of the five corrective action criteria.]
- i. Community acceptance. [Not one of the five corrective action criteria.]

Stoll, *supra* note 27, at 1310 (emphasis in original) (footnotes omitted).

104. 55 Fed. Reg. 30,798, at 30,823 (1990).

105. *Id.* at 30,825.

106. *Id.* at 30,804.

the remedy selection process.¹⁰⁷ Therefore, even though RCRA remedies need not meet "community standards," they must still withstand public scrutiny.

The EPA's desire to be flexible is evident throughout the 1990 rulemaking. In several places in the preamble, the EPA pointed out that RCRA cleanups will, as a rule, be far less complex than cleanups under CERCLA.¹⁰⁸ In fact, while most CERCLA remedial actions get bogged down in the RI/FS stage¹⁰⁹ because statutory requirements force the investigating party to posit several alternative remedies,¹¹⁰ under most RCRA corrective actions, cleanups will already have begun by the time the CERCLA requirements are met.¹¹¹ CERCLA also requires that after a period of public hearings and comments,¹¹² the EPA must formalize its choice of remedy in a record of decision ("ROD"), which takes, on average, thirty-eight months to complete.¹¹³ To be fair to CERCLA, however, most RCRA sites need much less cleanup work than do most CERCLA sites, which simplifies things substantially. Further, private parties performing RCRA corrective actions intending to recover some of their costs from third parties by suing under CERCLA § 107(a) might need to be consistent with the NCP, a much more rigorous standard than the relatively relaxed RCRA regulations.¹¹⁴

The final step in the cleanup process is the design and construction needed to remove the waste. Only now do the parties actually do the work. Even here, RCRA proves to be more flexible than CERCLA. Under RCRA, remedy design and implementation are entirely the province of the owner/operator of the site. At various points in the process the owner/operator must report its progress to the EPA.¹¹⁵ Throughout this portion of the corrective action process, the EPA plays the role of a passive overseer, never becoming directly involved until the end.¹¹⁶

Under CERCLA, the final design and remedy implementation can take place in one of three ways: (1) the PRP's will undertake the work pursuant to a

107. *Id.* at 30,858-59.

108. See Stoll, *supra* note 27, at 1311.

109. A RI/FS can take several years to complete. CHURCH & NAKAMURA, *supra* note 13, at 6.

110. PROBST & PORTNEY, *supra* note 18, at 21.

111. The 1990 rulemaking states:

EPA anticipates that for most RCRA facilities, the studies needed for developing sound, environmentally protective remedies can be relatively straightforward, and may not require extensive evaluation of a number of remedial alternatives. Such "streamlined" Corrective Measures Studies can be tailored to fit the complexity and scope of the remedial situation presented by the facility.

55 Fed. Reg. 30,798, at 30,821 (1990).

112. As noted above, a RCRA site may also have to undergo such scrutiny. See *supra* text accompanying note 107.

113. CHURCH & NAKAMURA, *supra* note 13, at 7-8.

114. Richard G. Stoll, *RCRA Versus CERCLA: Choice and Overlap*, in REAL ESTATE FINANCING DOCUMENTATION: LESSONS LEARNED FROM TROUBLED TIMES 141, 172-74 (A.L.I.-A.B.A. Comm. On Continuing Professional Educ. Study Materials No. C788, 1992).

115. 55 Fed. Reg. 30,798, at 30,836 (1990).

116. The Regional Administrator must determine that the remedy is complete (usually with the help of an independent professional). *Id.* at 30,837.

consent decree or other formalized agreement with the EPA; (2) the EPA can order the PRP's to do the work under § 106 of the statute; or (3) the EPA may perform the work itself (which usually means hiring an independent contractor) using monies from Superfund and reserving the right to recover costs from PRP's.¹¹⁷ The first and third options force the parties to spend a significant amount of time away from the site—either negotiating a settlement (which usually takes the form of a consent decree) or in litigation. The second option, while saving some time, still requires the EPA to issue a formal order, which can take time to draft, and has the added drawback of making PRP's and the EPA adversaries, perhaps eliminating any possibility that the two sides might work together to come up with the most efficient solution. While RCRA cleanups will have procedural delays in design and implementation,¹¹⁸ each of the three ways in which a CERCLA remedy may be implemented faces the same delays in addition to the transactional delays noted above.¹¹⁹

B. What Are the Costs of Each Program?

In 1990, the EPA estimated that there were 5700 TSD facilities possessing a total of 80,000 SWMU's. Many of these facilities will require some degree of remedial investigation and corrective action to address past or current releases.¹²⁰ The quantity of TSD's currently operating far outnumbers the approximately 1300 sites now on the NPL,¹²¹ and it is unlikely that this imbalance will change in the near future.¹²² Since the RCRA corrective action scheme is relatively new, there is no accurate information regarding the costs that might be incurred in cleaning up TSD facilities needing corrective action in the next several decades. Therefore, this Subpart examines past, current, and expected future costs of CERCLA remedial actions, and then compares the elements of a RCRA corrective action and estimates their costs based on that comparison. First, however, the Subpart introduces a framework within which those costs are analyzed.

117. CHURCH & NAKAMURA, *supra* note 13, at 7.

118. The EPA must approve design strategies and the owner/operator must prepare reports.

119. Note that even EPA-led CERCLA cleanups face this problem. Virtually all such cleanups are performed by independent contractors who must be monitored by the EPA. Brantly, *supra* note 100, at 975-76.

120. 55 Fed. Reg. 30,798, at 30,802 (1990).

121. McGee, *supra* note 25, at 122 (citing Note, *Cities Scurry*, NAT'L L.J., Sept. 2, 1991, at 22).

122. See Richard G. Stoll, *Corrective Action in RCRA Permits: An Emerging Rival to Superfund as the Hot Area for Environmental Lawyers and Consultants*, 21 *Envtl. L. Rep. (Envtl. L. Inst.)* 10,666, at 10,666 (1991) (editor's summary). *But see* McGee, *supra* note 25, at 122 n.13 (noting that as of December 31, 1990, 33,834 sites had been identified as potentially hazardous).

1. Defining "Costs"

"A 'cost' is an adverse impact on a choice-maker."¹²³ In the land-based hazardous waste context, PRP's, their insurers, their creditors, the government (local, state, and federal), the owners of the contaminated land, and the members of the community in which the waste exists are all "choice-makers" upon which costs may be visited.

Society—through Congress—has determined that the cost of no cleanup outweighs the cost of cleanup, at least as to those sites slated for remedial or corrective action. This Note assumes that these decisions make economic sense—that the true cost of cleanup outweighs the true cost of leaving the waste alone—so that the Author can instead concentrate on developing incentives to achieve clean-up with a minimum of extraneous or transaction costs.

The next step is to define "transaction costs." Judge Posner defines them as "the costs of effecting a transfer of rights."¹²⁴ Church and Nakamura define them as consisting

of those expenses that are directly related to determining issues of liability and in forcing the private parties to live up to their obligations under the statutes. . . . They include the EPA's costs in conducting searches to identify parties at a site, producing estimates of the volume and toxicity of the waste contributed by various parties, and negotiating remedial design and cleanup objectives with the PRPs.¹²⁵

These two authors also note that legal costs are almost certainly the largest transaction cost.¹²⁶ This Note divides transaction costs into five different categories:¹²⁷ (1) uncertainty of liability—this cost is present in any legal confrontation, and is mitigated here by extensive caselaw; (2) uncertainty of the amount of liability—the process needed to determine exactly what portion of the cleanup cost will be borne by whom is lengthy and costly under CERCLA (this is where most of the legal fees are generated); (3) bargaining incentives—this cost grows when the parties in a dispute find it beneficial to delay the bargaining process; (4) level of cleanup—the cost of determining the appropriate level of cleanup at a site and the extra cost attributable to an overdone cleanup;¹²⁸ and (5) monitoring costs—these will increase as more

123. Frank I. Michelman, *Pollution as a Tort: A Non-Accidental Perspective on Calabresi's Costs*, 80 YALE L.J. 647, 662 (1971) (book review).

124. RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 35 (4th ed. 1992).

125. CHURCH & NAKAMURA, *supra* note 13, at 37-38.

126. *Id.* at 38.

127. Undoubtedly, one could subdivide transaction costs into any number of categories. This Note uses these (arbitrary) divisions to define the word "costs" as it appears herein. It does not attempt to provide a detailed analysis of every cost of CERCLA or RCRA. Further, it does not posit that these divisions are the most useful for law and economics generally. Instead, this Note attempts to pinpoint discrete types of costs associated with land-based hazardous waste remediation that can and should be reduced. It then goes on to posit a system with which to reduce those costs. The Author thanks Professor Donald H. Gjerdingen for suggesting this five-part cost scheme.

128. An "overdone clean up" occurs when a site is made cleaner than necessary for its intended future use. In other words, a site is too clean when the remedy employed costs so much more than the

private parties perform cleanups. The proposal outlined in Part VI strikes a better balance among these costs than does the current scheme, and provides for a net reduction in societal cost.

2. CERCLA Costs

Since CERCLA was enacted in 1980, \$7.5 billion has been spent on cleanups; yet only sixty-four NPL sites have been cleaned.¹²⁹ The EPA estimates that it will cost \$40 billion to clean up the sites currently on the NPL, not including legal expenses and other transaction costs—an average cost of more than \$30 million per site.¹³⁰ Once transaction costs, including legal fees, are included, the estimated total cost for CERCLA-related cleanups ranges from \$60 billion to \$100 billion.¹³¹

Transaction costs are CERCLA's true Achilles' heel. Because many of the sites that fall within CERCLA's jurisdiction have been contaminated by hundreds of polluters, the EPA and PRP's with the most exposure expend vast resources trying to allocate properly (usually through litigation) the amount of liability among the PRP's.¹³² Litigation is the buzzword that always turns up in any discussion of CERCLA. The statute has made more than a few careers for environmental lawyers. In fact, environmental law seems to have gone from relative obscurity to superstardom. There are even law firms whose entire practice is centered around environmental law.

CERCLA-related litigation takes several forms. Along with the more obvious types of lawsuits,¹³³ other CERCLA-related litigation may center upon the liability of trustees¹³⁴ (in bankruptcy or otherwise) and lenders and investors.¹³⁵ The ever-expanding area of municipal and governmental liability also will surely spend some time in the court system.¹³⁶ However,

next best alternative remedy that the cost avoided by the super-remedy does not outweigh the additional costs incurred. For a discussion of Superfund's penchant for overcleaning, see Peter Huber, *Crime: Buck-passing*, FORBES, Mar. 14, 1994, at 120. Note, however, the recent congressional proposal for Superfund reform, which calls for amendment of the cleanup standards so as to tailor the remedy to the site. See H.R. 3800, 103d Cong., 2d Sess. (1993).

129. McGee, *supra* note 25, at 126.

130. CHURCH & NAKAMURA, *supra* note 13, at 8 & n.13 (basing this figure on the approximately 1300 sites on the NPL).

131. See *id.* at 3 ("One estimate originally believed to be excessively pessimistic set the total cost of the Superfund program at \$100 billion."); PROBST & PORTNEY, *supra* note 18, at 2 ("Even the most optimistic forecast of cleanup expenditures is on the order of \$60 billion to \$90 billion.").

132. Litigation is not the only Superfund dispute resolution cash vacuum—settlement and cost allocation negotiations also lead to significant expenditures. PROBST & PORTNEY, *supra* note 18, at 22.

133. These "obvious" lawsuits include: (1) the government against PRP's; (2) PRP's against other PRP's; (3) PRP's against their insurers; and (4) insurers against their reinsurers. *Id.*

134. See Michael D. Green, *Successors and CERCLA: The Imperfect Analogy to Products Liability and an Alternative Proposal*, 87 NW. U. L. REV. 897 (1993); J. Ricky Arriola, Note, *The Life & Times of a CERCLA Claim in Bankruptcy: An Examination of Hazardous Waste Liability in Bankruptcy Proceedings*, 67 ST. JOHN'S L. REV. 55 (1993).

135. See Susan J. Passovoy, *Environmental Concerns for the Lender and Investor*, in CREATIVE REAL ESTATE FINANCING 663 (PLI Real Estate Law & Practice Course Handbook Series No. 394, 1993).

136. See generally Van S. Katzman, Note, *The Waste of War: Government CERCLA Liability at World War II Facilities*, 79 VA. L. REV. 1191 (1993); Lynne A. Reinders, Note, *Municipal Liability Under Superfund As Generators of Municipal Solid Waste: Addressing the Plight of Local Governments*, 43 WASH. U. J. URB. & CONTEMP. L. 419 (1993).

“the most explosive growth in CERCLA litigation may be in the area that has thus far received relatively little attention by the courts, recovery for damages to natural resources.”¹³⁷

Although there is little data on exactly how much each of the various parties spends on litigation, there is unanimous agreement that it is excessive. For example, note that four insurance companies spent a combined total of \$70 million on Superfund claims in 1989.¹³⁸ Nearly ninety percent of this money “went to defending their policyholders in legal actions with EPA, states, or other PRP’s, and for disputing (with these same policyholders) whether their policies covered the cleanup costs.”¹³⁹

All of this money is spent because the stakes are so high. Joint and several liability means that losing the battle could make one PRP responsible for the entire cleanup bill. This encourages PRP’s to battle everyone possible in order to reduce their exposure. The Act’s current bargaining incentives are not sufficient.¹⁴⁰ Further, dollar settlements do not lead to the most efficient cleanups, because they do not encourage voluntary private cleanups.¹⁴¹

Other “superfluous” CERCLA costs associated with determining the amount of liability—and compounded by CERCLA’s irrational requirement that sites be pristine—include excessive detail in site studies and duplicative site studies. Because contractors hired by the EPA and engineers hired by private parties often study the same site at the same time, and because each (particularly the government contractors) often overstudies the site, large amounts of money and man-hours are wasted.¹⁴² One commentator has noted that in the first six years of Superfund’s existence, seventy-five percent of its budget was spent on litigation and repetitive feasibility studies.¹⁴³

Perhaps the worst case of wastefulness is found in EPA-led cleanups. “Private party cleanup of hazardous waste sites is invariably less expensive than remedial work performed by the government.”¹⁴⁴ Nowhere is this more evident than in the way the government hires engineers to clean up the sites:

In 1988, the EPA agreed to establish semi-permanent offices for forty-five companies that would plan and supervise cleanups. The EPA has been paying salaries, rent and other business costs—such as recruitment and

137. McSlarrow et al., *supra* note 3, at 10,412.

138. PROBST & PORTNEY, *supra* note 18, at 23. The 1989 figure is double what these same four insurance companies spent in 1986. *Id.*

139. *Id.*

140. Courts have held that when one PRP settles early, the remaining PRP’s must assume the full extent of the remaining liability. Hence, if the settling PRP settles “well” (*i.e.*, its settlement payment is less than its actual exposure), the other PRP’s, not the EPA, must assume the added “cost.” *See, e.g.*, *United States v. Union Elec. Co.*, 863 F. Supp. 1001, 1011 (E.D. Mo. 1994) (noting that CERCLA promotes early settlements “by rewarding those who settle . . . and by saddling those who do not settle with potentially disproportionate joint and several liability for any amounts remaining”).

141. *See infra* text accompanying note 144.

142. McGee, *supra* note 25, at 124 & nn.32-35.

143. *Id.* at 124 & n.32. Another commentator pointed out that more recent EPA costs related to enforcing CERCLA remediations, excluding the cost of conducting studies, were between 24% and 44% of total cleanup costs. *See id.* at 124 n.32 (citing Roger J. Marzulla, *Superfund '91—Congress' Chance to Clean Up Its Act*, RISK MGMT., Apr. 1990, at 32, 36).

144. Oliver, *supra* note 80, at 459 n.50.

training costs and employee bonuses—without regard to the number of cleanup jobs the companies have been managing. It even paid the contractors start-up money before they had any projects to manage. Four firms on the West Coast received \$855,000 for half of 1989 without visiting even one toxic waste site.

In some cases, the EPA has paid twice as much for a firm to administer a cleanup site as it actually cost the firm to clean it up. . . .¹⁴⁵

In fact, after estimating that forty-five firms would be needed to perform CERCLA cleanups throughout the 1990's, the EPA entered into ten-year contracts with each and budgeted \$6.5 billion to cover the anticipated costs—eleven percent of which was pegged for management costs.¹⁴⁶

The last "cost" created by CERCLA is difficult to quantify and is often overlooked by commentators: the opportunity cost of the time wasted by all of the parties involved in the cleanup of a particular site. While commentators have noted that CERCLA cleanups are lengthy, many fail to go beyond an examination of why the cleanups are slow to discuss the economic ramifications of the sluggish pace. Estimates vary, but one official of the Congressional Budget Office claims that the total time elapsed from the moment a site is first brought to the attention of the EPA to the moment a remedy is complete may average as much as fifteen years.¹⁴⁷ This long time-to-completion average would not be problematic if it represented the length of time needed for an efficiently performed cleanup, but it does not. As noted above, significant delays are caused by the litigation/negotiation process mandated by the statutory framework and congressional policy,¹⁴⁸ as well as by the duplicative nature of the site study and evaluation process. The pre-remedy delays are not the only source of inefficiency—most (if not all) CERCLA cleanups involve post-remedy litigation (and in many cases even post-remedy ground-water treatment).¹⁴⁹ The most important point about all of these collateral delays is not the amount of time spent but the way in which it is spent. Each hour the EPA, the PRP's, the insurance companies, or anyone else spends bickering over who should do what or who should pay for what, an hour of opportunity is lost. An hour that could have been spent cleaning up the site, creating a new product, or doing something else that increases

145. McGee, *supra* note 25, at 125 (footnotes omitted).

146. *Id.* at 126.

147. PROBST & PORTNEY, *supra* note 18, at 20. The EPA estimate is 11 years, but the Agency uses slightly different parameters—from the moment a site is proposed for inclusion on the NPL to the moment a remedy is complete. *Id.*

148. Congress' dislike of fund-led cleanups increases initial delays by forcing the EPA first to find the PRP's, and then either to negotiate a settlement with them or order them to perform the cleanup. *See supra* notes 96-102 and accompanying text. Turning to fund-led cleanups would reduce some of these delays and perhaps lead to faster cleanups. Arguably, the prosecutorial scheme whereby the EPA orders the PRP's to perform the cleanup is faster than the fund-led scheme for two reasons: (1) the Government, often the cause of many of the delays (especially given its penchant for the most costly "Cadillac" cleanups), no longer has an active role, and (2) the PRP's who will end up paying the bill have a much stronger incentive to keep costs low by increasing efficiency. PROBST & PORTNEY, *supra* note 18, at 22. This ignores, however, the post-remedy litigation that is both expensive and time consuming—it too is a transaction cost and an opportunity cost created by CERCLA.

149. PROBST & PORTNEY, *supra* note 18, at 21.

societal wealth, has instead been spent arguing over who is going to bear the burden of increasing that wealth. Instead of adopting a legal rule that creates incentives for value-maximizing conduct, as Coase advised,¹⁵⁰ Congress adopted a rule that in many ways maximized incentives for value-minimizing conduct.

3. RCRA Costs

The average RCRA cleanup will cost less than the average CERCLA cleanup. Although blanket statements are usually dangerous to make, this one is not. The differences between the two statutes permit no other conclusion. RCRA corrective actions usually involve cleaner sites, fewer non-essential investigations, cheaper remedy proposals (CMS's are usually far less detailed than FS's), and far less litigation (and far less time spent in settlement conferences). All of this is a direct result of the RCRA permit scheme which, while focusing first on prevention, still allows the EPA easily and quickly to pinpoint the one and only "responsible party," thereby virtually eliminating the costs associated with liability allocation. The holder of the permit must treat, store, and dispose of hazardous and solid waste pursuant to standards established by the EPA and must clean up any releases of hazardous waste resulting from a failure to meet those standards. After peeling away all the layers of complexity, RCRA comes down to comprehensive prevention and quick, effective, and straightforward correction. In RCRA, the Government created a scheme that avoids and mitigates the harm in the least costly way. RCRA avoids many of CERCLA's pitfalls by assigning liability early. Not only does the permit scheme and its penalties¹⁵¹ force a TSD facility owner/operator¹⁵² to be a more careful handler of the waste, but it also puts the cleanup in the hands of the person most likely to keep costs down. The corrective action regulations then provide the owner/operator with enough flexibility to keep the costs down.

RCRA is not without its transaction costs, however. The courts can play a significant role when disputes arise between the EPA and a TSD facility owner/operator as part of the permit process. They will review any EPA action "issuing, denying, modifying, or revoking any permit,"¹⁵³ and interested parties (usually owners or operators) can seek judicial review of any final regulations promulgated under RCRA.¹⁵⁴ Any EPA decision made

150. See Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960) (discussing those business practices which have damaging effects on other businesses).

151. RCRA § 3005, 42 U.S.C. § 6925.

152. RCRA also imposes substantial duties on generators and transporters of hazardous and solid waste, but since they are not required to provide support (financial or otherwise) for corrective actions, their liability is beyond the scope of this Note. For a good discussion of the potential liability (and resulting incentives) of generators and transporters under RCRA and why that liability needs to be stricter and more frequently imposed, see Alissa J. Stern, *Control of Toxic Substances: A Proposal to Improve Corporate Compliance with RCRA*, 22 ENVTL. L. 539 (1992).

153. RCRA § 7006(b), 42 U.S.C. § 6976(b).

154. *Id.*

in conjunction with a corrective action is also immediately reviewable because corrective actions are part of the permit process.¹⁵⁵ In contrast, under CERCLA, "courts generally are not permitted to review EPA's remedial decisions prior to the completion of the remedial action unless EPA initiates an action to force parties to perform a remedy or recover costs incurred."¹⁵⁶

At first glance this would seem to indicate that there are more opportunities for litigation to occur under RCRA than CERCLA, but, as noted above, disputes between PRP's and the EPA are only the tip of the iceberg under CERCLA.¹⁵⁷ Further, even if one ignores all of the secondary and tertiary litigation that often accompanies CERCLA remedial actions and concentrates only on disputes between PRP's and the EPA, CERCLA is still likely to spawn more costly litigation per site than is RCRA. The sheer number of parties typically involved in a CERCLA remedial action mandates such an outcome. Under RCRA the disputes will arise between the EPA and the owner/operator of the site—two parties whose disputes are likely to be readily cognizable to the trier of fact. Under CERCLA the disputes will arise between the EPA and PRP's—often hundreds of parties whose disputes typically are complex and confusing to the trier of fact. Although RCRA offers TSD owner/operators and the EPA more opportunities to use the courts than does CERCLA, the litigation that does take place under CERCLA is longer and far more expensive.

Ironically, CERCLA is likely to spawn large amounts of litigation over sites cleaned up under RCRA's provisions. At least one court, the Third Circuit, has held that both the EPA and private parties can use CERCLA's cost recovery provisions to recover some of their costs incurred under RCRA.¹⁵⁸ Hence, TSD facility owners/operators can now recover some of the costs of the cleanup from past polluters—usually past owners of the land. Notably, the court capped the EPA's power of recovery. The court also limited its holding to the recovery of those expenses that can be correctly termed "removal costs," and refused to allow the government to recover the costs it incurred

155. *Id.*

156. Curry et al., *supra* note 28, at 386.

157. *See supra* part IV.B..

158. *United States v. Rohm & Haas Co.*, 2 F.3d 1265, 1275 (3d Cir. 1993). Other courts are likely to follow the Third Circuit's lead. Several courts have noted that Congress intended CERCLA to be cumulative and not merely an alternative to RCRA or to be limited to use only at NPL sites. *See, e.g.*, *Chemical Waste Management v. Armstrong World Indus.*, 669 F. Supp. 1285, 1290 (E.D. Pa. 1987); *Mardan Corp. v. C.G.C. Music, Ltd.*, 600 F. Supp. 1049, 1054 (D. Ariz. 1984), *aff'd*, 804 F.2d 1454 (9th Cir. 1986). Courts have also held defendants liable for the cost of removal or remedial actions even where they were not incurred under CERCLA. *See, e.g.*, *United States v. Northeastern Pharmaceutical & Chem. Co.*, 810 F.2d 726, 741-43 (8th Cir. 1986) (holding that the costs of waste removal incurred by the Government prior to the enactment of CERCLA were recoverable), *cert. denied*, 484 U.S. 848 (1987); *United States v. Kramer*, 757 F. Supp. 397, 420-22 (D.N.J. 1991) (holding that under § 107, government expenditures not authorized under CERCLA § 104 are recoverable); *Chemical Waste Management*, 699 F. Supp. at 1294 (holding the costs of private party removal of hazardous waste to be recoverable from another private party under § 107); *United States v. Shell Oil Co.*, 605 F. Supp. 1064, 1079 (D. Colo. 1985); *Mardan Corp.*, 600 F. Supp. at 1058; *United States v. Wade*, 577 F. Supp. 1326, 1336-37 (E.D. Pa. 1983). Given these holdings, it is likely that at least these courts will accept the Third Circuit's extension of CERCLA § 107. *See infra* part V.

in overseeing a removal performed by a private party.¹⁵⁹ Part V discusses *Rohm & Haas* and its implications for the EPA, for RCRA corrective actions, and for CERCLA remedial actions. But first, Subpart C outlines why the EPA should choose RCRA corrective action over CERCLA remedial action whenever their jurisdictions overlap.

C. Whenever Possible Choose RCRA Corrective Action

Since the NPL arrived on the scene in 1983, the EPA has maintained a policy of deferring placement of facilities on the NPL that are subject to RCRA corrective action.¹⁶⁰ This policy, which also avoids the high transaction costs of CERCLA remedial actions, is designed to preserve CERCLA resources for use on other non-RCRA regulated sites:

Both CERCLA and [RCRA] contain authorities applicable to hazardous waste facilities. These authorities overlap for certain sites. Accordingly, where a site consists of regulated units of a RCRA facility operating pursuant to a permit or interim status, it will not be included on the NPL but will instead be addressed under the authorities of RCRA. . . .

Only if the facility is abandoned and the RCRA corrective action requirements cannot be enforced will EPA consider listing the site on the NPL for possible response under CERCLA. . . .¹⁶¹

Since 1983, the EPA has retreated from this stance slightly and now includes more RCRA facilities on the NPL for specific policy reasons.¹⁶² In most cases, however, EPA policy still states that deferral will be preferred.¹⁶³

By preferring RCRA over CERCLA, the EPA benefits society. RCRA corrective action regulations are more flexible than CERCLA remedial action regulations by allowing the parties to come up with solutions that best correspond to the problems presented. Because CERCLA is so inflexible and because it contemplates "permanent" remedies that require "Cadillac" cleanups, cleanups are often overdone—land that will always be put to industrial uses receives the same level of cleanup as land that is intended for parks or schoolhouses.

RCRA's permit scheme also provides private parties with adequate incentives to perform cleanups quickly and efficiently. Failure to obey EPA orders in permit decisions or other RCRA regulations can result in civil penalties—fines of \$25,000 per day for each day of the violation.¹⁶⁴ Although courts are sometimes willing to reduce the fine if it seems overly

159. *Rohm & Haas*, 2 F.3d at 1279-80.

160. 53 Fed. Reg. 30,005, at 30,005 (1988); see also Curry et al., *supra* note 28, at 378.

161. 48 Fed. Reg. 40,658, at 40,662 (1983).

162. Curry et al., *supra* note 28, at 379-80. For example, the EPA will list non-filers or late filers (TSD facilities that either did not file or were late in filing part A of the permit application) "because of its concern that these facilities have remained 'outside the range of cognizance of authorities responsible for compliance with RCRA.'" *Id.* at 382 (quoting 53 Fed. Reg. 23,978, at 23,981 (1988)). For a more detailed discussion of the exceptions, see 54 Fed. Reg. 41,000, at 41,004-06 (1989).

163. 55 Fed. Reg. 30,798, at 30,811 (1990).

164. 42 U.S.C. § 6928(c).

punitive,¹⁶⁵ they are still likely to impose substantial fines on a defendant who, by purposefully avoiding¹⁶⁶ RCRA regulations, has been able to "make money."¹⁶⁷ RCRA also includes the threat of criminal penalties for those who knowingly violate its provisions, and, unlike the daily civil penalties, intent must be proven before fines or jail sentences are imposed.¹⁶⁸ Even though the standard is high, the threat is real; courts have forced violators to pay large fines and go to jail for their misconduct.¹⁶⁹

Another example of RCRA's flexibility is that it provides private parties with even more incentives to comply with RCRA regulations—RCRA policies regarding voluntary corrective action. The 1990 rulemaking outlined where and when voluntary corrective actions will be allowed (and even encouraged) and how the private parties must go about such cleanups given their particular situation.¹⁷⁰ This twist in the corrective action program allows owner/operators to respond quickly and efficiently to minor (and possibly even major) releases. If they remedy the release early enough, they can avoid having to spend significant time and money on a full-scale CMS, and they can have a greater role in the choice of remedy.¹⁷¹ In most cases, however, the owner/operator will still need to contact the EPA before, during, and after the cleanup because many actions will require EPA approval. It is also important to note that performing voluntary cleanups "will not necessarily absolve the owner/operator from further cleanup responsibilities at a later date."¹⁷² Therefore, the voluntary corrective action alternative will not always induce private parties to clean up releases before RCRA guidelines mandate such action, but, at the very least, it offers those parties seeking to reduce their exposure an opportunity to do so.

CERCLA offers private parties few such opportunities. In fact, its design actually discourages parties from taking early, voluntary action. Unlike RCRA, CERCLA remedial actions involve a multitude of different parties, each trying to minimize their exposure. CERCLA encourages PRP's to take actions that actually raise the cost of the cleanup—such as "lying in the weeds"¹⁷³ or cost-recovery litigation—because CERCLA liability is joint and several. Often, the EPA orders only a handful of the PRP's to perform the cleanup and incur all of the costs, and because CERCLA liability is joint and several and noncompliance with § 106(a) orders can lead to punitive damages

165. See, e.g., *United States v. Environmental Waste Control, Inc.*, 710 F. Supp. 1172, 1242 (N.D. Ind. 1989); *United States v. T & S Brass & Bronze Works*, 681 F. Supp. 314, 322 (D.S.C. 1988).

166. Note that RCRA does not require a purposeful violation for penalties to be imposed; "strict liability" is the stated standard. H.R. REP. NO. 1185, 93d Cong., 2d Sess. 35-36 (1974).

167. *Environmental Waste Control, Inc.*, 710 F. Supp. at 1242.

168. 42 U.S.C. § 6928(d).

169. See, e.g., *United States v. Dec*, 912 F.2d 741 (4th Cir. 1990), cert. denied, 499 U.S. 919 (1991).

170. 55 Fed. Reg. 30,798, at 30,815 (1990).

171. Terry J. Satterlee & Jerry L. Anderson, *RCRA Corrective Action: The Next Wave of Hazardous Substance Cleanup*, 59 UMKC L. REV. 181, 195 (1991).

172. 55 Fed. Reg. 30,798, at 30,807-08 (1990).

173. PRP's will often wait and see whether the EPA or other PRP's can locate them and pull them into a remedial action by suing them for their involvement in a particular site. PROBST & PORTNEY, *supra* note 18, at 1.

equal to three times the cleanup costs,¹⁷⁴ these PRP's will comply. In order to minimize their costs, these few PRP's are forced to sue all of the other PRP's that the EPA chose to ignore.¹⁷⁵ Joint and several liability actually creates the free rider/holdout problem because if cleanup costs were prorated, there would be little to no incentive for PRP's with limited exposure to stay hidden, especially since the litigation costs for these parties would likely far outweigh their portion of the cleanup expense.

More importantly, CERCLA's liability scheme creates strong disincentives for parties to perform cleanups at NPL sites voluntarily.¹⁷⁶ CERCLA does not reward private parties for volunteering to clean up an NPL site, and in fact such action is punished: "EPA perceives voluntary cleanup efforts as a *confession of guilt* and as an invitation to hold a company responsible for all cleanup costs at a site, regardless of the company's share of the waste."¹⁷⁷ By making private voluntary cleanups a poor choice for PRP's, the Government automatically makes CERCLA cleanups more expensive than necessary. Rather than using regulation to improve economic efficiency—by implementing a legal rule that induces the parties to take the action they would have taken in the absence of prohibitively high transaction costs¹⁷⁸—Congress created a rule that forces private parties to engage in what would otherwise be irrational behavior. This cannot continue.

Nevertheless, CERCLA should not be "trashed."¹⁷⁹ Preferring RCRA will reduce transaction costs only at a limited number of sites. CERCLA covers many sites that RCRA does not, and those sites must still be cleaned up. Relying on the market to solve the problem by assigning property rights in groundwater¹⁸⁰ will not be enough to solve the nation's vast environmental problems. Taxing pollution, the solution of choice for most economists,¹⁸¹

174. 42 U.S.C. §9607(c)(3) (1988).

175. At least one commentator has accused the EPA of going after deep pockets and ignoring PRP's with significantly more exposure. McGee, *supra* note 25, at 131-32.

176. Ironically, this same draconian scheme might encourage voluntary cleanups at non-NPL sites, but data on such activity is sketchy. For a brief discussion of voluntary non-NPL cleanups, see PROBST & PORTNEY, *supra* note 18, at 24-25.

177. McGee, *supra* note 25, at 132 (emphasis added) (quoting James Bovard, *The Real Superfund Scandal*, Cato Institute Policy Analysis No. 89, at 11-12 (Aug. 14, 1987)).

178. Transaction costs are almost always prohibitively high where pollution is the focus of the dispute.

179. See McGee, *supra* note 25, at 141-42.

180. McGee argues for just such a solution. *Id.*

181. See POSNER, *supra* note 124, at 376. McGee suggests that taxing polluters—as opposed to hazardous material producers—is the best way to generate monies for Superfund. McGee, *supra* note 25, at 133-34. Most economists would agree with McGee since taxing polluters serves the dual purpose of giving the polluters an incentive to come up with other methods of engaging in the desired activity (which will now be more cost-effective for them), while generating the funds needed to keep Superfund afloat. See POSNER, *supra* note 124, at 377. The economists might argue, however, that the tax should not be tied to the amount of pollution created by any particular polluter but to the amount of damage done by that pollution. *Id.* at 376. This is a subtle but extremely important difference, for if all polluters are taxed merely on the amount of pollution they produce with no regard to the social costs of that pollution, each will be encouraged to reduce pollution at the same rate as all of the other polluters, and this may not be the most socially desirable result. For instance, if X company, located on land that will always be put to industrial uses, and Y company, located on land that will eventually be used for recreation, pollute at exactly equal rates, the amount-based tax will encourage each company to reduce

is perhaps the best way of preventing further damage to the environment but does little to provide incentives for cleaning up the damage already done.

CERCLA must be amended to encourage private parties to conduct voluntary cleanups. The first step in that direction is to remove the barriers to and provide incentives for cost-effective PRP-led cleanups. Part V discusses a recent Third Circuit decision that makes privately implemented remedies less expensive for the parties performing the cleanups. The Part goes on to argue that Congress and the EPA should not look upon this decision as anti-government but instead use it as a springboard for the creation of other "prizes" for private parties who step forward early and perform needed cleanups.

V. *UNITED STATES V. ROHM & HAAS CO.*

On August 12, 1993, the Third Circuit held that Rohm & Haas Company ("R&H") was not required to reimburse the EPA for costs the Agency incurred overseeing a RCRA corrective action performed by the company.¹⁸² The dispute started in 1979 when EPA and R&H investigations revealed hazardous substances present in the air, soil, and groundwater at a 120-acre landfill in Bristol Township, Pennsylvania. The landfill was owned at one time entirely by R&H but, as of 1978, the property was owned by R&H (through its wholly owned subsidiary) and two other companies. First, the EPA proposed to add the site to the NPL, but when R&H responded that the site was more appropriately managed under RCRA, the EPA agreed and removed the site from the proposed NPL. After entering into an agreement with the EPA, R&H's subsidiary began performing the required work.¹⁸³

A. *Oversight Costs Cannot Be Recovered*

In November, 1990, the Government sued R&H and the other owners of the site pursuant to CERCLA § 107, to recover all of the costs the EPA incurred in connection with the site since 1979, and sought a declaratory judgment for all future costs incurred at the site. The district court found that CERCLA's cost recovery provisions were applicable and held in favor of the Government, finding all past and future costs recoverable.¹⁸⁴

their pollution output by equal amounts. This result is undesirable because society would prefer Y company to reduce its pollution at a greater rate than it would like X company to reduce its pollution. The social cost of Y company's pollution is much greater than the social cost of X company's pollution, so taxing the two evenly results in a net loss for society.

Such an individualized tax scheme, however, may cost more to implement than it saves by avoiding the creation of improper incentives. Thus, a scheme imposing a tax on a product-by-product basis may be the most reasonable solution. That is, the tax should be calculated by comparing the social value of creating a particular product to the social "cost" of the wastes created in producing that product. The tax can then be tied to the amount of that product any one company produces. It is important to note that the "product" to be balanced can be anything (including services) that creates waste.

182. *United States v. Rohm & Haas Co.*, 2 F.3d 1265, 1279 (3d Cir. 1993).

183. *Id.* at 1267-68.

184. *Id.* at 1268.

The Third Circuit agreed with the district court on many points,¹⁸⁵ but refused to find recoverable any cost “of overseeing the performance of the entity that has assumed responsibility for the cleanup.”¹⁸⁶ The court failed to find any provision in CERCLA which allows the Government to recover costs incurred in overseeing private party removal or remedial activity. It found a specific provision allowing recovery for costs incurred in overseeing private party RI/FS’s and noted that none of the six categories of payments that can be made from Superfund (set forth in § 111) includes costs of overseeing private party removals or remedial actions.¹⁸⁷ The Government argued that the definition of “removal” in CERCLA § 101(23) includes EPA oversight of private party removals or remedial actions.¹⁸⁸ The court, however, relying on the statutory interpretation doctrine set forth in *National Cable Television Ass’n v. United States*,¹⁸⁹ found the Government’s arguments unpersuasive.¹⁹⁰

B. Implications and Incentives

Perhaps the most important aspect of the *Rohm & Haas* decision is that the court’s holding applies to private party remedies effected under RCRA or CERCLA. Each time private parties implement remedies as part of CERCLA remedial actions¹⁹¹ or as part of RCRA corrective actions, they will not be required to reimburse the EPA for costs the Agency incurred in overseeing those implementations. This will lead to significant savings for TSD facility owners and operators who are ordered to clean up a release. The costs that private parties must reimburse in such situations are the cost of the EPA-conducted RFA (and other initial investigations), the EPA’s RFI oversight costs, the cost that the EPA incurs in remedy selection, and the cost to the EPA of the final assessment after the cleanup has been completed. These costs may outweigh the cost of overseeing the implementation of the remedy, but that will depend on the site and the amount of time and effort the EPA expends before the cleanup begins. Given the flexibility of RCRA and the fact that alternative remedies need not always be proposed, it is quite possible that an owner/operator will owe relatively little money to the EPA when corrective action is complete.

185. For example, the court of appeals agreed that CERCLA’s cost recovery provisions are applicable to non-CERCLA cleanups, including RCRA corrective actions. *Id.* at 1274. The court also held recoverable all costs the Government incurred when taking “direct action to investigate, evaluate, or monitor a release, threat of release, or a danger posed by such problem.” *Id.* at 1278.

186. *Id.* at 1280 n.23.

187. *Id.* at 1278.

188. *Id.* at 1272.

189. 415 U.S. 336, 342 (1974).

190. *Rohm & Haas*, 2 F.3d at 1278.

191. CERCLA removal actions are also included but, since remedial actions are more costly and more common, this Note only discusses how the Third Circuit’s decision affects private party remedial actions.

After this decision, an owner/operator has even more incentive to take voluntary corrective action. Under voluntary corrective action, the EPA has an even smaller direct role than it does under RCRA-mandated corrective action. The EPA's largest costs in a voluntary corrective action most likely will be non-reimbursable oversight costs. Thus, reimbursable EPA costs will make up only a fraction of the private parties' total cost in a voluntary corrective action.

At first glance, *Rohm & Haas* would appear to have a much less important impact on CERCLA than it does on RCRA. If one looks at EPA remedy-oversight costs as a percentage of total EPA costs and compares the average private party corrective action percentage to the average private party remedial action percentage, the average corrective action percentage will inevitably be significantly larger. A TSD facility owner/operator will value the *Rohm & Haas* decision more highly than will a CERCLA PRP. Therefore, it is unlikely that such savings will cause any more PRP's to volunteer to conduct remedial actions than have done so thus far.

Although *Rohm & Haas* does not substantially change the current balance of Government-conducted and private-party cleanups under RCRA or CERCLA, it does begin to make private party cleanups more attractive. Owner/operators are now likely to seek the EPA's advice during cleanups, which can only lead to higher efficiency and effectiveness. EPA oversight will be welcomed, and relationships will be struck. These same effects will be felt at CERCLA sites when the cleanup is conducted by private parties.¹⁹² The *Rohm & Haas* decision will make it easier for the EPA and PRP's to work together. This increased cooperation may spill over into other areas of the remedial action process as certain PRP's come into contact with the EPA at several different sites, each in different stages of remedial activity.

VI. WHAT SHOULD BE DONE?

Rohm & Haas is best observed not for what it actually does but for the example that it sets. The Third Circuit's decision is the first improvement in the CERCLA PRP's situation since CERCLA was enacted. CERCLA appears to have been designed and amended to clean up the environment no matter what the cost. That cost has proved to be so high, however, that CERCLA has made more legal careers than it has cleaned sites. CERCLA is in need of a

192. The PRP's will be responsible for the majority of oversight costs under CERCLA because they must reimburse the EPA for the cost of approving the completed remediation. The PRP who cleans the site, however, can both minimize and spread this cost. It can minimize the cost by working closely with the EPA throughout the process (time spent by the EPA should not be charged to the PRP's because doing so would discourage cooperation). This close relationship should also reduce the incentive for the PRP to implement a less-than-effective remedy, because the cost that it saves by working closely with the EPA will outweigh the cost it saves by cutting corners (especially once the cost of the risk of detection and reperforming the cleanup are factored into the equation). The incentive to work closely with the EPA and not to cut corners will be even larger when the land share "carrot" is factored in. See *infra* notes 198-99 and accompanying text. The "responsible" PRP can then spread the cost through the allocation process.

substantial overhaul, and the courts cannot do it alone. Perhaps the Third Circuit was attempting to make cleanups more equitable; perhaps not. But by making private party cleanups more palatable and more attractive to the private parties, it did what Congress has thus far been unable to do, despite its stated desires.¹⁹³ More attention needs to be paid to providing private parties with proper incentives to share the load.

Congressional amendments that increase flexibility by allowing the EPA to consider the future uses to which a particular site is likely to be put are also needed, but not nearly as much as amendments changing the way in which liability is imposed. Joint and several liability is the largest obstacle to voluntary private party cleanups at NPL sites.¹⁹⁴ The proposals which the 103d Congress failed to pass would have addressed both of these issues, but they did not go far enough. The proposed Superfund Reform Act of 1994 ("SRA") includes provisions which require the EPA to take into account the future use of the site¹⁹⁵ and to develop an allocation procedure to determine the percentage of responsibility of each PRP.¹⁹⁶ If passed, these provisions would have been a good start, and any CERCLA reform must contain them;

193. See, e.g., H.R. REP. NO. 253, 99th Cong., 1st Sess., pt. 1, at 101 (1985) ("Negotiated private party actions are essential to an effective program . . . and it is the intent of this Committee to encourage private party cleanup at all sites. . . . Negotiated clean-ups will accelerate the rate of clean-ups and reduce their expense by making maximum use of private sector resources.").

194. McGee, *supra* note 25, at 132-33 ("Many . . . see joint and several liability as the biggest single impediment to private voluntary clean ups.") (quoting Bovard, *supra* note 77, at 11). But see Jerry L. Anderson, *The Hazardous Waste Land*, 13 VA. ENVTL L.J. 1, 31 (1993) (noting that "[j]oint and several liability is an aid to encourage voluntary cleanups" while rejecting joint and several liability as unnecessary).

195. See H.R. 4916, 103d Cong., 2d Sess. (1994); H.R. 3800, 103d Cong., 2d Sess. (1994); S. 1834, 103d Cong., 2d Sess. (1994). The proposed Act

[d]irects the [EPA] to promulgate national goals to be applied at all facilities and national generic cleanup levels for specific hazardous substances, pollutants, or contaminants that: (1) reflect reasonably anticipated future land uses; (2) reflect other variables which can be easily measured at a facility and whose effects are scientifically well-understood to vary on a site-specific basis; and (3) represent concentration levels below which a response action is not required.

1994 Bill Tracking Report, H.R. 3800 Title V-Preamble, available in LEXIS, BILTRCK File (Aug. 19, 1994).

196. H.R. 3800 § 409. At the time this writing goes to print, the status of CERCLA reauthorization is unclear. The newly elected Republican majority in the House of Representatives, as promised in its "Contract With America," has proposed a bill that would go further toward a more efficient system than would have the proposals of the 103d Congress. See H.R. 228, 104th Cong., 1st Sess. (1995). If passed, the bill would give the states a much greater role in the cleanup process, *id.* §§ 201-207, would expand the voluntary response program to encourage more private party cleanups (the bill gives the states the burden of devising workable incentive programs), *id.* § 301, would offer PRP's greater incentives to settle with the Government (including a detailed allocation procedure), *id.* §§ 401-413, would amend the definitions of appropriate cleanup standards to allow the amount of cleanup to be determined with reference to the likely future uses of the site, *id.* §§ 501-507, and most importantly, would repeal retroactive liability. *Id.* § 403(a)(7). Notably, however, there is no guarantee that this bill represents the proposal of the GOP. In fact, Senator Robert C. Smith (R-NH) and Representative Michael G. Oxley (R-OH), who chair the respective subcommittees originating the reauthorization legislation, say that they will start fresh. See Hazel Bradford & Tom Ichniowski, *Superfund Reform to Start Fresh*, WASH. OBSERVER, Feb. 6, 1995, at 9. Although they plan to pass legislation before the end of 1995, it is unlikely that any legislation will be passed before late summer. *Id.* ("Until they finish checking with affected players, from cleanup contractors to litigants, no hearing and markup schedules are being set.")

but more needs to be done. For example, under the SRA, if the PRP's—even one of them—decide that the allocator's decision is faulty, then they can refuse to settle with the EPA based on that decision. This refusal merely puts the PRP's who refuse in the same position as they were before—faced with an EPA suit which, if the PRP's lose, will make them jointly and severally liable for the cleanup costs.¹⁹⁷

Congress needs to build upon these proposals and provide the EPA with a bigger carrot with which to attract PRP's. This carrot will need to take different forms at different sites. In some instances, the EPA will want to attract the PRP with the most exposure at a site, and in other instances (usually when the PRP's with the most exposure are insolvent), the EPA will want to attract the PRP with the deepest pockets. Currently, the EPA has provisions at its disposal that allow it to order the most "attractive" PRP's to clean up an NPL site, but this action necessarily involves significant time and expense and creates a hostile atmosphere that decreases efficiency and increases transaction costs. If Congress were to go beyond prorating the liability of PRP's that perform voluntary cleanups and perhaps even "discount" the liability of such PRP's, then no time would be lost ordering cleanups, and transaction costs would be minimized. Congress could attract deep-pocket PRP's with low exposure by asking them to shoulder the burden of cleanup and, in return, reward them for their efforts.

This reward could come in the form of "shares" given to the PRP's who performed the cleanup in exchange for volunteering, which could then be exchanged for newly cleaned up property.¹⁹⁸ The property will have been condemned by the Government because insolvent PRP/owners could not afford their share of the cleanup bill. Of course, if the condemned property retains some of its pre-cleanup value, that value should be set off against the insolvent owners' cleanup liability.¹⁹⁹ Given that CERCLA sites are often old and unsellable, this condemnation "land bank" could grow to be quite large. If so, then the shares could be offered as a supplement to any contribution the deep pocket PRP receives from the other PRP's. Taking the system one step further, the EPA could impose allocated percentages of liability on those PRP's who did not perform the cleanup. This would ensure that the PRP's who performed the cleanup would not be forced to spend large

197. See H.R. 3800 § 408. The provisions protecting "di minimis parties" will not quash the fears of the deep pocket PRP's whose exposure, while not "di minimis," remains a relatively small percentage. See *id.* for details on the protection for "di minimis parties."

198. A share system is needed because the property that the deep-pocket PRP's pay to clean up may not always be owned by an insolvent PRP.

199. With this structure it will be much more difficult for the insolvent PRP/owner (or his creditors) to cry foul, because the property was virtually worthless before the cleanup and therefore not of much use to the PRP/owner (or his creditors). In fact, in many cases, heavily contaminated property has negative value and the PRP/owner (and his creditors) will be glad to get it off his hands and thereby improve his balance sheet.

amounts of time and money litigating the allocation question. Hence, those PRP's would receive the land and recover most of the cost of the cleanup.²⁰⁰

This scheme would reduce costs in all but two of this Note's five categories.²⁰¹ It would not reduce oversight costs; in fact, it would increase them. This increase would be offset by the increased cooperation among the EPA and the PRP's—thereby reducing costs associated with negative bargaining incentives. The scheme would also not reduce the cost of uncertainty of liability, but as noted above, this cost has been reduced over the years by a growing body of legal precedent. Most importantly, the scheme would reduce the costs associated with the bickering that occurs among the parties when liability determinations are made. These costs are particularly high when the site is old and has been unused for several years. By encouraging PRP's to undertake voluntary cleanup—avoiding bargaining delays and litigation delays—and by forcing the remaining PRP's to abide by the EPA's allocation formula (through an independent arbitrator), the scheme severely limits transaction costs. Finally, if the scheme were to be coupled with new guidelines for cleanliness that are tied to the intended future use of the site subject to remediation, CERCLA could achieve societal goals without breaking society's bank.

CONCLUSION

CERCLA costs society too much. Although public opinion polls indicate that the public is more concerned about hazardous waste sites than any other environmental hazard,²⁰² the public does not want total cleanup at any cost where partial cleanup at less than one-half the cost will suffice. If the public were truly concerned about hazardous waste sites, there would be little resistance to proposals calling for the elimination of the production of hazardous waste. But there is resistance. Hazardous waste is the necessary by-product of services and products society has deemed desirable and in some cases even necessary. One of the prices society must pay for technology is hazardous waste (at least until the technology becomes so advanced as to eliminate waste—an unlikely event). But this price need not be so high. By continuing to prefer RCRA over CERCLA whenever possible, and by decreasing CERCLA's high transaction costs by providing better incentives for voluntary private party cleanups, Congress and the EPA can be pro-environment without being anti-industry.

200. This assertion rests on two assumptions: (1) that the PRP's who performed the cleanup did not have the majority of the exposure at the site; and (2) that the PRP's with the rest of the exposure were solvent.

201. See *supra* part IV.B.1.

202. PROBST & PORTNEY, *supra* note 18, at 2.