

DIS-JOINTE? SEVERAL APPROACHES TO DIVISIBILITY AFTER *BURLINGTON NORTHERN*

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INTRODUCTION

The Supreme Court's sudden interest in the workings of the CERCLA liability scheme seems somewhat surprising.¹ Section 107, the crucial

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provision creating liability for cost recovery and for damages for injury to natural resources,² was, after all, revolutionary when it was enacted in 1980. Very quickly thereafter, lower federal courts were peppered with cases that required them to interpret and implement CERCLA's liability provisions. Petitions for certiorari followed in due course.³ Nonetheless, with few exceptions,⁴ the Supreme Court was content—for nearly a quarter century after CERCLA's enactment, and nearly two decades after substantial amendments to the statute—to let the lower federal courts sort out the mechanics of CERCLA liability.

In a relatively short time, consensus emerged. Among other things, the courts agreed that section 107 imposed joint and several liability for the government's response costs on each liable party, unless a defendant could satisfy a very difficult burden of proving that it should be assigned only a portion of the harm.⁵ But a liable person who paid more in response costs than equity demanded—whether by undertaking response actions either voluntarily or under government compulsion, or by reimbursing the government's response costs—had a right, initially read into the statute by courts and then written into section 113(f) by Congress,⁶ to seek to recover the excess in a contribution action against other responsible parties. A liable party could not, however, invoke CERCLA's cost recovery provision in an attempt to hold other responsible parties jointly and severally liable.⁷ These rules became part of the landscape of CERCLA practice. Then, in less than five years, the Supreme Court issued three seismic opinions in CERCLA cases, each of which did or could work “an ‘extreme makeover’”⁸

1. See generally *Burlington N. & Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870 (2009); Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601–9675 (2006).

2. 42 U.S.C. § 9607 (2006).

3. The first cert petition in a CERCLA case was filed on August 1, 1985. See Opening Brief for Petitioners at 8, *Stringfellow v. Concerned Neighbors in Action*, 489 U.S. 370 (1987) (No. 85-184).

4. *Pennsylvania v. Union Gas Co.*, 491 U.S. 1, 19 (1989) (holding Congress intended to make states liable under CERCLA and had constitutional authority to do so), *overruled by* *Seminole Tribe of Fla. v. Florida*, 517 U.S. 44 (1996); *Key Tronic Corp. v. United States*, 511 U.S. 809, 819 (1994) (clarifying the circumstances in which private CERCLA plaintiffs could recover their attorneys' fees); *United States v. Bestfoods*, 524 U.S. 51, 62 (1998) (announcing the rule of law that determines when a corporation's liability can be vicariously imposed on its parent corporation or other shareholders).

5. See *infra* Section I.A.

6. 42 U.S.C. § 9613(f) (2006).

7. *E.g.*, *Amoco Oil Co. v. Borden, Inc.*, 889 F.2d 664, 672 (5th Cir. 1989) (“When one liable party sues another to recover its equitable share of the response costs, the action is one for contribution”); *Akzo Coatings, Inc. v. Aigner Corp.*, 30 F.3d 761, 764 (7th Cir. 1994); see also note 15, *infra*.

8. Michael W. Steinberg, *Cloudy with a Chance of Contribution: Life After Cooper Industries*, 2 SUPERFUND & NAT. RES. DAMAGES LITIG. COMMITTEE NEWSLETTER 2, 2 (Aug. 2005).

of an aspect of the CERCLA liability scheme that government, industry, and the courts had come to take for granted.

The first case was *Cooper Industries, Inc. v. Aviall Services, Inc.*⁹ *Cooper Industries* upheld the judiciary's belated discovery¹⁰ of the "plain meaning" of CERCLA's contribution provision: that when Congress granted a right to parties to seek contribution either "during or following" a civil enforcement action¹¹ or once they had "resolved [their] liability to the United States or a State" in a settlement,¹² Congress meant those circumstances to be the only ones in which a party could invoke the statutory contribution remedy. Thus, a responsible party that conducted response actions in the absence of a qualifying lawsuit or settlement could not bring a CERCLA contribution claim.

Cooper Industries did not decide whether such a party could sue for cost recovery under section 107, but lower court precedent seemed to foreclose that option.¹³ Therefore, many parties seemed to have lost legal recourse that they thought they had against other liable persons, and many commentators concluded that as a result *Cooper Industries* had seriously undermined incentives for voluntary cleanup of contaminated sites.¹⁴ After two and a half years in which the lower courts attempted, to varying degrees and in diverse ways, to restore those incentives, the Supreme Court decided that section 107(a)(2) of CERCLA authorizes responsible parties to bring cost recovery actions after all.¹⁵ Once again the Supreme Court held

9. *Cooper Indus. Inc. v. Aviall Servs. Inc.*, 543 U.S. 157 (2004).

10. As the majority of the en banc Fifth Circuit put it: "In numerous published cases decided after the enactment of SARA in 1986, this and other courts of appeals have ruled on CERCLA claims for contribution where no [prior civil enforcement] action had been brought [O]ne must assume that talented attorneys have had sufficient incentive and opportunity to explore statutory lacunae such as those created by a cramped reading of § 113(f)(1). Yet all that existed before this case arose are isolated dicta. The absence of direct precedent is like the dog that didn't bark." *Aviall Servs. Inc. v. Cooper Indus. Inc.*, 312 F.3d 677, 688–89 (5th Cir. 2002) (en banc) (footnotes omitted), *rev'd*, 543 U.S. 157, 171 (2004).

11. § 9613(f)(1).

12. § 9613(f)(2).

13. Steven Ferrey, *Inverting the Law: Superfund Hazardous Substance Liability and Supreme Court Reversal of All Federal Circuits*, 33 WM. & MARY ENVTL. L. & POL'Y REV. 633, 663–64 (2009) (citing cases).

14. *E.g.*, Michael Mazzone et al., *New Supreme Court Decision Discourages Voluntary Clean-up Under CERCLA*, 42 HOUSTON LAW. 52 (Jan./Feb. 2005); Jeannette Paul, *Neither Innocent nor Proven Guilty: The Aviall Services v. Cooper Industries Dilemma*, 13 BUFF. ENVTL. L.J. 31, 56–57 (2005).

15. *United States v. Atl. Research Corp.*, 551 U.S. 128, 139 (2007). Ironically, this was the conclusion reached in what appears to be the first CERCLA decision published. *City of Philadelphia v. Stepan Chem. Co.*, 544 F. Supp. 1135 (E.D. Pa. 1982) (denying motion to dismiss). After the plaintiff in *City of Philadelphia* cleaned up a hazardous substance release at a municipal dump, it sued several defendants for cost recovery, alleging that the defendants had arranged for disposal of hazardous

that the lower courts had missed the meaning of CERCLA's "plain terms."¹⁶ And once again the Supreme Court left a major question, previously thought settled, unanswered: "We assume without deciding[.]" the Court wrote in a footnote, "that § 107(a) provides for joint and several liability."¹⁷

In May, 2009 the Supreme Court answered that question in *Burlington Northern and Santa Fe Railway Co. v. United States*.¹⁸ The Supreme Court decided that for once the lower courts got it right: section 107(a) does indeed provide for joint and several liability. But, as the lower courts also had decided, there is an out: a liable defendant might limit its liability to several liability for an apportioned share, if it were to provide proof sufficient to support such apportionment. What it takes to satisfy that burden was the subject of *Burlington Northern*.¹⁹ What *Burlington Northern* should mean to the courts that must apply it, and to the future of joint and several liability under CERCLA, is the subject of this article.

Interested parties' first-blush response to the Supreme Court's opinion implies that lower courts will not find proper application of *Burlington Northern* to be obvious or easy. The Department of Justice, emphasizing the Court's matter-of-fact agreement with the legal standard that lower courts have long applied to CERCLA scope-of-liability disputes,²⁰ contends that the opinion illustrates that *plus ça change, plus c'est la même chose*.²¹ By contrast, the CERCLA defense bar claims that the opinion "reverses a

substances at the facility. The defendants argued that because the city, as owner of the dump, was also a responsible party, the city could not bring a cost recovery suit under section 107. At the time, neither case law nor statutory amendment had established any right of responsible parties to seek contribution. The court denied the motion, keeping the city's CERCLA claim alive. *Id.* at 1143. The court's reluctance to dismiss the city's claim was influenced by the fact that the city owned and operated a hazardous waste dump only unwillingly: the hazardous substances had been deposited illegally by waste transporters who obtained access to the dump by bribing city employees. *Id.*

16. *Atl. Research Corp.*, 551 U.S. at 141.

17. *Id.* at 140 n.7.

18. *Burlington N. & Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870 (2009).

19. *Burlington Northern* also addressed the issue of arranger liability under CERCLA. *Id.* at 1880. That holding is not addressed here.

20. *Id.* at 1880–81.

21. *See, e.g.*, John C. Cruden, Acting Assistant Attorney Gen., Env'tl. & Natural Res. Div., The Supreme Court's Decision in *Burlington Northern & Santa Fe Railway Company v. United States* (May 29, 2009), <http://www.usdoj.gov/enrd/1306.htm> (stating: (1) the "opinion clearly reaffirmed the basic principles that we have advocated for years"; (2) with respect to apportionment, the decision "is predominantly factual"; and (3) "[w]e think that [meeting burden of proof on apportionment] will continue to be difficult to do in most cases"); United States' Reply Memorandum in Support of Its Renewed Motion for Summary Judgment on the Joint and Several Liability of Defendant Saul Senser 29, *United States v. Atlas Lederer Co.*, No. 3:91cv309 (S.D. Ohio June 1, 2009) (arguing that because *Burlington Northern* "did not change the governing legal principles," courts should adhere to prior rejection of apportionment based on evidence constituting "no more than a 'best guess'" of each responsible party's contribution to the site).

long-standing presumption by the Environmental Protection Agency in favor of joint and several liability in multiple-party [CERCLA] cases.”²² Some observers argue that *Burlington Northern* so severely and wrongly diminished the proof required to avoid joint and several liability that legislative action is required to correct the decision’s effects.²³

I contend that the *Burlington Northern* decision should have relatively limited impact on CERCLA litigation, if federal courts understand and apply the Supreme Court’s opinion properly. Section I describes the jurisprudence of joint and several liability under CERCLA that preceded *Burlington Northern*, and it also describes the *Burlington Northern* decision itself. Section II describes the statutory purposes courts must keep in mind when applying *Burlington Northern* in CERCLA cases and, in particular, the role of joint and several liability in fulfilling those purposes. In Section III, I argue that *Burlington Northern*’s ruling on the sufficiency of evidence of apportionment should not, and likely will not, be reflected in an upsurge of successful proof of apportionment in commonly encountered CERCLA fact patterns. In Section IV, I argue that a number of viable legal theories should preserve joint and several liability under CERCLA even if *Burlington Northern* has the effect of greatly diminishing the evidentiary hurdles that had in the past largely stymied attempts at apportionment.

I. DIVISIBILITY IN CERCLA JURISPRUDENCE

A. Before Burlington Northern

From the outset, the government sought to hold defendants jointly and severally liable as it grappled with cost recovery claims for which dozens of

22. *Cost Recovery: Burlington Northern Decision Called New Path to Fairness Under CERCLA 1*, TOXICS L. RPT. (BNA), May 21, 2009 (referring to comments by members of firm that represented Burlington Northern); see, e.g., Allen A. Kacenjar et al., *Burlington Northern and Santa Fe Railway Co. v. United States*, June 11, 2009, http://www.martindale.com/environmental-law/article_Squire-Sanders-Dempsey-L.L.P._703524.htm (proposing that as a result of the *Burlington Northern* decision, apportionment will be more available, more defendants will argue for apportionment, and defendants will have increased leverage in settlement negotiations with government).

23. Mark R. Misiorowski & Joel D. Eagle, *The Diminishing Role of Science in CERCLA After Burlington Northern & Santa Fe*, 40 ENV’T REP. (BNA) 1205, 1205 (May 22, 2009); see generally *Appleton Papers, Inc. v. George A. Whiting Paper Co.*, No. 08-C-16, 2009 U.S. Dist. LEXIS 111648, at *8–9 (E.D. Wis. Nov. 18, 2009) (describing *Burlington Northern* as a “watershed” case that “significantly eases the burden on defendants who seek to avoid joint and several liability”); *Evansville Greenway & Remediation Trust v. Southern Ind. Gas & Elec. Co., Inc.*, No. 3:07-cv-0066-DFH-WGH, 2009 U.S. Dist. LEXIS 95091, at *66 (S.D. Ind. Sept. 29, 2009) (noting “full import of *Burlington Northern* is hotly debated”).

parties were potentially responsible under section 107.²⁴ In the first-impression opinion that has ever since been considered “seminal” on the issue,²⁵ Chief Judge Carl Rubin of the Southern District of Ohio confronted defendants’ motion “for an early determination that they are not jointly and severally liable for the clean-up costs”²⁶ incurred in connection with the Chem-Dyne Superfund site in Hamilton, Ohio.²⁷

Judge Rubin found CERCLA’s “language ambiguous with regard to the scope of liability.” He therefore consulted the legislative history and concluded:

- Although earlier versions of the bill that became CERCLA included language mandating joint and several liability that was deleted before final passage, the deletion did not imply that Congress intended liability to be only several.

- “Rather, the term was omitted in order to have the scope of liability determined under common law principles, where a court performing a case by case evaluation of the complex factual scenarios associated with multiple-generator waste sites will assess the propriety of applying joint and several liability on an individual basis.”

- The common law principles to be applied should be uniform and federal, rather than borrowed from the law of the forum state.

Judge Rubin rejected the government’s invitation to fashion a common law rule of mandatory joint and several liability. Instead, Judge Rubin borrowed a framework from the Second Restatement of Torts:

24. The government sought to hold parties joint and severally liable for Love Canal, which predated CERCLA and was the impetus for it. *See* *United States v. Hooker Chem. & Plastics Corp.*, 607 F. Supp. 1052, 1053 n.2 (W.D. N.Y. 1985) (case involving Hooker dumps in Niagara Falls, including Love Canal, filed in 1979). *Hooker* presented the question of the scope of liability of multiple responsible parties. *Id.* at 1053. Although all of the millions of pounds of chemical waste at Love Canal were put there by Hooker Chemical while Hooker Chemical owned the site, see *United States v. Hooker Chem. & Plastics Corp.*, 680 F. Supp. 546, 549, 556 (W.D. N.Y. 1988) (holding Hooker’s successor jointly and severally liable), the City of Niagara Falls was also held liable because it acquired the property from Hooker for nominal consideration and used it, among other things, as the location of a school. *United States v. Hooker Chem. & Plastics Corp.*, 965 F. Supp. 408, 413, 416 (W.D. N.Y. 1997) (city liable under CERCLA, divisibility of harm to be determined in apportionment phase).

25. H.R. REP. NO. 253, pt. 1, at 74 (1985), *reprinted in* 1986 U.S.C.C.A.N. 2835, 2856 (“The Committee fully subscribes to the reasoning of the court in the seminal case of *United States v. Chem-Dyne Corp.*, 572 F. Supp. 802 (S.D. Ohio 1983), which established a uniform federal rule allowing for joint and several liability in appropriate CERCLA cases.”); *Burlington Northern*, 129 S. Ct. at 1880 (“The seminal opinion on the subject of apportionment in CERCLA actions was written in 1983 . . .”).

26. *Chem-Dyne Corp.*, 572 F. Supp. at 804 (noting that “[a]t present, there is no case authority specifically addressing” scope of liability under CERCLA). The United States alleged claims against twenty-four defendants in *Chem-Dyne*. *Id.*

27. *See* 40 C.F.R. pt. 300, App. B (2008) (National Priorities List including and giving location of Chem-Dyne site).

An examination of the common law reveals that when two or more persons acting independently caused a distinct or single harm for which there is a reasonable basis for division according to the contribution of each, each is subject to liability only for the portion of the total harm that he has himself caused. Restatement (Second) of Torts, §§ 433A, 881 (1976) But where two or more persons cause a single and indivisible harm, each is subject to liability for the entire harm. Restatement (Second) of Torts, § 875 Furthermore, where the conduct of two or more persons liable under § 9607 has combined to violate the statute, and one or more of the defendants seeks to limit his liability on the ground that the entire harm is capable of apportionment, the burden of proof as to apportionment is upon each defendant. *Id.* at § 433B²⁸

Chem-Dyne thus presented a rare opportunity for a federal district judge to announce a rule of law entirely in the abstract, a “judicial interpretation of the nature and scope of liability under 42 U.S.C. § 9607” that was “intended to assist the parties in expediting discovery and trial preparation.”²⁹ Judge Rubin predicted that the rule would prove serviceable: “These rules clearly enumerate the analysis to be undertaken when applying 42 U.S.C. § 9607”³⁰ But he never got to perform that analysis in a concrete factual setting: the case settled less than two years after Judge Rubin issued his opinion.³¹

Other district courts quickly adopted the *Chem-Dyne* analysis.³² The courts of appeals unanimously followed suit, agreeing on the basic “federal

28. *Chem-Dyne Corp.*, 572 F. Supp. at 810 (selected citations omitted).

29. *Id.* at 811.

30. *Id.* at 810–11.

31. See Proposed Consent Decrees in Action Under the Comprehensive Environmental Response, Compensation and Liability Act and the Resource Conservation and Recovery Act to Require Defendants to Reimburse the United States for Response Costs and to Complete Cleanup of the Chem-Dyne Hazardous Waste Site in Hamilton, OH, 50 Fed. Reg. 25,797 (June 21, 1985) (announcing and soliciting public comment on proposed settlements related to Chem-Dyne site). In one very narrow sense, Judge Rubin did apply the legal rule to the facts of the case: treating the defendants’ motion as a motion for partial summary judgment that they were not jointly and severally liable; the court held that in light of their burden of proof the defendants had not demonstrated the absence of genuine issues of material fact. *Chem-Dyne Corp.*, 572 F. Supp. at 810. It is clear, however, that because the defendants argued that CERCLA did not provide for joint and several liability regardless of the facts, they had made no attempt to build a record that might have satisfied their burden.

32. See e.g., *United States v. Wade*, 577 F. Supp. 1326, 1337 (E.D. Pa. 1983) (adopting *Chem-Dyne* rule and denying plaintiff’s summary judgment motion because facts not sufficiently developed); *United States v. Conservation Chem. Co.*, 589 F. Supp. 59, 63 (W.D. Mo. 1984) (adopting *Chem-Dyne* rule and denying defendants’ summary judgment motion); *United States v. S.C. Recycling & Disposal*,

common law” principles that would govern the scope of liability in CERCLA cases.³³ Those principles, the courts agreed, derive primarily from section 433A of the Second Restatement of Torts (hereinafter referred to simply as “section 433A”):

§ 433 A. Apportionment of Harm to Causes

Inc., 653 F. Supp. 984, 994–95 (adopting *Chem-Dyne* legal analysis and granting plaintiff summary judgment because undisputed facts showed that harm was indivisible); *United States v. Argent Corp.*, 14 *Env'tl L. Rep.* 20, 616 No. 83-0523 (D.N.M. May 4, 1984) (denying plaintiff's summary judgment motion because of disputed fact issues). A few early cases adopted the view that equitable factors, rather than the causal principles of the Restatement, could provide a basis for apportionment in lieu of joint and several liability. *United States v. A&F Materials Co.*, 578 F. Supp. 1249, 1256 (S.D. Ill. 1984) (rejecting “rigid” application of Restatement formula to allow court to apportion by applying equitable “Gore factors”); *United States v. Stringfellow*, 14 *Env'tl L. Rep.* 20,385 No. CV-83-2501-MML, (C.D. Cal. Apr. 5, 1984) (suggesting federal courts *may* impose joint and several liability). The courts of appeals decisively rejected that analysis. *See United States v. Twp. of Brighton*, 153 F.3d 307, 318–20 (6th Cir. 1998) (divisibility inquiry based on causal apportionment distinct from equitable inquiry involving normative fault); *United States v. Monsanto Co.*, 858 F.2d 160, 171 n.22 (4th Cir. 1988) (equitable factors are relevant in subsequent actions for contribution but not to the question of joint and several liability, which focuses on divisibility); *United States v. Alcan Aluminum Corp. (Alcan-Butler)*, 964 F.2d 252, 270 n.29 (3d Cir. 1992) (“[T]he contribution proceeding is an equitable one in which a court is permitted to allocate response costs based on factors it deems appropriate, whereas the court is not vested with such discretion in the divisibility determination.”). Later, the Supreme Court did the same. *Burlington Northern*, 129 S. Ct. at 1882 n.9.

33. *United States v. Capital Tax Corp.*, 545 F.3d 525, 535–36 (7th Cir. 2008) (applying section 433A analysis, holding defendant failed to establish basis for apportionment); *Chem-Nuclear Sys. v. Bush*, 292 F.3d 254, 259–61 (D.C. Cir. 2002) (applying Section 433A analysis, affirming holding that responsible party failed to prove reasonable basis for apportioning harm and therefore could not obtain partial reimbursement of response costs from Superfund); *Carson Harbor Vill., Ltd. v. Unocal Corp.*, 270 F.3d 863, 870 (9th Cir. 2001) (articulating *Chem-Dyne* rule without citing *Chem-Dyne*); *United States v. Hercules, Inc.*, 247 F.3d 706, 717 (8th Cir. 2001) (applying *Chem-Dyne* analysis, reversing summary judgment that defendant was jointly and severally liable, because of disputed issues of fact); *United States v. Burlington N. R.R. Co.*, 200 F.3d 679, 697 (10th Cir. 1999) (following *Chem-Dyne*, holding that district court that found harm was geographically divisible correctly apportioned associated settlement credit); *Redwing Carriers, Inc. v. Saraland Apartments*, 94 F.3d 1489, 1513 (11th Cir. 1996) (approving *Chem-Dyne* test while distinguishing apportionment of liability from equitable contribution); *In re Bell Petroleum Servs.*, 3 F.3d 889, 901–04 (5th Cir. 1993) (applying Restatement analysis similar to *Chem-Dyne*, reversing judgment of joint and several liability entered after trial because where different defendants operated same plant emitting same pollutant for successive periods, evidence of duration and volume of operation provided reasonable basis for apportionment); *United States v. Alcan Aluminum Corp.*, 990 F.2d 711, 722 (2d Cir. 1993) (adopting *Chem-Dyne* approach, reversing plaintiff's summary judgment for consideration of disputed factual issues about whether defendant's hazardous substance contributed to environmental harm and if so whether contribution was divisible); *Alcan-Butler*, 964 F.2d at 268–69 (following *Chem-Dyne*, reversing plaintiff's summary judgment for hearing on disputed fact issues); *United States v. R.W. Meyer, Inc.*, 889 F.2d 1497, 1507 (6th Cir. 1989) (following *Chem-Dyne*, affirming summary judgment that defendant was jointly and severally liable, because finding of indivisible harm not clearly erroneous); *O'Neil v. Picillo*, 883 F.2d 176, 178 (1st Cir. 1989) (adopting *Chem-Dyne* approach, affirming judgment of joint and several liability against arrangers after trial); *Monsanto Co.*, 858 F.2d at 171–72 (affirming judgment of joint and several liability).

(1) Damages for harm are to be apportioned among two or more causes where

(a) there are distinct harms, or

(b) there is a reasonable basis for determining the contribution of each cause to a single harm.

(2) Damages for any other harm cannot be apportioned among two or more causes.³⁴

To apply those rules, courts struggled to figure out what terms like “damages” and “harm” mean in the statutory context of CERCLA liability for cost recovery or performance of response actions.³⁵ The most frequent and most challenging cases involved claims that “a single harm” could be apportioned on a reasonable basis by “determining the contribution of each cause.” Following the terminology of a Restatement comment, courts came to refer to the issue as “divisibility.”³⁶

Courts held, again following the Restatement, that liable defendants bear the burden of proof on divisibility in order to avoid joint and several liability.³⁷ The courts found the divisibility inquiry to be “intensely factual.”³⁸ It required “a fairly complex factual determination.”³⁹ And, although “‘commingled’ waste is not synonymous with ‘indivisible’ harm,”⁴⁰ for a typical Superfund site featuring “numerous, commingled

34. RESTATEMENT (SECOND) OF TORTS § 433A (1966). References in the text to the “Restatement” refer to RESTATEMENT (SECOND) OF TORTS unless the context clearly indicates another meaning.

35. See, e.g., *O’Neil*, 883 F.2d at 180 (expressing doubt as to whether “harm,” for divisibility purposes, consists of response costs, of environmental contamination that actually occurred, or of environmental contamination averted by response action); see also *United States v. Burlington N. & Santa Fe Ry. Co.*, 520 F.3d 918, 938–39 (9th Cir. 2008) (discussing possible interpretations of “harm” in CERCLA cases).

36. See RESTATEMENT (SECOND) OF TORTS § 433A cmt. d (1966) (stating that certain kinds of harm not clearly severable are still capable of division).

37. *Chem-Dyne Corp.*, 572 F. Supp. at 810 (citing RESTATEMENT (SECOND) OF TORTS § 433B (1966)).

38. *Alcan-Butler*, 964 F.2d at 269; see, e.g., *Hercules*, 247 F.3d at 717 (“[A]pproaches to divisibility will vary tremendously depending on the facts and circumstances of each case.”).

39. *Chem-Dyne Corp.*, 572 F. Supp. at 811.

40. *Alcan-Butler*, 964 F.2d at 270 n.29; accord *United States v. Alcan Aluminum Corp.*, 990 F.2d 711, 722 (2d Cir. 1993) (“[C]ommingling is not synonymous with indivisible harm”); *Hercules*, 247 F.3d at 718 (“[C]ommingling is not synonymous with indivisible harm.”) (quoting *Alcan*, 990 F.2d at 722); cf. *O’Neil*, 883 F.2d at 183 n.11 (“Because there was substantial commingling of wastes [in contaminated soil], we think that any attempt to apportion the costs incurred by the state in removing the contaminated soil would necessarily be arbitrary.”).

hazardous substances with synergistic effects and unknown toxicity,⁴¹ proving divisibility was “a very difficult proposition.”⁴² As a result, defendants “rarely succeed”⁴³ in meeting their burden. The failure of proof variously consisted of an inability to segregate the harm caused by a defendant’s waste amid a toxic soup of potentially interacting hazardous substances,⁴⁴ or an inability to quantify a defendant’s volumetric or geographic contribution as a proportion of the total waste,⁴⁵ or both.

Until *Burlington Northern*, in only one significant CERCLA case—*Bell Petroleum*—had a court clearly held that a defendant had established a reasonable basis for apportioning a single harm. The facility and the hazardous substance release in *Bell Petroleum*, however, were quite different from the prototypical CERCLA dump site. The contamination to which the government responded consisted of a single hazardous substance (chromium) that originated from industrial operations at a single plant, although it had spread from that plant in groundwater. The plant had been operated, in succession, by three different manufacturers. All of them conducted essentially the same operations that resulted in chromium reaching the aquifer. On these facts, the Fifth Circuit held as a matter of law that the harm was at least theoretically capable of apportionment.⁴⁶ As a factual matter, it also held that the defendants had presented sufficient

41. *In re Bell Petroleum Servs.*, 3 F.3d 889, 903 (5th Cir. 1993).

42. *Control Data Corp. v. S.C.S.C. Corp.*, 53 F.3d 930, 934 n.4 (8th Cir. 1995); *see, e.g., Alcan-Butler*, 964 F.2d at 269 (“Alcan’s burden in attempting to prove the divisibility of harm . . . is substantial, and the analysis will be factually complex. . . .”). Although the Third Circuit, in *Alcan-Butler*, held that the district court had improperly granted summary judgment to the plaintiff, on remand the district court found after a hearing that Alcan had failed to meet its burden, *United States v. Alcan Aluminum Corp.*, 892 F. Supp. 648, 648 (M.D. Pa. 1995), and the Third Circuit affirmed without opinion. 96 F.3d 1434 (1996). The Second Circuit similarly affirmed Alcan’s joint and several liability after remand. *Alcan*, 990 F.2d at 711.

43. *Bell Petroleum*, 3 F.3d at 901; *accord United States v. Capital Tax Corp.*, 545 F.3d 525, 535 n.9 (7th Cir. 2008) (“[D]ivisibility is a ‘rare scenario.’”); *O’Neil*, 883 F.2d at 178–79 (“[P]ractical effect of placing the burden on defendants has been that responsible parties rarely escape joint and several liability . . .”).

44. *E.g., United States v. Alcan Aluminum Corp. (Alcan-Fulton)*, 315 F.3d 179, 187 (2d Cir. 2003); *United States v. Alcan Aluminum Corp.*, 892 F. Supp. 648, 656–57 (M.D. Pa. 1995), *aff’d mem.*, 96 F.3d 1434 (3d Cir. 1996); *Monsanto*, 858 F.2d at 172–73. (“In this case, however, volume could not establish the effective contribution of each waste generator to the harm at the Bluff Road site.”).

45. *E.g., Capital Tax*, 545 F.3d at 535–36; *United States v. Vertac Chem. Corp.*, 453 F.3d 1031, 1047 (8th Cir. 2006); *Alcan-Fulton*, 315 F.3d at 186; *Chem-Nuclear*, 292 F.3d at 261 (“In short, while CWM produces some circumstantial evidence to support its theory of geographic divisibility, it has not managed the ‘very difficult proposition’ of proving its theory by a preponderance of the evidence.”); *O’Neil*, 883 F.2d at 182.

46. *Bell Petroleum*, at 902–03 (“[T]he question whether the harm to the plaintiff is capable of apportionment among two or more causes is a question of law.”) (quoting RESTATEMENT (SECOND) OF TORTS § 434 (1966)). The court distinguished cases involving chemical soups presenting possible synergistic effects. *Id.* at 903.

documentary and testimonial evidence from which the trier of fact could have determined the relative contribution of each defendant to the harm.⁴⁷ The court of appeals remanded to the district court with instructions to make that determination.⁴⁸

B. Burlington Northern

The facility at issue in *Burlington Northern* was the Brown & Bryant Superfund Site in Arvin, California. Brown & Bryant, Inc. (B&B) ran an agricultural chemical distribution business there; as in *Bell Petroleum*, the site was not a dump for waste from off-site manufacturers.⁴⁹ B&B originally conducted its operations on property it owned (the “B&B Parcel”), but it later leased from two railroad companies (the “Railroads”) a smaller adjacent parcel that the Railroads jointly owned (the “Railroad Parcel”).⁵⁰ B&B’s sloppy operation resulted in soil and groundwater contamination with at least three hazardous substances: Dinoseb, Nemagon, and D-D, the last two of which were sold to B&B by the Shell Oil Company (“Shell”).⁵¹

The United States and the State of California eventually conducted removal and remedial action in response to the release of hazardous substances at the Arvin Site and sued for cost recovery. By the time the cost recovery suit was tried, B&B had long since disappeared into insolvency. The defendants at trial were the Railroads, allegedly liable as current owners⁵² and as owners at the time of disposal,⁵³ and Shell, allegedly liable as an operator at the time of disposal⁵⁴ and as an arranger.⁵⁵

1. The District Court Decision

District Judge Oliver W. Wanger lived with the Brown & Bryant Superfund site for a decade. He tried the governments’ cost recovery case over a period of more than two months, and he issued his very long

47. *Id.* at 904.

48. *Id.* at 889.

49. *Burlington N. & Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870, 1874 (2009).

50. *Id.*

51. *Id.* at 1875.

52. 42 U.S.C. § 9607(a)(1) (2006).

53. § 9607(a)(2).

54. *See id.*

55. *See id.* § 9607(a)(3) (persons who arranged for disposal or treatment as responsible parties).

decision four years later.⁵⁶ Judge Wanger concluded that the Railroads were liable as current owners and owners at the time of disposal, and that Shell was liable as an arranger but not as an operator.

The Railroads and Shell each had argued that it should not be held liable at all. Neither defendant had pressed a theory of divisibility.⁵⁷ Nevertheless, Judge Wanger felt that “the circumstances of the case” required apportionment, so he *sua sponte* undertook a search of the record for evidentiary support.⁵⁸

There can be no question that concerns for equity drove Judge Wanger to conduct this “heroic labor.”⁵⁹ In the course of holding the Railroads liable, Judge Wanger noted that CERCLA makes facility owners liable regardless of whether they were “responsible for the actual disposal,”⁶⁰ thus ensuring “that at least some entity other than the taxpayers will be potentially available, in the first instance, to redress the environmental harm.”⁶¹ Tellingly, however, immediately after the holding the Railroads liable, Judge Wanger added an additional and, in the context, apparently gratuitous conclusion of law: “The volume of the hazardous substance releasing activities on the B&B site is at least ten times greater than any Railroad parcel releases.”⁶² The presence, in the court’s liability discussion, of that curiously-worded conclusion of law—which began by referring to a volume of activity and ended by referring to a volume of releases of hazardous substances—illustrates Judge Wanger’s discomfort with the “potentially unfair” consequences of CERCLA’s liability scheme.⁶³ The judge noted, however, that such “concerns are more appropriately addressed in the harm (apportionment) stage.”⁶⁴

56. *United States v. Atchison, Topeka & Santa Fe Ry. Co.*, No. CV-F-92-6058, 2003 U.S. Dist. LEXIS 23130, at *4 (E.D. Cal. July 14, 2003).

57. *Id.* at *236.

58. *Id.* at *237.

59. *Burlington N. & Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870, 1885 (2009) (Ginsburg, J., dissenting).

60. *Atchison, Topeka & Santa Fe Ry. Co.*, 2003 U.S. Dist. LEXIS 23130, at *141 (¶ 324a); *see id.* at *142 (¶¶ 324b–c) (“Although owners may not actually engage in disposal of hazardous substances, they are still deemed polluters for allowing ultrahazardous activity to occur on their property.”).

61. *Id.* at *143 (¶ 324d).

62. *Id.* at *146. Elsewhere, Judge Wanger made many factual findings that would support a qualitative inference that the magnitude of releases on the B&B Parcel far exceeded that of the releases on the Railroad Parcel. *E.g.*, *id.* at *24–25, *33–35, *253–55.

63. *Id.* at *157 (¶ 352).

64. *Id.* at *159 (¶ 353); *see id.* at *237 (¶ 455) (parties, by declining to offer evidence on apportionment, “left the court to independently perform the equitable apportionment analysis”).

In the apportionment stage, the court held that the case involved a single “harm”—the plume of contaminated groundwater.⁶⁵ The court reasoned generally that this plume “predominately” consisted of chemicals originally spilled on the B&B Parcel; the evidence showed that the volume of spills resulting from B&B’s activities on the Railroad Parcel, although “incalculable,” had been much smaller.⁶⁶ To produce a quantitative apportionment, Judge Wanger multiplied three fractions: the area of the Railroad Parcel as a fraction of the total area of both parcels (19%), the number of years during which B&B operated on the Railroad Parcel as a fraction of the total number of years of B&B’s operation (0.45), and the amount of site contamination attributed to the chemicals spilled on the Railroad Parcel that could have contributed to the groundwater plume (2/3rds).⁶⁷ The product equaled approximately 6%, which the judge increased by one-half, to 9%, to account for possible “calculation errors.”⁶⁸

2. The Ninth Circuit Decision

The court of appeals reversed Judge Wanger’s apportionment of the Railroads’ liability.⁶⁹ In the course of determining the standard of review, the Ninth Circuit held that the divisibility issue comprised two components: first, whether “the particular harm at issue in the case is theoretically capable of apportionment,” (i.e., divisible or indivisible) which is a question of law;⁷⁰ and second, if so, whether the defendant seeking apportionment submitted sufficient evidence to establish a reasonable basis for it.⁷¹

The court of appeals agreed with the district court that the case involved a single harm: “the contamination on the Arvin site.”⁷²

65. *Id.* at *250–51 (¶ 472). The court included contaminated overlying soil in the single harm because contamination could leach from the soil into the groundwater. *Id.*

66. *Id.* at *238 (¶ 458); *see id.* at *146, *254, *259 (referring to the spills in quantifiable terms).

67. *Id.* at *260 (¶ 489). All three chemicals were found in soil on the Railroad Parcel, but the court concluded that the “slight” D-D contamination could be “offset” based on other facts tending to indicate that the D-D spilled there would not have required remediation. *Id.* at *259 (¶ 488). Of the remaining two chemicals, the court wrote: “Estimates are that these two chemicals contributed to 2/3 of overall Site contamination.” *Id.* at *259 (¶ 489).

68. *Id.* at *260 (¶ 489). Judge Wanger also apportioned Shell’s liability, assigning it a six percent share (without any adjustment for calculation errors). *Id.* at *267 (¶ 498).

69. The Ninth Circuit’s original decision, *United States v. Burlington N. & Santa Fe Ry. Co.*, 479 F.3d 1113 (9th Cir. 2007), was amended after a petition for rehearing en banc. *United States v. Burlington N. & Santa Fe Ry. Co.*, 520 F.3d 918, 952 (9th Cir. 2008). The court denied the petition for rehearing en banc over an eight-judge dissent. *Id.*

70. *Burlington Northern*, 520 F.3d at 942.

71. *Id.*

72. *Id.* at 943.

Accordingly, the court held that apportionment could be justified only if defendants established, per section 433(A)(1)(b), a reasonable basis for determining the contribution of each cause to that harm.⁷³ The Ninth Circuit found “no dispute” on the “purely legal question—whether the harm is capable of apportionment.”⁷⁴ The court of appeals also agreed with the district court that proof of the portion of “contaminants found on the [entire] Arvin parcel . . . attributable to the presence of toxic substances or to activities on the Railroad parcel” would provide a reasonable basis for apportionment.⁷⁵ But it found clearly erroneous the district court’s finding that such proof was in the record, noting that the Railroads presented no evidence that the contribution of hazardous substances from their parcel was in any way proportional to the parcel’s area, the number of years of activity, or the number of chemicals involved. Therefore, the court of appeals held, the district court’s calculations “bore insufficient logical connection to the pertinent question.”⁷⁶

3. The Supreme Court Opinion

The Supreme Court reversed, reinstating the district court’s apportionment.⁷⁷ The Supreme Court found no error in the Ninth Circuit’s analysis of the legal standards for divisibility.⁷⁸ The Court endorsed the *Chem-Dyne* analysis and, apparently, the decisions of the courts of appeals that “fully embraced” it.⁷⁹ Quoting section 433A(1)(b), the Court stated that “apportionment is proper when there is a reasonable basis for determining the contribution of each cause to a single harm,” and agreed that the party seeking apportionment bears the burden of proof on the issue.⁸⁰ “Neither the parties nor the lower courts dispute [these] principles,” the Court noted.⁸¹

73. *Id.* at 939.

74. *Id.* at 942.

75. *Id.* at 946.

76. *Id.*

77. *Burlington N. & Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870, 1883 (2009).

78. In fact, the Supreme Court barely mentioned the Ninth Circuit’s opinion in this context. *See id.* at 1880–81 (mentioning little of the Ninth Circuit’s opinion and instead discussing *Chem-Dyne* and citing only decisions of other federal appellate courts).

79. *Id.* at 1881.

80. *Id.* (quoting RESTATEMENT (SECOND) OF TORTS § 433A(1)(b) (1963–64)). The opinion does not even note the existence of the Third Restatement on apportionment of liability, which reflects the widespread legislative modification of joint and several liability by comparative fault or comparative responsibility statutes. *See generally* RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 1 (2000). The Third Restatement describes regimes of pure joint and several liability, pure apportionment, and several hybrids without expressing an ultimate preference for any. *Id.* § 17. It suggests that its principles should inform interpretation of CERCLA and other liability-imposing

Both “the District Court and Court of Appeals agreed that the harm created by the contamination . . . although singular, was theoretically capable of apportionment,” the Court continued.⁸² It then reviewed the district court’s apportionment and concluded that “facts contained in the record reasonably supported the apportionment.”⁸³ The Supreme Court seemed heavily influenced by the qualitative evidence that made it “abundantly clear that the primary pollution” at the site was deposited on the B&B Parcel,⁸⁴ and appeared to accept without question the district court’s inference from that qualitative evidence that “spills . . . on the Railroad parcel contributed to no more than 10% of the total site contamination.”⁸⁵ “With those background facts in mind,” the Supreme Court was persuaded that it was reasonable for the district court to use the relative area of the parcels and the relative number of years of operation as the “starting point for its analysis.”⁸⁶ Coincidentally, the relative area of the parcels multiplied by the number of years of operation equals 9%—the same percentage the district court ultimately apportioned to the Railroads, and a close approximation of “no more than 10%.”⁸⁷

The importance of this coincidence became apparent as the Supreme Court considered the last factor in the district court’s apportionment formula, 2/3rds, to represent the harm caused by the two chemicals spilled in relatively large quantity on the Railroad Parcel. The district court’s “conclusion that those two chemicals accounted for only two-thirds of the contamination requiring remediation,” the Court understated, “finds less support in the record.”⁸⁸ But never mind—the district court’s 50% fudge factor and its erroneous 1/3rd reduction, neither one of which had any particular factual support in the record, happily offset one another.⁸⁹ One wonders what guidance the district court in the next case is supposed to take from this ruling.⁹⁰

statutes but also acknowledges that CERCLA and other statutory liability regimes may present “special policy considerations” influencing the choice in the context of those statutes. *Id.* § 1 cmt. e.

81. *Burlington Northern*, 129 S. Ct. at 1881.

82. *Id.*

83. *Id.* at 1882. The Court acknowledged that the district court erred by invoking equity in the apportionment analysis, but glossed over the error because the “actual apportionment decision was properly rooted in evidence” of causal contribution. *Id.* at 1882 n.9.

84. *Id.* at 1883.

85. *Id.*

86. *Id.*

87. *Id.*

88. *Id.*

89. *Id.*

90. Is it always appropriate to increase a calculated apportionment to account for possible error? If it is, is 50% necessarily the right amount by which to increase the calculated apportionment?

The Court might have reached the same conclusion more honestly. It could have agreed with the Ninth Circuit's correct observation that the record was inadequate to support the district court's assumption of proportionality between contamination and surface area or number of years.⁹¹ It could then have stated, however, that the qualitative evidence relating to the amount of activity and spillage on the two parcels was overwhelming—so overwhelming that it actually justified the inference that 10% was the highest plausible quantitative estimate. That ruling, too, would have been open to questioning and criticism, but it would have provided some useful guideposts to lower courts and would have indicated clearly the fact-bound nature of the holding.

But that is not what the Supreme Court did. So now lower courts must determine how broadly or narrowly to apply the *Burlington Northern* decision. Section II explains that, in making that choice, courts should consider the overall goals of CERCLA and the role that joint and several liability plays in achieving them.

II. JOINT AND SEVERAL LIABILITY IN THE CERCLA SCHEME

Despite the imprimatur the Supreme Court gave to section 433A of the Second Restatement,⁹² courts “follow the Restatement, however, only to the extent that it is compatible with the provisions of CERCLA.”⁹³ Under the Restatement, for example, the decision of whether liability is apportioned or is joint and several does not even arise unless the plaintiff has first proven that each defendant's conduct was a “substantial” factor in bringing about the harm, but courts “decline to place this threshold burden on the government in CERCLA actions” because to do so would be inconsistent with the statute's liability-creating provision.⁹⁴ Judicial determination of

If it is, and 9% was the apportionment supported by the record, shouldn't the Railroads' share have been increased to 13.5%? Is it never appropriate to include an adjustment for possible error?

91. See generally Misorowski & Eagle, *supra* note 23 (criticizing the Supreme Court for approving apportionment despite lack of expert scientific testimony). As Misorowski & Eagle point out, it is unlikely that an expert trying to testify in support of the district court's apportionment formula could have survived a *Daubert* challenge. It is a useful thought experiment to wonder how *Burlington Northern* would have come out had the burden of proof been in the opposite direction. If a plaintiff seeking cost recovery had to prove the Railroads' contribution in order to hold the Railroads liable at all, would the Supreme Court have affirmed a plaintiff's verdict of nine percent liability on the same record?

92. *Burlington N. v. Burlington N. and Santa Fe Ry. Co. v. United States*, 520 F.3d 918, 944 (9th Cir. 2008) (stating section 433A is a “universal starting point” for divisibility analysis) (quoting *United States v. Hercules, Inc.*, 247 F.3d 706, 717 (8th Cir. 2001)).

93. *Hercules*, 247 F.3d at 717; accord *United States v. Capital Tax Corp.*, 545 F.3d 525, 535 n.8 (7th Cir. 2008).

94. *O'Neil v. Picillo*, 883 F.2d 176, 179 (1st Cir. 1989).

the scope of CERCLA liability is not a pure exercise of common law judging, but an exercise in interstitial statutory interpretation.⁹⁵ Courts, therefore, should consider how well their application of Restatement provisions comports with the statute's overall structure and purpose as well as its literal provisions.⁹⁶

Despite the superficial resemblance between CERCLA liability and tort liability for pollution, the analogy between CERCLA and tort is far from perfect. In a traditional tort case involving multiple independent tortfeasors, the "primary consequence of what form of joint and several or several liability is imposed is the allocation of the risk of insolvency of one or more responsible tortfeasors."⁹⁷ This is also a critical consequence of the choice between joint or apportioned liability in CERCLA cases, of course, as the *Burlington Northern* case thoroughly illustrates. But joint and several liability is vital to the CERCLA scheme in important ways that do not apply to tort actions. CERCLA "was designed to promote the 'timely cleanup of hazardous waste sites' and to ensure that the costs of such cleanup efforts were borne by those responsible for the contamination."⁹⁸ The routine imposition of joint and several liability, more than its mere theoretical availability, has admirably served those purposes.

A. Implementing the Polluter Pays Principle

Most obviously, joint and several liability furthers the second of CERCLA's major goals set forth above. By making solvent liable parties (rather than the responding government) bear the risk that other liable parties are insolvent, joint and several liability places the financial burden of CERCLA cleanup on those responsible for the contamination.⁹⁹

One might object that "responsibility" for contamination extends only so far as one's several contribution to the problem, but that begs the question. Someone must bear any "share" that would be assigned to an insolvent liable party. The issue is whether Congress evinced any

95. *United States v. Alcan Aluminum Corp.*, 964 F.2d 252, 268, 270 n.29 (3d Cir. 1992); *United States v. Chem-Dyne Corp.*, 572 F. Supp. 802, 808 (S.D. Ohio 1983).

96. *See In re Bell Petroleum Servs.*, 3 F.3d 889, 902 (5th Cir. 1993) ("Restatement principles must be adapted, where necessary, to implement congressional intent with respect to liability under the unique statutory scheme of CERCLA.") (emphasis in original).

97. RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 10 cmt. a (2000).

98. *Burlington N. & Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870, 1874 (2009) (quoting *Consol. Edison Co. of N.Y. v. UGI Util., Inc.*, 423 F.3d 90, 94 (2d Cir. 2005)).

99. "The degree to which the United States will be able to protect its financial interest in the trust fund is directly related to the scope of liability under CERCLA . . ." *Chem-Dyne Corp.*, 572 F. Supp. at 808.

preference for allocating such share to the responding government, on the one hand, or to viable responsible parties, on the other. The statute itself¹⁰⁰ provides plenty of evidence of “the general congressional intent of placing liability for toxic waste clean-up as nearly as possible on those responsible for creating the hazard,”¹⁰¹ even though Congress also created the Hazardous Substances Superfund as a backstop.

The most telling provisions are those that Congress enacted specifically in response to the argument that joint and several liability unfairly makes relatively minor contributors disproportionately liable for CERCLA response actions. Congress did not mandate that the courts abandon or limit the imposition of joint and several liability.¹⁰² Instead, endorsing the *Chem-Dyne* approach, Congress chose to rely on contribution to ameliorate the “harshness”¹⁰³ of joint and several liability, even though, of course, a contribution right would be futile in proportion to the extent of insolvency among those allocated equitable shares.

When generators of municipal solid waste and of small amounts of waste bearing hazardous substances continued to express concerns about being subject to the CERCLA liability scheme, Congress again declined to enact a scheme of several liability in proportion to causal contribution, or even, for example, to specify that joint and several liability would apply only to liable parties whose contributions exceeded some threshold of significance. Instead, Congress chose to entirely exempt from liability certain types of parties that presented compelling cases of unfairness in the existing liability regime.¹⁰⁴ In doing so, Congress again acknowledged the general availability of joint and several liability under the statute,¹⁰⁵ and Congress again chose not to change it—preferring a different way to “return a little bit of basic fairness to Superfund’s liability regime.”¹⁰⁶ In

100. Statements of congressional intent in the legislative history that ratify the early joint and several liability jurisprudence under CERCLA provide additional support. See *supra* note 31.

101. *United States v. Wade*, 577 F. Supp. 1326, 1339 (E.D. Pa. 1983).

102. The enacted provisions did again demonstrate, however, that “when Congress wanted to draw distinctions based on concentration or quantity, it expressly provided as much.” B.F. Goodrich Co. v. Murtha, 958 F.2d 1192, 1200 (2d Cir. 1992).

103. *U.S. Bank Nat’l. Ass’n v. Env’tl. Prot. Agency*, 563 F.3d 199, 207 n.4 (6th Cir. 2009).

104. See 42 U.S.C. § 9607(o) (2006) (de micromis exemption); see also *id.* § 9607(p) (municipal solid waste exemption). Congress enacted both provisions as part of the Small Business Liability Relief and Brownfields Revitalization Act, Pub. L. No. 107-118 (2002).

105. H.R. REP. NO. 107-70, at 2 (2001) (CERCLA “has been interpreted by the courts to have established responsibility for clean ups based upon a retroactive, strict, joint, and several liability scheme”); 147 CONG. REC. H 10,903 (Dec. 19, 2001) (statement of Rep. Boehlert) (describing problems of arranger for disposal of very small quantity of waste under “current strict, joint, and several liability system . . .”).

106. 147 CONG. REC. H 10,903 (Dec. 19, 2001) (statement of Rep. Boehlert).

fact, in response to the argument that exempting parties from liability would reduce the government's ability to recover costs to replenish the Superfund, the pertinent House committee explained that "to the extent EPA could recover the exempted PRP's share of the costs from any other remaining PRPs at a particular site, there would be no reduction in costs recovered."¹⁰⁷ Such recovery, of course, is possible only if liability is joint and several; otherwise no liable party could be forced to cover the causally-apportioned share of an exempted party.

Furthermore, the statute's treatment of settlements, and in particular of so-called "ability to pay" settlements, demonstrates congressional intent that other responsible parties, and not the government, bear the shares of insolvent parties. The 1986 amendments to CERCLA included provisions designed to encourage and expedite settlements. One provision specified that a settlement with one defendant "reduces the potential liability of the others by the amount of the settlement," rather than by the settling defendant's apportioned share of the liability.¹⁰⁸ This places on non-settling defendants the risk that the government will make an inadequate settlement. In 2002, Congress further clarified that the government should reduce the amount required in settlement for a party that demonstrated an inability or limited ability to pay response costs.¹⁰⁹ These provisions combine to assign the responsibility of filling the gap between what a liable party can pay and what it rightly ought to pay. Congress put that burden squarely on other liable parties instead of the responding government—just as the imposition of joint and several liability does.

Finally, if joint and several liability were to become rare under CERCLA, or even if its availability in any given case were to become subject to considerable doubt, government plaintiffs would have little alternative but to sue as many potentially responsible parties as they reasonably could in order to maximize the potential cost recovery. This would drive up the government's enforcement costs, both because it would have to pursue more parties and because the cases would become inherently

107. H.R. REP. NO. 107-70, at 5 (2001).

108. 42 U.S.C. § 9613(f)(2) (2006); *see id.* § 9622(g)(5) (same, with respect to expedited "de minimis" settlements with arrangers that contributed small amounts of hazardous substances to the facility or with owners who did not dispose of hazardous substances or contribute to the release). Contribution protection for settlers coupled with this "pro tanto" approach, which makes no sense if parties can only be held severally liable for their apportioned share, strongly implies that Congress understood that parties would be liable for shares that could be causally attributed to other parties, as in joint and several liability.

109. § 9622(g)(7).

more complex. Those costs are recoverable under CERCLA,¹¹⁰ but they, too, presumably would be recoverable only severally. The changed legal regime would thus force the government to spend more money on enforcement and to lose a portion of each dollar spent if some responsible parties were insolvent. Not only would this exacerbate the erosion of the polluter-pays principle, but it would also, if only by competition for resources, likely cause a delay in government cleanup activities—thereby frustrating CERCLA’s other primary goal.

B. *Facilitating Response Action*

“Timely cleanup” has been central not just to the legislative purpose, but to the executive’s implementation of CERCLA. In 1989, EPA initiated its “enforcement first” approach, which seeks to have responsible parties undertake response action in preference to a government-conducted, Superfund-financed cleanup followed by cost recovery litigation.¹¹¹ The near-certain, or even likely, prospect of joint and several liability for the costs of responding to a release of hazardous substances is an obvious incentive for one or a group of responsible parties to agree to undertake response action,¹¹² and under the evolved legal regime responsible parties have very commonly entered such agreements.¹¹³ By contrast, a party that confidently believed it faced only several liability would be much more likely to prefer litigating against the government to attempt to establish an x% share of liability, rather than undertaking to perform a response action

110. 42 U.S.C. § 9607(a)(4)(A) (2006); *see id.* § 9601(25) (“The terms ‘respond’ or ‘response’ means remove, removal, remedy, and remedial action; all such terms (including the terms ‘removal’ and ‘remedial action’) include enforcement activities related thereto.”).

111. EPA, SUPERFUND 20TH ANNIVERSARY REPORT, TEXT TIMELINE (2000), <http://www.epa.gov/superfund/20years/texttl.htm>; EPA OFFICE OF WASTE PROGRAMS ENFORCEMENT, SUPERFUND ENFORCEMENT STRATEGY AND IMPLEMENTATION PLAN 7, 15, 18–19 (Sept. 26, 1989), <http://www.epa.gov/compliance/resources/policies/cleanup/superfund/strategy-imp-rpt.pdf> (describing emphasis on private party response action implementation as general principle, in removal program, and in remedial program).

112. *See United States v. Atchison, Topeka & Santa Fe Ry. Co.*, No. CV-F-92-6058, 2003 U.S. Dist. LEXIS 23130, at *229 (E.D. Cal. July 16, 2003) (“[I]mposing joint and several liability carries out the legislative intent by insuring that responsible parties will fulfill their obligations to clean up the hazardous waste facility.”) (quoting *United States v. Stringfellow*, 661 F. Supp. 1053, 1060 (C.D. Cal. 1987); 131 Cong. Rec. 23,928, 23,953 (Sept. 17, 1985) (responses by EPA appended to statement of Sen. Stafford, predicting that replacing joint and several liability with apportioned liability would delay cleanup by making injunctive relief more difficult to obtain and reducing incentives for settlement)).

113. A recent study identified nearly 1800 such agreements to perform response actions with an estimated value of \$22.5 billion, with respect only to the subset of response actions that involve sites on the National Priorities List. *See Martha L. Judy & Katherine N. Probst, Superfund at 30*, 11 VT. J. ENVTL. L. 191, 199 (2009).

and then trying to recover the difference between 100% and x% from a multitude of other responsible parties.¹¹⁴

Even when responsible parties have not agreed to perform response actions, the government nevertheless has very often secured private performance by issuing a unilateral administrative order under section 106(a) of CERCLA.¹¹⁵ Failing to comply with such an order without sufficient cause subjects the violator to stiff civil penalties¹¹⁶ and punitive damages,¹¹⁷ which might elicit performance even from a party that believed it was liable only for a portion of site response costs and that imposition of joint and several liability was unlikely. But such a party presumably would, upon completion of the action, seek reimbursement from the Superfund¹¹⁸ for the reasonable costs it incurred in excess of its apportioned liability.¹¹⁹

114. Agreements to perform response action provide a variety of benefits to settling defendants. A performing party secures the right to select contractors (subject to government veto) and obtains a degree of control over the work and costs. Moreover, the government sometimes offers a partial compromise of past costs as an incentive for agreeing to the obligation to perform future response actions (an offer made feasible by the government's knowledge that it could pursue non-settlers jointly and severally for any shortfall). All these benefits are worth proportionately less to a party that is confident it faces only an apportioned share of liability. Compared to settling with the government and suing many other responsible parties for contribution, defending against the government and seeking apportionment would probably cost less, would be administratively easier, and would avoid both litigation risk and insolvency risk against the other responsible parties. The analysis is no different for attempted negotiations with a group of responsible parties, each of which believes it is only severally liable.

115. 42 U.S.C. § 9606(a) (2006).

116. § 9606(b)(1) ("Any person who, without sufficient cause, willfully violates, or fails or refuses to comply with, any order of the President under subsection (a) may . . . be . . . fined not more than \$25,000 for each day in which such violation occurs or such failure to comply continues.").

117. 42 U.S.C. § 9607(c)(3) (2006) ("If any person who is liable for a release or threat of release of a hazardous substance fails without sufficient cause to properly provide removal or remedial action upon order of the President . . . such person may be liable to the United States for punitive damages in an amount at least equal to, and not more than three times, the amount of any costs incurred by the Fund as a result of such failure . . .").

118. § 9606(b)(2) (authorizes judicially reviewable petitions for reimbursement by "[a]ny person who . . . complies with" a section 106(a) order). To obtain reimbursement, a petitioner must "establish by a preponderance of the evidence that it is not liable for response costs." § 9606(b)(2)(C).

119. The Railroads involved in *Burlington Northern* did just this. EPA ordered them to repair a security fence, build a berm, and install monitoring wells on their parcel at the Brown & Bryant site. *In re Brown & Bryant, Inc. Site, Pet. for Reimbursement of Costs* 7, No. 94-12 (EPA Oct. 5, 1992). Their initial petition for reimbursement contended (as they contended in the district court) that they bore no liability whatsoever for the site. *Id.* at 2, 13-20. After the district court's judgment, the Railroads moved in the administrative proceeding for a reimbursement award of 91% of their costs of compliance with the 106(a) order, consistent with the district court's finding that they bore a 9% share of liability. *In re Brown & Bryant, Inc. Site, Notice of Expiration of Stay and Request for Issuance of Final Order Granting Reimbursement* 4-5, 18, No. 94-12 (EPA Sept. 30, 2003). Based on review of the Environmental Appeals Board docket as of this writing, the petition apparently remains pending. At least one court decision strongly implies, however, that reimbursement would be available to a party in the Railroads' position. *Chem-Nuclear*, 292 F.3d at 259 (if it could meet its burden of proof on

If reimbursement claims based on apportionment of liability were to begin to succeed routinely, EPA would face constant uncertainty as to the eventual financial outcome of any section 106(a) order. That uncertainty could inhibit EPA's willingness to use its authority to issue orders, reducing the utility of this critical statutory tool for achievement of the key statutory objective of timely response actions.¹²⁰

The statutory objective of achieving prompt response action—which entails efficacious use of the statute's provisions for responsible party implementation under orders, injunctions, and settlements¹²¹—distinguishes CERCLA from tort law, which is concerned only with where the financial consequences of a completed loss will lie.¹²² This distinction should inform courts' efforts to apply common law principles in the CERCLA context.¹²³ The common law's willingness to apportion harm was predicated at least in part on a concern for fairness: that “the one who did the least” not be “made liable for the damages of others far exceeding” that.¹²⁴ But CERCLA, as courts have drily noted, “is not a legislative scheme which places a high priority on fairness to” parties made liable;¹²⁵ it imposes liability, for instance, even if no evidence exists to satisfy the traditional common law causation standard.¹²⁶ Joint and several liability is a pretty big hammer to

apportionment, petitioner clearly liable for at least some costs could nonetheless “avoid joint-and-several liability for the full” cost of response action performed under order; court held burden was not met).

120. Even if EPA continued to issue section 106(a) orders, the need to plan amid the attendant uncertainty, as well as to cover the eventual reimbursements, would surely inhibit EPA commitments of resources to Superfund-lead sites, impeding achievement of the statute's cleanup objective in another way.

121. See 42 U.S.C. § 9604(a) (authorizing the President to allow a responsible party to take response action including remedial investigations and feasibility studies); § 9606(a) (authorizing the President to issue orders to protect public health, welfare, and the environment or to require the Attorney General to secure injunctive relief); 42 U.S.C. § 9622(a) (2006) (authorizing the President to enter settlements under which responsible parties will perform response actions).

122. In this respect, an administrative order or suit for injunction under CERCLA also is different from a tort claim seeking abatement of a nuisance, because a nuisance defendant generally can be enjoined only to cease its own nuisance-creating activity, while any party liable for a release of hazardous substances can be ordered to take response action.

123. *E.g.*, *United States v. Chem-Dyne Corp.*, 572 F. Supp 802, 810 (S.D. Ohio 1983).

124. *Chipman v. Palmer*, 77 N.Y. 51, 53 (1879).

125. *United States v. Rohm & Haas Co.*, 721 F. Supp. 666, 686 (D.N.J. 1989).

126. See, *e.g.*, *United States v. Alcan Aluminum Corp. (Alcan-Fulton)*, 315 F.3d 179, 184 (2d Cir. 2003) (“[G]overnment is not required to show that a specific defendant's waste caused the incurrence of cleanup costs in order for strict liability to attach to that defendant.”); *United States v. Alcan Aluminum Corp.*, 990 F.2d 711, 721 (2d Cir. 1993) (“CERCLA does away with a causation requirement.”); *United States v. Alcan Aluminum Corp. (Alcan-Butler)*, 964 F.2d at 265 (“Congress . . . imposed liability upon a class of responsible persons without regard to whether the person specifically caused or contributed to the release and the resultant response costs.”) (emphasis in original); *United States v. Hercules*, 247 F.3d 706, 716 (8th Cir. 2001) (CERCLA “does not require the government to

use to achieve the goal of responsible-party-led cleanups,¹²⁷ but that does not mean courts should ignore the congressional objective.

The Supreme Court's opinion in *Burlington Northern* did not consider whether or how its ruling would affect the achievement of CERCLA's statutory goals. But it also did not instruct that the congressional purpose is irrelevant. Those goals should suffuse the thinking of lower courts as they try to figure out, in CERCLA cases with different fact patterns, whether they should make the same kind of loose assumptions that the Supreme Court thought sufficient in *Burlington Northern*.

III. *BURLINGTON NORTHERN* PROVIDES LITTLE JUSTIFICATION FOR APPORTIONMENT IN OTHER FACTUAL SETTINGS

Burlington Northern and *Bell Petroleum* stand as the primary examples of successful divisibility arguments by CERCLA responsible parties. Of the two, *Burlington Northern* was the harder case to prove. There were three hazardous substances, not one; and there were two parcels at which different activities took place, not one plant at which successive owners did the same thing. The business records available to the court in *Bell Petroleum*, although incomplete and still requiring inference,¹²⁸ were much better evidence of each defendant's contribution to the groundwater contamination than Judge Wanger had in *Burlington Northern*. But even though *Burlington Northern* was not as simple as *Bell Petroleum*, it also was not like the many CERCLA cases that involve numerous commingled chemicals from numerous sources. Should the fact that apportionment succeeded in *Burlington Northern* lead to successful apportionment in the more typical cases where, up to now, courts have found the evidence insufficient? As this section explains, it should not.

A. *Separate Ownership Was a Critical Fact in Burlington Northern*

Both the district court and appellate court in *Burlington Northern* emphasized that the two adjacent parcels on which B&B conducted its

prove as part of its prima facie case that the defendant caused any harm to the environment.”); *United States v. Burlington N. & Santa Fe Ry. Co.*, 520 F.3d 918, 933 (9th Cir. 2008) (parties can be liable “without any finding . . . that they caused the contamination . . .”).

127. *See United States v. Conservation Chem. Co.*, 628 F. Supp. 391, 403 (W.D. Mo. 1985) (“[A]ll other things being equal, this Court believes that public policy demands that preference be given to the use of private funds for cleanup of hazardous waste sites.”).

128. *In re Bell Petroleum Servs.*, 3 F.3d 889, 894 (5th Cir. 1993).

operations constituted a single CERCLA “facility.”¹²⁹ Nevertheless, the fact of separate ownership was critical to the district court’s apportionment, which the Supreme Court eventually found reasonably supported by the record.

To understand this requires looking at the first round of litigation over the B&B Superfund site, which was filed by the Railroads. Having complied with an EPA order requiring them to repair a security fence at the site and to conduct investigatory activities on their parcel, the Railroads sued B&B and related parties for the costs of those actions.¹³⁰ The B&B parties counterclaimed for contribution. The parties filed cross-motions for summary judgment.

Judge Wanger rejected, as he later did in the governments’ case, the Railroads’ arguments that they bore no CERCLA liability whatever for the Arvin site.¹³¹ The ruling was not a total loss for the Railroads, however. In hindsight, it clearly adumbrated the apportionment decision that was to come after additional years of litigation and evidentiary development. The decision sharply distinguished the two parcels. It reasoned that because CERCLA liability attaches to the “owner and operator of . . . a facility . . . from which there is a release . . . of a hazardous substance,”¹³²

Both the Railroads and the Brown & Bryant parties . . . incorrectly focus their liability analysis on the areas affected by the contamination rather than upon the source (“facility”) of the contamination. It is not material to the issue of liability who owns the property requiring remediation; what is essential to the issue of liability is who

129. *United States v. Atchison, Topeka & Santa Fe Ry. Co.*, No. CV-F-92-6058, 2003 U.S. Dist. LEXIS 23130, at *128 (¶ 304) (E.D. Cal. July 14, 2003); *United States v. Burlington N. & Santa Fe Ry. Co.*, 520 F.3d 918, 944 (9th Cir. 2008). The Supreme Court did not address the issue so clearly, but it nonetheless repeatedly referred to “the Arvin facility.” *E.g.*, *Burlington Northern*, 129 S. Ct. at 1883.

130. The Railroads described their action as one “for cost recovery and contribution.” *See In re Brown & Bryant, Inc. Site, Petitioners’ Motion to Stay Further Proceedings Pending Resolution of Related CERCLA Actions in U.S. District Court and Request for Issuance of Final Order Granting Reimbursement 2*, No. 94-12 (EPA May 13, 1997). *See generally* *Atchison, Topeka & Santa Fe Ry. Co. v. Brown & Bryant, Inc.*, 42 ERC (BNA) 1605, 1995 U.S. Dist. LEXIS 20627, at *24–25 (E.D. Cal. Nov. 15, 1995) (stating that railroads could seek joint and several liability against B&B parties for costs of responding to releases from B&B Parcel). They alleged they had spent more than \$3 million to comply with the order. The district court ultimately found that the Railroads had incurred about \$2.6 million in costs that were reasonable and thus recoverable by a private party under CERCLA. *Id.*; *see* 42 U.S.C. § 9607(a)(2) (2006) (stating that parties are liable when they owned or operated a facility at the time of hazardous material disposal).

131. *Brown & Bryant, Inc.*, 45 ERC (BNA) 1605 at *17–18.

132. § 9607.

owned or operated the “facility” that caused the need for remediation.¹³³

Therefore, Judge Wanger held that “the Railroads are not liable for response costs for releases from the Brown & Bryant property.”¹³⁴ The judge found “a genuine issue of material fact whether releases from the Railroads’ property have resulted in response costs for groundwater contamination” beneath B&B’s land, so he refused to rule, at that stage, that the Railroads could not be jointly and severally liable for the *cleanup* of the B&B property.¹³⁵ Nevertheless, even before the governments put their claims in issue, the trial court had conceived that the Railroads’ liability (1) was fundamentally severable from B&B’s and (2) could be determined based on the extent to which releases from the Railroad parcel contributed to the groundwater contamination plume. This conception never altered. It permeated the liability holding in the governments’ case¹³⁶ as well as the apportionment ruling, which amounted to an effort to figure out how much of the contamination in the groundwater might have come from releases on the Railroad parcel.

The district court’s approach cannot translate to paradigmatic multiple arranger cases such as in *Chem-Dyne*, *O’Neil*, or the *Alcan* cases while remaining consistent with those decisions. The equivalent analysis would begin with the assertion that each arranger is liable only “for” the release of its own hazardous substances, a contention the courts have firmly rejected. Rather, CERCLA makes arrangers liable for the costs of responding to the release from the facility—unless, of course, they can prove what their volumetric share was and also that volumetric share is a reasonable basis for apportionment.

B. Burlington Northern *Did Not Relieve Arrangers Seeking Apportionment of the Burden of Proving Their Shares*

In *Burlington Northern*, the Supreme Court approved an apportionment calculation based on strong assumptions of proportionality that were

133. *Brown & Bryant, Inc.*, 45 ERC (BNA) 1605 at *12–13 (emphasis omitted) (footnote omitted).

134. *Id.* at *19 (emphasis omitted); *see id.* at *21 (“[T]here is no basis for the Railroads’ liability for response costs attributable to releases at Brown & Bryant’s property.”).

135. *Id.* at *18.

136. “The Railroads are strictly liable for the hazardous substances originating from the ‘Railroad parcel’ that in part caused the need for CERCLA response of the Site.” *United States v. Atchison, Topeka & Santa Fe Ry. Co.*, No. CV-F-92-6058, 2003 U.S. Dist. LEXIS 23130, at *159 (E.D. Cal. July 14, 2003).

weakly supported by evidence.¹³⁷ But the record in *Burlington Northern* still allowed the district court to extract the two components that are critical to allow apportionment of a fraction of liability: a numerator and a denominator. The Restatement makes clear that before even a divisible harm can be divided, there must be evidence of the appropriate dividend and divisor.¹³⁸

In many multiple-arranger cases, such evidence has been absent or inadequate. Nothing in *Burlington Northern* undercuts the holding, for example, of *O'Neil*, in which the court held that the arranger defendants seeking apportionment had merely proven the minimum number of drums they had sent to the site,¹³⁹ or the similar holding of *Chem-Nuclear*.¹⁴⁰ *Burlington Northern* would be analogous only if the Railroads had proven that their parcel constituted at least 19% of the site but possibly more, or that their lease had extended through at least 45% of the time B&B operated but possibly longer. Similarly, the denominator was not in question in *Burlington Northern*, but in many chemical dump cases the total amount of hazardous substances disposed cannot reliably be estimated. In such a case, it would be speculative to assign a percentage share even to an arranger whose own contribution was fully proven.

Finally, even if a volumetric numerator and denominator could be proven, they may not provide a reasonable basis for apportionment. In “chemical soup” cases, apportionment has often failed also because variable toxicity, variable mobility, and potential interactions among the different chemicals in the mix have made it unreasonable to simply assume that volume is a reasonable proxy for harm.¹⁴¹ Even in common law claims for pollution damage, courts recognized that synergistic effects would warrant joint and several liability.¹⁴² CERCLA defendants often cannot demonstrate

137. The district court (1) had very limited quantitative evidence of the actual amount of chemicals spilled on the Railroad Parcel as compared to the B&B Parcel and instead relied on proxies of unproven reliability, such as land area and number of years; and (2) assumed the proportionality of harm to volume without having heard any testimony directed to that issue. *See supra* notes 67–69.

138. RESTATEMENT (SECOND) OF TORTS § 433A cmt. d (1966).

139. *O'Neil v. Picillo*, 883 F.2d 176, 182–83 (1st Cir. 1989).

140. *Chem-Nuclear Sys., Inc. v. Bush*, 292 F.3d 254, 260–61 (D.C. Cir. 2002) (stating that proof that drums known to have come from the arranger defendant had been dumped in one part of the site was insufficient to support the conclusion that none of the arranger's drums had been dumped in another portion of the site).

141. *E.g.*, *O'Neil*, 883 F.2d at 182 (stating that appellants could be limited contributors only if they documented “the whereabouts of their waste at all times after it left their facilit[y]”).

142. *See Symmes v. Prairie Pebble Phosphate Co.*, 63 So. 1, 3 (Fla. 1913) (holding that companies that independently dumped mine waste that destroyed plaintiff's oyster beds were only severally liable, in part because it did not “appear that the act of each one made the acts of the others more injurious”).

the absence of interactions or variability that would vitiate the assumption that harm is proportional to quantity.

The relatively simple situation in *Burlington Northern*, where the same three chemicals were spilled on both parcels, did not present the possibility of synergistic interactions or differential effects of different defendants' hazardous substances.¹⁴³ The Supreme Court's decision, which after all cited cases like *Alcan* and *Monsanto* that found the absence of such evidence dispositive, cannot be read to alter those cases' import.¹⁴⁴

IV. NEW AND OLD LEGAL THEORIES OF INDIVISIBLE HARM CONTINUE TO SUPPORT IMPOSITION OF JOINT AND SEVERAL LIABILITY AFTER *BURLINGTON NORTHERN*

Section III explained why judicial application of the actual holding of *Burlington Northern*—that the record in that case provided an adequate basis for apportionment—should not extend to a broader range of factual scenarios. But what if it does? What if *Burlington Northern* ends up meaning that the burden of production and persuasion is no longer “difficult,”¹⁴⁵ so that in the future it will be satisfied commonly rather than “rarely”?¹⁴⁶ This section proceeds from that assumption and argues that courts should still impose joint and several liability in a wide range of circumstances.

As the Supreme Court noted, before evidence can support a reasonable basis for apportioning a harm, the harm must be “theoretically capable of apportionment.”¹⁴⁷ The Supreme Court spent no analytical energy on this requirement, merely observing that “both the District Court and Court of Appeals agreed that the harm created by the contamination of the Arvin site, although singular, was theoretically capable of apportionment.”¹⁴⁸ Lower courts that rejected CERCLA defendants' earlier attempts to justify

143. See Brief for Petitioners Burlington Northern and Santa Fe Ry. Co. and Union Pacific Railroad Co. at 36, 38, *Burlington N. and Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870 (2009) (No. 07-1601 & 07-1067) (contrasting *Burlington Northern* with case of “genuinely synergistic harms”).

144. See *Burlington N. v. Burlington N. and Santa Fe Ry. Co. v. United States*, 520 F.3d 918, 944 (9th Cir. 2008) (The Ninth Circuit referred to the “synergistic” use of two parcels, but it did not suggest the existence of chemical synergies akin to those found in multiple arranger cases.).

145. *United States v. Hercules, Inc.*, 247 F.3d 706, 716 (8th Cir. 2001) (“We have previously observed that proving divisibility is a very difficult proposition.”) (internal quotation marks and citation omitted).

146. *O'Neil*, 883 F.2d at 178 (“[R]esponsible parties rarely escape joint and several liability . . .”).

147. *Burlington Northern*, 129 S. Ct. at 1881.

148. *Id.*

apportionment generally relied, like the Ninth Circuit in *Burlington Northern*, on the relatively easy finding of a failure of proof, without having to grapple too closely with the preliminary question of when apportionment is appropriate even in principle. CERCLA plaintiffs, who routinely won with arguments that the defendants' proof had failed to clear the bar, had little reason to engage in esoteric legal argument that the defendants should not be permitted even to attempt the vault.

Nevertheless, according to both the Second Restatement and the Supreme Court, the apportionment inquiry is a two-step process. If *Burlington Northern* is understood to imply that courts have misunderstood the nature of the second step, that understanding warrants re-examination of the first step. The requirement that a harm be "theoretically capable of apportionment" must have some substantive content, or neither the Second Restatement nor the Supreme Court would have bothered articulating it.

And it must mean something more than "the total amount of damages can be divided into fractions," which would make every harm apportionable. "Not all harms are capable of apportionment,"¹⁴⁹ the Supreme Court acknowledged; such a thing exists as a "single, indivisible harm."¹⁵⁰ This is true under section 433A of the Second Restatement in general,¹⁵¹ and it must also be true of harms in CERCLA cases in particular. For even if "Congress did not intend for joint and several liability to be imposed without exception,"¹⁵² it is equally clear that Congress did not intend for courts invariably to apportion liability. We know this, not only for the reasons Judge Rubin expressed in *Chem-Dyne*, but also because of the subsequent Congressional response in enacting the Superfund Amendments and Reauthorization Act of 1986 ("SARA").¹⁵³ Not only did Congress "fully subscribe[] to the reasoning" of *Chem-Dyne* itself,¹⁵⁴ but it also embraced the then-developed body of jurisprudence applying *Chem-Dyne*,¹⁵⁵ which had already begun to evince joint and several liability as the

149. *Id.*

150. *Id.*

151. RESTATEMENT (SECOND) OF TORTS § 433A(2) (1966); *see id.* cmt. i.

152. *O'Neil v. Picillo*, 883 F.2d 176, 181 (1st Cir. 1989).

153. Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499 (1986).

154. H.R. REP. NO. 253, pt. 1, at 74 (1985), *reprinted in* 1986 U.S.C.C.A.N. 2835, 2856; *accord* 131 Cong. Rec. 34,632 (Dec. 5, 1985) (statement of Rep. Dingell) ("The uniform Federal rule on joint and several liability established in [*Chem-Dyne*] is correct and should be followed."); *see id.* at 34,636 (statement of Rep. Eckart) (The bill "absolutely protects" CERCLA "liability scheme of strict, joint, and several liability"; all committees involved "fully subscribe" to *Chem-Dyne* standard.); 132 Cong. Rec. 29,737 (Oct. 8, 1986) (statement of Rep. Glicksman) (conferees continued house committees' approach endorsing *Chem-Dyne*).

155. H.R. REP. NO. 253, pt. 1, at 74 (1985), *reprinted in* 1986 U.S.C.C.A.N. 2835, 2856 ("[C]ourts have made substantial progress" in applying traditional and evolving common law standards

ordinary, if not ordained, result in CERCLA cases.¹⁵⁶ Moreover, when it amended CERCLA, Congress codified a right of contribution among responsible parties, which would be unnecessary if defendants were liable to plaintiffs only severally.¹⁵⁷

The challenge, then, is for courts simultaneously to abide by the teaching of *Burlington Northern*, to apply the common law principles of the Second Restatement, and to keep faith with the congressional intent of CERCLA. Courts can do this, even if they believe the Supreme Court has greatly reduced proof requirements for conventional CERCLA divisibility arguments, by taking a fresh look at how the “traditional and evolving principles of common law”¹⁵⁸ fit with the overarching objectives of the statute. To show how, I briefly review the role of joint and several liability in the statutory structure and then describe several bases for imposition of joint and several liability that survive even a greatly relaxed standard of proof of divisibility under section 433A. These theories can ensure that joint and several liability continues to play its appropriate role in sustaining the objectives of CERCLA, without the need for legislative changes and without disregarding either the Restatement or *Burlington Northern*.

A hypothetical will help illustrate several of these theories. Consider the Manufacturers’ Surplus Landfill (“MSL”), a prototypical (but simpler than is usual in the real world) dump site, contaminated with a halogenated organic solvent hazardous substance (“HOS”) that the government first investigates and then remediates by installing a cap to prevent infiltration and a pump-and-treat system that will need to operate for thirty years to manage migration. The following parties are liable:¹⁵⁹

to scope of CERCLA liability.); 132 Cong. Rec. 29,716 (Oct. 8, 1986) (statement of Rep. Dingell) (“Nothing in this legislation is intended to change the application of the uniform Federal rule of joint and several liability enunciated in the Chem-Dyne case and followed by a number of other Federal courts.”).

156. See *United States v. S.C. Recycling and Disposal, Inc.*, 653 F. Supp. 984, 995 (C.D. S.C. 1984) (“[A]rbitrary or theoretical means of *cost* apportionment do not diminish the indivisibility of the underlying harm”—refusing to apportion among arrangers by volume.) (emphasis in original); *United States v. Ottati & Goss, Inc.*, 630 F. Supp. 1361, 1396 (D.N.H. 1985) (ruling that although defendants proved approximately how many of their drums were brought to site, “resulting proportionate harm to surface and groundwater cannot be proportioned with any degree of accuracy as to any individual defendant,” so “liability is joint, several and indivisible.”).

157. 42 U.S.C. § 9613(f) (2006); RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 23 (2000) (stating that contribution is applicable “when two or more persons are or may be liable for the same harm and one of them discharges the liability of another”); see H.R. REP. NO. 253, pt. 1, at 79 (1985), reprinted in 1986 U.S.C.C.A.N. 2835, 2861 (stating that the contribution right among liable parties is “concomitant” to their joint and several liability to government).

158. *United States v. Chem-Dyne Corp.*, 572 F. Supp. 802, 807 (S.D. Ohio 1983).

159. In an actual case, liability might be disputed, but the assumption that all identified defendants are liable facilitates a useful illustration. The same applies to the facts concerning volume of

Defendant *O1* owned and operated the dump for the first twenty years of its existence. Sixty-seven percent of the total volume of HOS was dumped during this time. *O1* is insolvent.

Defendant *O2* is the current owner of the dump. After buying the dump from *O1* twenty years ago, *O2* operated the dump for ten additional years, during which 33% of the total volume of HOS was dumped, and then *O2* stopped accepting waste there. *O2* is insolvent.

Defendant *T1* is a waste hauler that transported 60% of the total volume of HOS to the dump. *T1* is insolvent.

Defendant *T2* is a waste hauler that transported 10% of the total volume of HOS to the dump. *T2* is insolvent.

Defendant *A1* is a manufacturer that contracted with *O1* and *O2* (the owner/operators) for disposal of HOS. *A1* brought its HOS to the dump in its own trucks and contributed 30% of the total volume of HOS. *A1* is viable.

Defendant *A2* is a manufacturer that contracted with *T1* to haul HOS from its plant; *T1* hauled the HOS to the dump. *A2* contributed 20% of the total volume of HOS. *A2* is viable.

Defendant *A3* is a manufacturer that contracted with *T1* to haul HOS from its plant; *T1* hauled the HOS to the dump. *A3* contributed 40% of the total volume of HOS. *A3* is insolvent.

Defendants *A4* through *A8* are machine shops that contracted with *T2* to haul HOS from their plants; *T2* hauled the HOS to the dump. Each of these five arrangers contributed 2% of the total volume of HOS. *A4* has assets, but not enough to satisfy the entire liability. *A5*, *A6*, *A7*, and *A8* are insolvent.

It is impossible to argue that the MSL facility presents “distinct harms.” A defendant seeking to apportion liability for MSL would, like the Railroads in *Burlington Northern*, try to establish that the single harm is divisible, or reasonably capable of apportionment, under section 433A(1)(b). The theories described below all suggest reasons why the assertion of divisibility might fail at the first step, the determination whether the CERCLA harm is “theoretically capable of apportionment.” A corollary is that none of these theories (even if it completely ruled out the possibility of divisibility under section 433A(1)(b)) would lead to invariable imposition of joint and several liability, because liability in cases of distinct harms would still be several. Thus, these theories would not contravene the dictum that “Congress did not intend for joint and several

each arranger’s and transporter’s hazardous substance, which in the real world would almost certainly be much more in doubt.

liability to be imposed without exception.”¹⁶⁰ Cases of distinct harm are not hypothetical: they can arise in so-called “two-site” cases where harms are geographically distinct, and perhaps in cases involving parties bearing separate responsibility for contamination of separate environmental media.

With these preliminary matters addressed, the legal theories can be presented. They begin with the one that requires the least rethinking of the prevailing assumption of theoretical divisibility and ascend from there.

A. Of Soloists and Ensembles: Concert of Action

Section 433A may be the “universal starting point for divisibility of harm analyses in CERCLA cases,”¹⁶¹ but it is not the only basis in the Restatement for imposition of joint and several liability on multiple tortfeasors. Section 433A provides a scope of liability rule that applies “when two or more persons acting independently”¹⁶² cause harm.

The Restatement articulates another basis for imposition of joint and several liability. Tortfeasors that act in concert are jointly and severally liable for the harm their concerted action causes, even if their individual acts cause only part of that harm.¹⁶³ According to the Second Restatement, concerted action leading to joint and several liability exists, subjecting a party to liability “[f]or harm resulting to a third person from the tortious conduct of another,”¹⁶⁴ where that party:

(a) does a tortious act in concert with the other or pursuant to a common design with him, or

(b) knows that the other's conduct constitutes a breach of duty and gives substantial assistance or encouragement to the other so to conduct himself, or

160. *O’Neil v. Picillo*, 883 F.2d 176, 181 (1st Cir. 1989); *see Burlington N. & Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870, 1881 (2009) (CERCLA “did not mandate ‘joint and several’ liability in every case.”) (citation omitted); *United States v. Chem-Dyne Corp.*, 572 F. Supp. 802, 810 (S.D. Ohio 1983) (rejecting “blanket adoption” of joint and several liability).

161. *Burlington Northern*, 129 S. Ct. at 1881 (quoting *United States v. Hercules, Inc.*, 247 F.3d 706, 717 (8th Cir. 2001)).

162. *Chem-Dyne Corp.*, 572 F. Supp. at 810 (citing RESTATEMENT (SECOND) OF TORTS §§ 433A, 881 (1966)).

163. “The original meaning of a ‘joint tort’ was that of vicarious liability for concerted action.” WILLIAM L. PROSSER, *LAW OF TORTS* 291 (4th ed. 1971); *see* RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 15 cmt. a (2000) (“[J]oint and several liability for persons engaged in concerted action applies regardless of the rule regarding joint and several or several liability for independent negligent tortfeasors in the jurisdiction.”).

164. RESTATEMENT (SECOND) OF TORTS § 876 (1966).

(c) gives substantial assistance to the other in accomplishing a tortious result and his own conduct, separately considered, constitutes a breach of duty to the third person.¹⁶⁵

From *Chem-Dyne* on down, courts in CERCLA cases have simply assumed the independence of action of multiple liable parties.¹⁶⁶ Plaintiffs have had little incentive to challenge the courts to do otherwise, in light of the failure rate of attempts to prove a reasonable basis for apportionment.¹⁶⁷ As a result, concert of action theories have not been discussed.¹⁶⁸ But if *Burlington Northern* has really changed the game on proof of a basis for apportionment under section 433A, then both plaintiffs and courts must examine whether that section's underlying predicate of independent action is truly satisfied.

165. *Id.* The Third Restatement similarly states that each tortfeasor acting in concert with others is jointly and severally liable for the liability of all. RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 15 (2000). The Third Restatement takes no position on whether those acting in concert are jointly and severally liable with others acting independently, leaving that to the jurisdiction's selection of one of five "tracks" in use after adoption of comparative responsibility. *Id.* cmt. a. That section "does not address the rules regarding when concerted activity exists," *id.* cmt. o, although the reporters appear to endorse the Second Restatement's formulation. *Id.* (quoting RESTATEMENT (SECOND) OF TORTS § 876 (1966)).

166. When CERCLA defendants raised lack of concert of action as a basis for avoiding joint and several liability, courts correctly held that independent actors can be jointly and severally liable under CERCLA by application of the principles of section 433A. *E.g.*, *Kelley v. Thomas Solvent Co.*, 714 F. Supp. 1439, 1449 (W.D. Mich. 1989) (Striking affirmative defense alleging "liability . . . is not joint with other defendants because . . . there is no concert of action," because "[c]oncert of action has no relevance to the decision about whether to impose joint and several liability.").

167. So long as a reasonable basis for apportionment remains hard to prove, it is easier for a CERCLA plaintiff to achieve joint and several liability by relying on the defendants' failure to satisfy the burden that section 433B imposes than by trying to prove concert of action.

168. *See generally* *Bulk Distrib. Ctrs., Inc. v. Monsanto Co.*, 589 F. Supp. 1437, 1443 (S.D. Fla. 1984) ("[I]f they worked in concert to produce a single indivisible release or threatened release, then they may be held jointly and severally liable for the claimant's response costs if the applicable state law so provides."). A few cases address whether concert of action could serve as the sole basis for imposing liability in the first instance, *e.g.*, *Grine v. Coombs*, No. 95-342 ERIE, 1997 U.S. Dist. LEXIS 19690, *11-12 (W.D. Pa. 1997) (allegation that defendant arranged for disposal of hazardous substance by conspiring with others sufficient to survive motion to dismiss), or the sufficiency of evidence of concerted action, *e.g.*, *Gen. Elec. Co. v. AAMCO Transmissions, Inc.*, 962 F.2d 281, 288 (2d Cir. 1992) (stating that where oil companies, who leased underground storage tanks to independent gas station operators who used tanks to store contaminated waste oil subsequently disposed of at Superfund site, did not participate in disposal or know of disposal practices, common law aider and abetter liability under Second Restatement § 876(b) could not apply, so court did not decide "whether common law doctrines can . . . supplement" CERCLA liability scheme); *New Jersey Tpk. Auth. v. PPG Indus., Inc.*, 16 F. Supp. 2d 460, 471 (D.N.J. 1998) (stating that the theory of "enterprise (or 'concert-of-action') liability" did not apply where plaintiff could not show which of several defendants' chromium ore waste had been deposited at any of several facilities and did not contend or produce evidence showing there was "any sort of common plan" to dispose of such waste at those facilities).

The Restatement gives the example of a group of people committing intentional torts as the paradigmatic case of tortfeasors acting in concert,¹⁶⁹ but concert of action theories have long been applied to negligence¹⁷⁰ and, more recently, to strict liability actions as well.¹⁷¹ A uniform law of the scope of CERCLA liability based on “traditional and evolving principles of common law,” applied in the context of the statutory goals, should apply concert of action principles to impose joint and several liability on multiple CERCLA defendants in appropriate factual circumstances.

How might this work? Assume *arguendo* that the facts of the MSL hypothetical would support an apportionment under section 433A.¹⁷² In that case, the very best outcome a plaintiff could hope for would be apportionment of 52% of the liability to the three viable arrangers, based on their share of the total volume of HOS dumped. The actual outcome would probably yield a much lower percentage recovery to the plaintiff, for a court truly apportioning liability on a purely causal basis (without considering equities or the effect of certain defendants’ insolvency on the plaintiff) would be hard-pressed to ignore the causal contribution of the defunct owner-operators and transporters.

A concert of action theory, however, could and should restore a measure of joint and several liability to this situation. At a minimum, *A1* should be liable for the liability apportioned to *O1* and *O2* as well as to itself; *A2* should be liable for the liability apportioned to *T1* as well as to itself; and *A4* should be liable for the liability apportioned to *T2* as well as to itself.¹⁷³ In each instance the arranger defendant “act[ed] in accordance with an agreement to cooperate in a particular line of conduct or to accomplish a particular result.”¹⁷⁴ The line of conduct or particular result was the disposal of hazardous substances belonging to the arranger, for that is what

169. See RESTATEMENT (SECOND) OF TORTS § 876 cmt. a, illus. 1 (1966).

170. *E.g.*, *Moore v. Foster*, 180 So. 73, 74 (Miss. 1938) (applying joint liability to a negligence claim); *Oliver v. Miles*, 110 So. 666, 668 (Miss. 1926) (applying joint liability to a negligence claim). Both decisions are cited in RESTATEMENT OF (SECOND) TORTS § 876 Rptrs’ Note, cmt. b (1966).

171. *E.g.*, *Roney v. Gencorp*, 431 F. Supp. 2d 622, 633–34 (S.D. W. Va. 2006) (applying West Virginia law, denying motion to dismiss product liability claim alleging “aiding and abetting” concert of action as described in subsection b of section 876 of the Second Restatement). In the Restatement, the American Law Institute took “no position on whether the” concert of action rules apply to cases where the conduct is neither intentionally tortious or negligent but “involves strict liability for the resulting harm.” RESTATEMENT (SECOND) OF TORTS § 876 Caveat (1966).

172. The assumption is not valid.

173. See RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 15 cmt. a (2000) (Explaining that even where joint and severable liability has been replaced or modified by comparative responsibility, “joint and several liability for persons engaged in concerted action applies regardless of the rule . . . for independent negligent tortfeasors.”).

174. RESTATEMENT (SECOND) OF TORTS § 876 cmt. a (1966) (defining “acting in concert”).

creates the CERCLA liability. It should not matter that no party to any of the transactions anticipated the eventual release of hazardous substances, much less the eventual incurrence of response costs.¹⁷⁵ Alternatively, each of the three arrangers should be liable for additional apportioned shares as described above under either or both of the “aiding and abetting” prongs of the Second Restatement’s concert of action rule.¹⁷⁶ In each case, the arranger’s conduct gave “substantial assistance” to the liability-creating conduct of the owner/operator or transporter, and vice versa.

On the same theory, the liability of the transporters, *T1* and *T2*, includes not only their individually-apportioned shares but also the liability apportioned to the owner/operators, *O1* and *O2*. Therefore, *A2* and *A4*, who are liable for the transporters’ apportioned liability as well as their own, should also be jointly and severally liable for liability apportioned to the owner/operators. This is only fair to *A1*, who contracted with the dump owner directly and used *A1*’s own trucks to haul waste there. There is no reason *A1* should be liable for the potentially large causal share assigned to the owner/operators while *A2* and *A4* should avoid that share because they used an intermediary to participate in the same course of conduct (disposing of hazardous substances in the dump).¹⁷⁷

The viable arrangers would presumably object that holding them liable for the shares of transporters and owner/operators is unfair and improper: once the court has apportioned individual causal shares to *A1*, *A2*, and *A4*, each of them should be liable for that causal share and no more, as section 433A envisions. Such an objection should not succeed. The theory behind apportionment under section 433A is that each independent actor should be liable only for the amount of harm it caused, if that amount can be determined. The theory behind joint and several liability under section 876 is that an actor should be liable even for harm that it demonstrably did not cause—even an entirely distinct harm—if the harm was caused by a person acting in concert. Joint and several liability under a concerted action theory trumps causal apportionment, not the other way around.¹⁷⁸

175. In the drag racing cases, the “particular line of conduct” or “particular result” accomplished in concert is the race, not the eventual collision between one of the racing cars and a third car. Yet both participants in the race are jointly and severally liable for the resulting harm. RESTATEMENT (SECOND) OF TORTS § 876 cmt. a, illus. 2 (1966).

176. *Id.* § 876(b), (c) (1966).

177. By contrast, making *A2* and *A4* (but not *A1*) liable for the apportioned liability of *T1* and *T2* is not unfair. The causal apportionment presumably would have initially assigned a percentage of liability to owner/operators versus transporters versus arrangers, and *A1*, as its own “transporter,” would already have been assigned an aliquot of liability for its participation in that role.

178. *See* Reilly v. Anderson, 727 N.W.2d 102, 112 (Iowa 2006) (Concerted actors do not commit independent tortious conduct and thus remain jointly and severally liable with one another.);

Consider, hypothetically, a site without transporters or liable owner/operators: a remote farm, for example, where despite the farm owner's adequate precautions and due care,¹⁷⁹ our hypothetical arrangers *A1* through *A8* manage to engage in midnight dumping using their own trucks. Assuming, again, that their relative volumetric contributions provide a reasonable basis for apportionment under section 433A, a plaintiff that cleaned up the farm would be able to recover 52% of its costs from viable liable parties—not nearly so nice as the 100% recovery that joint and several liability would have provided, but still respectable. Adding transporter or owner/operator participants to the enterprise of getting rid of these arrangers' hazardous substances should not allow the arrangers to evade liability¹⁸⁰ for costs that they would have borne in the absence of other participants.¹⁸¹ It certainly should not serve to transfer those costs to a plaintiff in the event that the other participants are judgment-proof at collection time.

A more serious objection would be that various elements of concert of action in traditional tort claims are missing from the hypothetical dump case. The Restatement's aiding and abetting provisions, for example, require either knowledge that the other tortfeasor's conduct is a breach of duty or that the aider and abetter's conduct is in its own right a breach of duty to the victim. So, it would be argued, *A4* could not be liable for the share assigned to *T2*, and a fortiori the shares assigned to *O1* and *O2*, unless *A4* knew that *T2* was going to bring the waste to the dump, or unless *A4* somehow acted wrongfully in consigning the waste to *T2*. Similarly, one might argue that the types of arms-length commercial transactions between arrangers, transporters, and owner/operators have hardly been considered "substantial assistance or encouragement" in tort law, much less part of "a common design."

RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 15 cmt. a (2000) (stating that persons engaged in concerted action bear joint and several liability even where independent tortfeasors would not).

179. The owner would thus qualify for CERCLA's third-party defense. 42 U.S.C. § 9607(b)(3) (2006).

180. "Evading liability" in this context means liability to the plaintiffs. The statutory contribution remedy would remain available to the arranger defendants if a transporter or owner/operator had assets from which to pay contribution.

181. Perverse incentives would arise, in a CERCLA regime in which apportionment were routine, if a party's apportioned liability were reduced by the presence in the case of other parties with a different causal relationship to the same hazardous substances. A party arranging for disposal of waste, for example, might prefer to contract with multiple transporters and disposal site operators, on the theory that if something were to go wrong, the future CERCLA liability would be shared. The cause of proper hazardous-substance management might be better served by encouraging responsible arrangers to "take ownership" of their waste and minimize risk of releases.

These arguments might have much force if a plaintiff that incurred response costs were to try to recover them as damages for a common law tort. But, of course, such a plaintiff would sue under CERCLA, and courts refer to common law only as a source of interpretation and interstitial completion of the statutory scheme. Just as courts do not impose the “substantial factor” burden on CERCLA plaintiffs because doing so would be inconsistent with the statutory scheme, it would be inappropriate to require a showing of a tortious act or breach of duty before finding concert of action sufficient to hold the concerted actors jointly and severally liable for the harm apportioned to all. The appropriate standard is the statutory one. Did the defendant arrange for disposal or transport, or own or operate a facility, in concert with another liable person? Did the defendant know that the liable person, to whom defendant gave substantial assistance or encouragement, was engaging in the conduct (or role) that gave rise to CERCLA liability? Did the defendant, who gave substantial assistance or encouragement to another liable party, itself engage in conduct (or role) that gave rise to CERCLA liability?

Congress has, in this regard, provided courts with a strong hint of what might constitute concerted action among responsible parties under CERCLA. Congress addressed causation in section 107(b) of the statute, the exclusive affirmative defenses to CERCLA liability.¹⁸² In a major departure from the common law, Congress crafted CERCLA’s third-party defense extremely narrowly.¹⁸³ For a posited third-party cause to absolve an otherwise responsible party of liability, the release of hazardous substances must be “caused solely by”¹⁸⁴ “an act or omission of a third party other than . . . one whose act or omission occurs in connection with a contractual relationship, existing directly or indirectly, with the defendant”¹⁸⁵

182. § 9607(b). The defenses allow an otherwise responsible person to avoid liability by proving that the release was “solely” caused by an act of God, an act of war, or an act or omission of a third party. *Id.*

183. The statutory defense is so different from common law causation rules that courts routinely struck from answers, as legally insufficient, alleged common law defenses such as “no proximate cause,” “intervening cause,” etc. *E.g.*, *United States v. Kramer*, 757 F. Supp. 397, 418 (D.N.J. 1991).

184. § 9607(b).

185. § 9607(b)(3). To establish the defense, a defendant also must demonstrate that it exercised due care and took precautions. *Id.* Because parties liable under CERCLA are apt to have in some way contributed to causing the release of hazardous substances (e.g., by arranging for disposal of a hazardous substance at the facility) or to be in some contractual relationship (e.g., a contract for dumping or hauling services or for the rental or purchase of real estate) with the putative third-party cause, successful assertions of the third-party defense have been rare. The primary exception has been for so-called “innocent landowners” who acquire previously contaminated property, e.g., *New York v. Lashins Arcade Co.*, 91 F.3d 353, 360 (2d Cir. 1996) (finding that a recent purchaser of contaminated property established third-party defense where prior owner’s act or omission was not “in connection with” the purchase contract). Congress enacted special provisions for such landowners, 42 U.S.C. § 9601(35)(A)

This tells us just how far Congress thought it appropriate, for purposes of a cost recovery action, to impute the causal relation between a defendant's status as a "covered person" and a release of hazardous substances which causes the incurrence of response costs. A person remains liable, not just for the acts of an employee or agent, but even of independent contractors that cause the release—even if the contractor's relationship with the liable party exists only "indirectly." It is true that section 107(b)(3) directly addresses only the existence of liability, not the scope of liability. But Congress's willingness to extend liability through multiple contractual links suggests strongly that a comparably broad interpretation of the requirements for concerted action under CERCLA would be consistent with the statutory goals.¹⁸⁶ And even though concert of action theories have not yet found application in CERCLA jurisprudence, there is precedent that would support their use.¹⁸⁷

*O'Neil v. Q.L.C.R.I., Inc.*¹⁸⁸ involved land from which a faulty septic system leaked raw sewage into a river. The state alleged that the landowner was liable under the Federal Water Pollution Control Act¹⁸⁹ (FWPCA) for the illegal discharge of a pollutant.¹⁹⁰ The state also sued a credit union that held a mortgage on the property, even though the state could not allege that the credit union itself discharged a pollutant. Instead, the state sought "to use the common law concept of aiding and abetting to find [the credit union] in violation of federal . . . statutory . . . law."¹⁹¹ The state alleged that the credit union aided and abetted the unlawful discharge by participating in "straw conveyances" and by making the loans without requiring the borrower to correct the sewage discharge, even though the credit union knew about the discharge.¹⁹² The court held that the complaint stated a claim for relief against the credit union:

(enacted by Pub. L. 99-499 (1986); amended by Pub. L. 107-118 (2002)). Congress later created other exemptions from liability. See *supra* note 104 and accompanying text.

186. CERCLA is a remedial statute that is broadly construed to effectuate its purposes. *E.g.*, *United States v. Carolina Transformer Co.*, 978 F.2d 832, 838 (4th Cir. 1992); *Colorado v. Idarado Mining Co.*, 916 F.2d 1486, 1493 (10th Cir. 1990).

187. The very few court decisions that even refer to concerted action in connection with CERCLA claims are described *supra* note 168. These opinions do not hold that concert of action theories are unavailable under CERCLA, even though they also do not include a successful use of such a theory.

188. *O'Neil v. Q.L.C.R.I., Inc.*, 750 F. Supp. 551 (D.R.I. 1990).

189. Federal Water Pollution Control Act, 33 U.S.C. §§ 1251–1387 (2006) (more commonly known as the Clean Water Act).

190. See *Friends of the Sakonnet v. Dutra*, 738 F. Supp. 623, 627 (D.R.I. 1990) (describing facts relating to the discharge).

191. *Q.L.C.R.I., Inc.*, 750 F. Supp. at 554 (citing RESTATEMENT (SECOND) OF TORTS § 876 (1966)).

192. *Id.*

[T]his Court must determine whether the common law concept of aiding and abetting can be used to determine liability under the FWPCA. The applicability of common law doctrines in litigation under federal statutes depends on whether these principles advance the goals of the particular federal statute which plaintiffs allege has been violated [A]iding and abetting is a concept that can be used to interpret “in violation” under [33 U.S.C.] § 1365 [the citizen suit provision of the Clean Water Act]. Nothing in the FWPCA rules out the use of the aiding and abetting doctrine Plaintiff has alleged sufficient involvement and possible control on the part of [the credit union] to present a viable claim of aiding and abetting.¹⁹³

This analysis of why aiding and abetting may be used as a basis for liability under FWPCA applies even more strongly to assessing whether the common law concert of action doctrine (which includes aiding and abetting) may be used to determine the scope of CERCLA liability. All courts, including the Supreme Court, have recognized that Congress intended for courts to refer to common law for the scope-of-liability determination. Joint and several liability for persons acting in concert is consistent with common law principles as well as with CERCLA, and will further CERCLA’s well-understood objectives.

Applying concert of action to CERCLA as proposed herein would sometimes impose joint and several liability even if the divisibility standard of section 433A(1)(b) could otherwise be met. But it would not result inevitably in the imposition of joint and several liability in all cases of otherwise divisible harm.¹⁹⁴

First, it is hard to see how, in many cases, a court could find concert of action among multiple defendants in the same category of responsible persons. In the dump hypothetical, the arrangers *A1*, *A2*, and *A4* contracted independently with *O1/O2*, *T1*, and *T2*, respectively, to dump or haul each arranger’s waste. *T1* and *T2*, similarly, each acted in concert with the owner/operator parties and with its respective arranger customers, but not in any obvious way with the other transporters.¹⁹⁵

193. *Id.* at 555 (quoting *Petro-Tech, Inc. v. Western Co. of N. Am.*, 824 F.2d 1349 (3d Cir. 1987) (internal quotation marks and brackets omitted).

194. It would also not affect cases of distinct harms. *See supra* note 160 (discussing the non-universal application of joint and several liability).

195. Of course, in a given case, a plaintiff might develop facts tending to show that arrangers (for example) acted in concert with other arrangers. Different arrangers might, for example, have

Second, in some factual scenarios even “vertical” concert of action among arrangers, transporters, and owner/operators would lead to less than complete joint and several liability. For example, consider a site at which, first, an owner/operator created a waste-oil lagoon in which wastes from various arrangers and transporters were mixed. Subsequently, a second owner/operator who purchased the property rented storage tanks to various industrial customers, some of the tanks’ substances leaked into the lagoon. Assuming, again, that these parties first established a reasonable basis for apportionment under section 433A, concert of action might hold the waste-oil arrangers and transporters jointly and severally liable for the first owner’s share, and the tank-farm customers jointly and severally liable for the second owner’s share. But it is hard to see how a concert of action theory could allow the liability apportioned to the parties involved in the waste-oil operation to be attributed to the parties involved in the tank-rental operation, and vice versa.

Thus, concert of action theories would be legally appropriate and could enable CERCLA plaintiffs to achieve greater cost recoveries in cases where defendants met their burden of proof on apportionment under *Burlington Northern* and some liability had been apportioned to insolvent parties. However, concert of action theories would not necessarily result in a defendant being jointly and severally liable for all response costs at a site.

In that respect, of course, being relegated to concert of action would be substantially less desirable for plaintiffs than the prevailing legal regime before *Burlington Northern*, in which defendants tried, but generally failed, to avoid joint and several liability under section 433A. Allocation of the burden of proof is another critical difference. As all CERCLA jurisprudence applying the Second Restatement has held, once a plaintiff proves a defendant liable—a relatively light burden under CERCLA—the liability is joint and several unless the defendant satisfies the burden of justifying apportionment per section 433A.¹⁹⁶ Concert of action, by contrast, is an element of the case for a plaintiff who wishes to rely on it.¹⁹⁷ Yet, of course, a CERCLA plaintiff need not allege concert of action in order to state a claim that any individual owner/operator, arranger, or transporter is liable under section 107(a) of CERCLA.

encouraged one another to use a particular transporter or disposal facility, or formed some type of joint venture to achieve economies of scale in disposing of a particular waste generated by a particular industry in a particular locality.

196. *Burlington N. & Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870, 1881 (2009); RESTATEMENT (SECOND) OF TORTS § 433B (1966).

197. See, e.g., *Roney v. Gencorp*, 431 F. Supp. 2d 622, 634 (S.D. W. Va. 2006) (“While Plaintiff may not be able to prove this ‘concert of action’ theory of liability . . . Plaintiff has alleged sufficient facts to survive a motion to dismiss.”).

It would make sense, then, for CERCLA plaintiffs to continue to allege joint and several liability, but to plead concerted action in the alternative in the event that the court otherwise holds defendants' liability to be several only. Defendants would retain the burden of proof on divisibility/apportionment and would need to satisfy that burden to avoid imposition of joint and several liability. If defendants satisfied the burden on divisibility/apportionment, a plaintiff could attempt to prove concert of action among one or more groups of defendants. As outlined above, in many cases, establishing this proof would not be terribly difficult: it would consist of the same evidence adduced to establish a defendant's liability in the first instance.¹⁹⁸ If plaintiff succeeded, the court would hold each member of each concerted action group jointly and severally liable for the summed apportioned liability of the group.

Concert of action theories would not re-create a prior legal regime in which CERCLA responsible parties' liability was "typically joint and several."¹⁹⁹ Concert of action theories would, however, blunt the deleterious effects of a regime in which apportionment was too easy to achieve, sometimes dramatically. Consider *Burlington Northern* itself, and assume (counterfactually) that Shell remained liable as an arranger. A strong case could have been made that Shell acted in concert with the now-penniless Brown & Bryant. The success of that case would have made the plaintiffs whole, notwithstanding the small share of liability apportioned to the Railroads.

B. Of Two Lethal Wounds: Multiple Sufficient Causes

The premise of apportioned liability is that a defendant should be liable only for harm that it has caused, and not for harm that others have caused.²⁰⁰ In *Burlington Northern*, for instance, both the district court and the Supreme Court gagged on the notion that the Railroads should be liable for the consequences of the activities that Brown & Bryant conducted on Brown & Bryant's own parcel. But what if each of the multiple defendants caused all of the harm—or would have, in the absence of their co-defendants?

198. For example, if an arranger brought hazardous substances to a dump in its own trucks, admission of the dump tickets would demonstrate an express agreement with the owner/operator. If there were no dump tickets, testimonial proof of the dumping would establish a tacit agreement, except in a case of "midnight dumping."

199. *United States v. Hercules, Inc.*, 247 F.3d 706, at 715 (8th Cir. 2001).

200. See RESTATEMENT (SECOND) OF TORTS § 881 cmt. a (In cases of divisible harm, "each [tortfeasor] is held liable only for the proportion of the total harm for which he is himself responsible.").

This situation faced the only district court that, as of this writing, has attempted to apply *Burlington Northern*'s apportionment ruling to another CERCLA claim. The result in *Reichhold, Inc. v. United States Metals Refining Co.*,²⁰¹ issued by a court in an influential district that sees considerable CERCLA litigation, is not encouraging for those who would argue that the reach of *Burlington Northern* is closely cabined by its facts.

Reichhold, Inc. bought industrial property in Carteret, New Jersey from United States Metals Refining Co. (USMRC). USMRC's operations (as the district court later found) had contaminated large swaths of the site with significant quantities of metals. Reichhold later sold the property, but the state environmental agency nevertheless required Reichhold to investigate and clean up the mess. Reichhold recouped some of its response costs from USMRC's parent company in a settlement. The settlement agreement included a reservation of rights or "re-opener" under which Reichhold could sue USMRC for costs relating to any "Material New Environmental Obligations" relating to the site. After the agency demanded several additional response actions, Reichhold invoked the re-opener²⁰² and sued USMRC for cost recovery under CERCLA and the New Jersey Spill Act. USMRC asserted various defenses and counterclaimed for contribution.

After a bench trial, Senior Judge Dickinson R. Debevoise found that USMRC "had deposited vast amounts" of hazardous substances on the property before the sale to Reichhold, and that Reichhold had neither brought new contaminated fill to the property nor spread the pre-existing contamination²⁰³ during its operations or cleanup. Thus, the court held USMRC liable²⁰⁴ for the cost of most of the response actions subject to the re-opener.²⁰⁴

The court found, however, that in one contaminated area, USMRC's operations were not the only source of contaminated fill. In that area, a subsequent landowner or tenant²⁰⁵ placed two or three feet of fill on top of

201. *Reichhold, Inc. v. United States Metals Refining Co.*, No. 03-453(DRD), 2009 U.S. Dist. LEXIS 52471, at *131-33 (D.N.J. 2009).

202. Much of the district court's opinion is devoted to determining whether each of several response actions, for which *Reichhold* sought recovery, satisfied the conditions that the settlement agreement's elaborate definition of "Material New Environmental Obligation" required for invoking the re-opener. *Reichhold*, 2009 U.S. Dist. LEXIS 52471, at *11-12.

203. Moving pre-existing material can be "disposal" under CERCLA. *Kaiser Aluminum & Chem. Corp. v. Catellus Dev. Corp.*, 976 F.2d 1338, 1342 (9th Cir. 1992).

204. The court held that a few of the additional response actions were not "Material New Environmental Obligations" subject to the re-opener; the settlement had resolved USMRC's liability to *Reichhold* for those. *Reichhold*, 2009 U.S. Dist. LEXIS 52471, at *5.

205. Several entities owned or occupied the property after *Reichhold*. *Id.* at *132. The opinion does not identify which one deposited the additional contaminated fill—presumably because that party

the contaminated slag that USMRC had previously deposited. Judge Debevoise found that the new fill was contaminated as well, and that either the pre-existing fill placed by USMRC or the new fill placed by the subsequent owner or tenant would have required the additional response action—a cap over the contaminated area—for which Reichhold sought cost recovery from USMRC.

On those facts, the district court held that “the metals contamination [of the area in question] was a distinct or single harm that USMRC and a third party caused.” *Burlington Northern*, the court stated, “suggests that this situation might be addressed by apportionment rather than equitable principles.” Attempting to apply section 433A of the Second Restatement and the teaching of *Burlington Northern*, the court held:

There is a reasonable basis for division according to the contribution of each. The measurement is not the exact amount of metals contamination for which each was responsible; USMRC was undoubtedly the source of most of it. Rather, it is the circumstances that each was responsible for a sufficient amount of metals contamination that required the cap [B]ecause under CERCLA, USMRC would be responsible for only half these costs [of the cap], Reichhold will be able to collect from USMRC only one-half of its past and future expenditures in connection with the . . . [c]ap.²⁰⁶

Like Judge Wanger in *Burlington Northern*, Judge Debevoise apparently arrived at an apportionment *sua sponte*.²⁰⁷ The effort to apply brand-new Supreme Court precedent was commendable, but the holding was unsound.

The trial court in *Reichhold* found, as a matter of fact, that either the USMRC slag or the later-added fill was sufficient, alone, to have caused remediation by capping. This type of over-determined causation posed a conundrum for the common law, which responded by modifying the traditional “but for” test for causation in fact so that “[i]f two forces are actively operating, one because of the actor’s negligence, the other not

was not identified in the record, either because the litigants did not know its identity or because they chose not to present it to the district court despite knowing it.

206. *Id.* at *131–32.

207. The non-jury trial in *Reichhold* ended on March 4, 2009. *Id.* at *3. The Supreme Court issued *Burlington Northern* on May 4, 2009. *Burlington N. & Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870 (2009). Judge Debevoise issued the *Reichhold* opinion on June 22, 2009. The opinion makes no reference to any argument about apportionment by a litigant.

because of any misconduct on his part, and each of itself is sufficient to bring about harm to another, the actor's negligence may be found to be a substantial factor in bringing it about."²⁰⁸

The classic case involves two fires that combine to burn a plaintiff's property.²⁰⁹ If either fire alone would have done the harm, each "is regarded as a factual cause of the harm"²¹⁰—a "substantial factor" in bringing the harm about, in the Second Restatement formulation.

To say that each causally sufficient fire (or tortious act, or arrangement for disposal) is a cause of the harm under section 432(2) of the Second Restatement does not necessarily imply that the person who set each fire should be jointly and severally liable for the entire harm under section 433A. Nevertheless, joint and several liability among multiple sufficient causes makes sense.

If the predicate of causal sufficiency is correct—either fire alone would have burned the plaintiff's property—then each fire's contribution to the harm is not proportional to its size before it merged with the other. It cannot be said that each fire merely contributed some fraction of the heat and flame that, only when combined with the other fire's fractional contribution of heat and flame, burned plaintiff's property. What harm did the person who set each fire cause? Each caused the burning of the property, not the burning of a portion of the property. The fairness-based argument for apportionment, that no actor should be charged with liability for harm it did not cause, does not support apportionment among multiple sufficient causes.²¹¹

This analysis tracks precisely the reasoning of the Minnesota Supreme Court in the type specimen of multiple sufficient cause cases.²¹² The

208. RESTATEMENT (SECOND) OF TORTS § 432(2) (1966).

209. *Id.* at illus. 3 ("Two fires are negligently set by separate acts of the A and B Railway Companies The normal spread of either fire would have been sufficient to burn [C's property] It may be found that the negligence of either the A or the B Company or of both is a substantial factor in bringing about C's harm.").

210. RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 27 (Proposed Final Draft No. 1, 2005) ("If multiple acts exist, each of which alone would have been a [but for] factual cause under § 26 of the physical harm at the same time, each act is regarded as a factual cause of the harm.").

211. *See* RESTATEMENT (SECOND) OF TORTS § 881 (1966) ("If two or more persons, acting independently, tortiously cause distinct harms or a single harm for which there is a reasonable basis for division according to the contribution of each, each is subject to liability only for the portion of the total harm that he has himself caused."); *cf.* RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 10 cmt. a (2000). One justification for joint and several liability is that each defendant's tortious conduct is the legal cause "of the entirety of the plaintiff's damages," although if comparative responsibility is involved, plaintiff's conduct is a cause of all the harm as well. *Id.*

212. *Anderson v. Minneapolis, St. Paul & Sault Ste. Marie Ry. Co.*, 179 N.W. 45, 46 (Minn. 1920). *See* RESTATEMENT (SECOND) OF TORTS § 432 Rptrs' Note, 3 App. (1966) ("Illustration 3 is based on *Anderson*" and other cases).

plaintiff alleged that sparks from a railroad's engines caused one or more fires that the railroad failed to extinguish, and that those fires eventually flared up and spread to plaintiff's property. The day they did, however, several "great fires . . . swept through Northeast Minnesota," including plaintiff's property.²¹³ The defendant argued that it should not be liable if the damage was caused by the combination of a fire it set and others "of no responsible origin, but of such sufficient or superior force that they would have produced the damage to plaintiff's property, regardless of the fire pleaded."²¹⁴ The court responded that "[i]f a fire set by the engine of one railroad company unites with a fire set by the engine of another company, there is joint and several liability, even though either fire would have destroyed plaintiff's property"; therefore it would not absolve a railroad of liability if the second fire happened to be "of no responsible origin" instead of being set by another railroad.²¹⁵ The court affirmed the plaintiff's verdict. The court did not suggest that damages were reduced because of the other "innocent" causes.

The Second Restatement treats multiple sufficient causes explicitly only as an exception to "but for" causation,²¹⁶ and does not discuss how this exception coheres with the causal apportionment principles of section 433A. The comments to section 433A open with a seemingly broad statement of applicability: "The rules stated in this Section apply whenever two or more causes have combined to bring about harm to the plaintiff, and each has been a substantial factor in producing the harm, as stated in sections 431 and 433."²¹⁷ But nothing in section 433A or its accompanying commentary suggests that a single harm can or must be apportioned among multiple sufficient causes.

The section 432(2) description of multiple independent causes— "two forces are actively operating . . . and each of itself is sufficient to bring about harm to another"—is not literally within the ambit of "whenever two or more causes have combined to bring about harm," and the comment to section 433A notably omits any reference to section 432(2).²¹⁸ The Second Restatement gives thirteen illustrations that deem apportionment appropriate, and not one involves a clear case of multiple sufficient

213. *Anderson*, 179 N.W. at 46.

214. *Id.* at 49.

215. *Id.*

216. *Compare* RESTATEMENT (SECOND) OF TORTS § 432(2) (1966), *with id.* § 432(1).

217. *Id.* § 433A cmt. a (1966).

218. *See generally* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 27 cmt. i (1999) (Proposed Final Draft No. 1, 2005) (distinguishing multiple causes from multiple sufficient causes).

causes.²¹⁹ The conspicuous absence of combining fire cases from these illustrations suggests strongly that at common law and under the Second Restatement, parties responsible for multiple sufficient causes of harm faced joint and several liability for the entire resulting harm. Even some common law pollution cases that otherwise held apportionment appropriate suggested that parties should be held jointly and severally liable for the entire harm.²²⁰

In the CERCLA context, statutory objectives reinforce the common law's reasoning. To shift costs from the government to responsible parties, Congress made parties liable for response costs under CERCLA even *without* proof that their involvement with a facility (as owner, operator, transporter, or arranger) caused the environmental damage addressed by the response action. It follows that Congress surely intended to shift costs to any party that could be shown to have caused, all on its own, the need for an entire cleanup. It would be inconsistent with CERCLA for such a party's liability to be reduced simply because another party did the same thing—especially in a case where, because of the other party's insolvency, the result would be to shift costs back to the taxpayer.

219. Illustrations that relate to separate torts that cause separate injuries (including successive episodes of water pollution that deprive a plaintiff of the use of the water at different times) are obviously distinguishable from multiple sufficient causes of the same harm. RESTATEMENT (SECOND) OF TORTS § 433A(1) (1966); *see id.* cmts. b, c, f, & illus. 1, 2, 8, 10, 11. In the animal-trespass examples, it is clear that each tortfeasor's trespassing animals did some of the damage, and that neither tortfeasor's animals acting alone would have caused all of the harm. *Id.* cmt. d, illus. 3. The flooding examples constitute the clear case in which each cause literally creates only a fraction of the damage: the extent of a flood is proportionate to the amount of water released. *Id.* § 433A cmts. d, e, f, & illus. 4, 6, 9. The mine-debris example is exactly analogous to flooding. *Id.* § 881 cmt. d, illus. 1. The private nuisance example of smoke from a roundhouse posits explicitly that "reasonable operation of the roundhouse . . . would have caused one-third of the smoke and interference," so neither the reasonably emitted smoke nor the tortious smoke was a sufficient cause of the entire harm. *Id.* § 433A cmt. e, illus. 7. Similarly, the example of smelter fumes specifies that one of the sources would by itself cause no harm at all, much less all of the harm. *Id.* § 881 cmt. d, illus. 2. The private nuisance example of concurrent water pollution in which oil pollution, 70% discharged by A and 30% discharged by B, "deprived [plaintiff] of the use of the water for his own industrial purposes" is the only illustration in which it is even conceivable that each cause was a sufficient one. *Id.* § 433A cmt. d, illus. 5. But the illustration does not say so, and the sufficiency of each cause is not logically compelled—the water might have been usable for industrial purposes if polluted by only a fraction of the oil. The intellectual underpinning of section 433A, and the context of the other illustrations, suggest powerfully that the illustration conceives that each oil discharge separately would have caused actual harm in proportion to the amount of oil discharged, rather than causing the same harm that resulted from the combined discharges.

220. *E.g.*, *Mitchell Realty Co. v. City of W. Allis*, 199 N.W. 390, 395 (Wis. 1924) (distinguishing that case from situations in which each wrongful act would produce the identical results); *Pulaski Anthracite Coal Co. v. Gibboney Sand Bar Co.*, 66 S.E. 73, 74 (Va. 1909) (stating that several liability is the rule among multiple independent tortfeasors, provided "neither being sufficient to produce the entire loss . . .").

Multiple sufficient causes may exist commonly in CERCLA cases where response action is triggered by environmental conditions that exceed a certain threshold.²²¹ In the MSL hypothetical, if twenty percent of the total amount of HOS placed in the landfill would have made the concentration of HOS in the groundwater high enough to require the remedy, many of the liable parties should be considered multiple sufficient “causes” in the context of the CERCLA liability scheme: *O1* and *O2*, each of whom owned and operated the landfill when more than twenty percent of the HOS was disposed of there; *T1*, who transported more than twenty percent of the HOS to the dump; and *A1*, *A2*, and *A3*, each of whom arranged for disposal of at least twenty percent of the HOS dumped.²²² The amount of HOS for which each of these defendants is responsible was sufficient to induce construction of the cap, installation of the pump-and-treat system and, with some further factual assumptions, the duration of operation of the pump-and-treat system.²²³ A surface cap, as in *Reichhold*, may be the purest example: if two companies arrange for disposal of the same hazardous substance in a given area, and the amount dumped by each causes the soil concentration to exceed the response action threshold, then each has caused the need for construction of a cap over the area they jointly contaminated.

How might this work in practice? CERCLA plaintiffs would continue to prove the usual elements of CERCLA liability, without needing to allege traditional causation and certainly without needing to allege that any individual defendant’s behavior would have been sufficient to cause the response action. A defendant that alleged divisibility would bear the burden of establishing a reasonable basis for apportionment. Even under *Burlington Northern*, establishing the basis for apportionment would necessarily entail some type of proof of the defendant’s causal contribution. In attempting to defeat the claim for apportionment, the plaintiff should be entitled to produce evidence that the defendant’s causal contribution, even

221. But, of course, multiple sufficient causes will not always exist, so this theory, too, does not produce joint and several liability in every case of a single harm under CERCLA.

222. This hypothetical is not unrealistic. The author was lead counsel for the United States in a case involving a landfill with innumerable customers that may have arranged for disposal of hazardous substances, but the evidence suggested that the overwhelming majority of the organic solvents that “drove” the remedy decision came from just three or four companies. The issue was never litigated, but it would have been completely plausible that the volume dumped by any one of these major contributors would have required a remedy all by itself.

223. If the duration of operation of the pump-and-treat system to manage migration were a function only of the presence under the dump of groundwater contaminated above the threshold and the rate of flow of that groundwater to the landfill boundary, then each sufficient contributor to the above-threshold contamination would have caused the need for the thirty years of operation.

if proven, would alone have been a sufficient cause of the harm. The burden of proof on apportionment would remain with the defendant.²²⁴ Thus, in response to plaintiff's production, the defendant would have to establish by a preponderance of the evidence that its proven causal contribution was insufficient to cause the harm.

Even though the burden of proof on apportionment would remain with the defendant, this would still be a harder case than CERCLA plaintiffs have been accustomed to presenting. In order to obtain and preserve evidence that a particular responsible party's basis for liability constituted a sufficient cause, EPA or other responding agencies would likely need to adjust the way in which response action decisions are documented. Agencies would need to intensify investigation and discovery into particular responsible parties' roles (although that is a probable consequence of *Burlington Northern* regardless of how the courts treat multiple sufficient causes). In some cases, such as a cost recovery claim for a site involving no dominant arrangers among many, the facts may not implicate any party—or any solvent party—as a sufficient cause.²²⁵ In other cases, the harm may be inherently proportional to causal contribution. Such harm is analogous to a purely dose-dependent toxicological response, instead of a threshold response.²²⁶ Thus, sometimes it might not be possible, even theoretically, for agencies to assign causal sufficiency to any party among several in a given category of responsible persons.²²⁷

224. RESTATEMENT (SECOND) OF TORTS § 433B (1966).

225. Often, owner/operator defendants could be found to have caused the entire harm, but they are apt to be defunct, like Brown & Bryant. But mere owner/operator status would not always imply joint and several liability on a multiple-sufficient-cause theory. In a case like *Bell Petroleum*, depending on the facts, each of several owner/operator defendants might be found to have contributed too little to have been a sufficient cause of the entire harm. *In re Bell Petroleum Servs.*, 3 F.3d 889, 889 (5th Cir. 1993).

226. A drum removal, with no contamination of environmental media, may be the purest example. If, for example, two arrangers brought drums of the same hazardous substance to a storage facility, which the facility owner/operator abandoned after going bankrupt, it is hard to see how either arranger could be found to have caused the entire removal action. *But cf.* *United States v. Capital Tax Corp.*, 545 F.3d 525, 536 (7th Cir. 2008) (stating that joint and several liability was warranted in drum removal case because not all response actions were proportionate to number of drums and because “a CERCLA owner may not move barrels of hazardous substances across property lines . . . in order to reduce its liability . . .”).

227. Defendants responding to an assertion of causal sufficiency would likely search for ways in which the response action was “dose-dependent.” For example, in the MSL hypothetical, a defendant might argue that duration or cost of operating the pump-and-treat system was a function of the total volume of HOS in the soil and groundwater. In a soil cap scenario like *Reichhold*, a defendant might argue that the combination of both companies' dumped material increased the total contaminated area and therefore proportionately increased the size and cost of the needed cap. Courts should scrutinize such claims closely, even if they conclude that *Burlington Northern* established a relatively relaxed proof standard for reasonable apportionment in general. If found to be a sufficient cause of the response

Despite these issues, proper judicial treatment of multiple sufficient causes in the context of CERCLA liability should result in joint and several liability, even in some cases where contributions could be estimated under a broad view of *Burlington Northern*. *Reichhold* provides a perfect illustration. For the capped area at issue in this case, the evidence had given Judge Debevoise an idea of the relative contributions of USMRC and the subsequent occupier's metals contamination.²²⁸ But once the court found as a fact that either one's contribution would have required the cap even in the absence of the other's,²²⁹ the Second Restatement and CERCLA dictated that the party responsible for either of these sufficient causes should have been held jointly and severally liable for the resulting harm. By apportioning²³⁰ half the harm to a third party that was not before the court in any capacity, Judge Debevoise saved the plainly liable USMRC more than \$348,000²³¹ and stuck the plaintiff with that expense.²³² Future

action overall, a defendant should be jointly and severally liable even if it could argue for apportionment based on loose approximations like those in *Burlington Northern*. An attempt to avoid that result by nuanced dissection of the response action should be supported by correspondingly nuanced proof. So the MSL defendant should be required to prove not just its contribution to the HOS problem, but that the pump-and-treat operating costs are in fact proportional to that contribution; the soil cap defendant should be required to prove not just its percentage share of the dumped contaminated fill, but how much smaller the cap would have been in the absence of the other company's dumping.

228. In discussing apportionment of the costs of the cap, the opinion stated that "USMRC was undoubtedly the source of most of" the contamination of the relevant area. *Reichhold, Inc. v. United States Metals Refining Co.*, No. 03-453(DRD), 2009 U.S. Dist. LEXIS 52471, at *131-33 (D.N.J. 2009). Earlier in the opinion, the findings of fact gave an even starker qualitative comparison: "There is evidence that a subsequent owner or tenant . . . introduced two or three feet of contaminated fill . . . which was spread on top of an enormous amount of slag fill placed there by USMRC . . ." *Id.* at *93. Still more specifically, the evidence disclosed the area of the cap—125,000 square feet—and the volume of slag fill dumped by USMRC—65,000 cubic yards. *Id.* at *10, *93-96. Had the judge deemed it pertinent, he easily could have computed the greatest possible volume of later fill consistent with the evidence (three feet deep times 125,000 square feet, a little less than 14,000 cubic yards), and concluded that USMRC contributed about eighty-two percent of the total volume of contaminated fill in that area. The calculation implies an assumption that the contamination levels were the same in the fill from each source, but such an assumption hardly seems less of a stretch than the implicit assumptions the Supreme Court found acceptable in *Burlington Northern*.

229. *Reichhold, Inc. v. United States Metals Refining Co.*, No. 03-453(DRD), 2009 U.S. Dist. LEXIS 52471, at *116 (D.N.J. 2009).

230. The simple apportionment approach of *Reichhold* seems at odds with the Third Circuit's view that proof of divisibility "will be factually complex as it will require an assessment of the relative toxicity, migratory potential and synergistic capacity of the hazardous waste at issue." *United States v. Alcan Aluminum Corp.*, 964 F.2d 252, 269 (3d Cir. 1992). Ironically, Judge Debevoise, sitting by designation, was on the *Alcan* panel.

231. *Reichhold, Inc.*, 2009 U.S. Dist. LEXIS 52471, at *132 (plaintiff awarded \$348,212 in past costs, plus one-half of future costs, for the cap).

232. One might be tempted not to weep much for *Reichhold*, which as a liable party itself might have been required to contribute to the cleanup costs in any event. But nothing in the opinion's reasoning would preclude its application to a non-liable government plaintiff. It is disturbing, moreover, that *Reichhold*, which agreed to construct the cap and then sought cost recovery, might have fared better

courts facing similar circumstances should apply *Burlington Northern* more cautiously.²³³

C. Of the Weight of Lines and the Length of Masses: Incommensurable Bases for Liability

The first Restatement of Torts placed the scope-of-liability rules in a chapter that addressed a variety of problems involving multiple tortfeasors.²³⁴ The Second Restatement recognized the theoretical gravamen of these rules and nestled their successors comfortably amid other causation principles.²³⁵ However, CERCLA imposes liability for response actions without regard to whether the conduct of an owner, operator, arranger, or transporter was a but-for cause of the response action or even a substantial factor in bringing it about.²³⁶ Courts have recognized

had the state performed the response action and sued Reichhold for cost recovery, after which Reichhold sued USMRC for equitable contribution. The equities tipped strongly against USMRC. USMRC placed the lion's share of the contamination into the capped area; by contrast, the court found "no evidence that Reichhold has brought contaminating metals onto the Site" at all, even if its activities might have moved some previously-existing contamination. *Id.* at *89.

233. It seemed as if the Third Circuit Court of Appeals would have an opportunity, as USMRC appealed the judgment against it, *Reichhold, Inc. v. United States Metals Refining Co.*, No. 03-453 (DRD), Notice of Appeal (D.N.J. filed July 10, 2009), and Reichhold cross-appealed. *Reichhold, Inc. v. United States Metals Refining Co.*, No. 03-453 (DRD), Notice of Cross-Appeal (D.N.J. filed July 17, 2009). Although Reichhold's notice of cross-appeal did not refer to the apportionment ruling, USMRC identified the apportionment as an issue on appeal in a preliminary filing with the Court of Appeals. *Reichhold, Inc. v. United States Metals Refining Co.*, No. 09-3027, Concise Summary of the Case (3d Cir. filed July 30, 2009). But the case settled and the parties dismissed their appeals. *Reichhold, Inc. v. United States Metals Refining Co.*, No. 09-3027, Order (3d Cir. filed Oct. 2, 2009).

234. RESTATEMENT (FIRST) OF TORTS §§ 875, 879, 881 (1939).

235. RESTATEMENT (SECOND) OF TORTS § 433A Rptrs' Note (1966) (stating that this section "expands rules formerly stated in §§ 875, 879, and 881, which Sections now refer to this one"). *But cf.* Gerald W. Boston, *Apportionment of Harm in Tort Law: A Proposed Restatement*, 21 U. DAYTON L. REV. 269, 327 (1996) (arguing that causation principles alone cannot explain section 433A).

236. *E.g.*, *United States v. Capital Tax Corp.*, 545 F.3d 525, 530 (7th Cir. 2008) (CERCLA imposes liability "when a party is found to have a statutorily defined 'connection' with the facility; that connection makes the party responsible regardless of causation."); *United States v. Alcan Aluminum Corp.*, 990 F.2d 711, 721 (2d Cir. 1993) ("What is not required is that the government show that a specific defendant's waste caused incurrence of clean-up costs."); *United States v. Alcan Aluminum Corp.*, 964 F.2d 252, 266 (3d Cir. 1992) ("Decisions rejecting a causation requirement between the defendant's waste and the release or the incurrence of response costs are well-reasoned, consistent with the plain language of the statute and consistent with the legislative history of CERCLA"; plaintiff need not prove that the arranger's hazardous substances caused the release or the incurrence of response costs.); *Memphis Zane May Assocs. v. IBC Mfg. Co.*, 952 F. Supp. 541, 546 (W.D. Tenn. 1996) ("[T]ort notions of causation do not apply in CERCLA, which utilizes a 'status-based' liability standard.") (quoting Peter M. Manus, *Natural Resource Damages from Rachel Carson's Perspective: A Rite of Spring in American Environmentalism*, 37 WM. & MARY L. REV. 381, 417 (1996)); *cf.* RESTATEMENT (SECOND) OF TORTS § 432(1) (1966) (describing "but for" causation); *see id.* § 431 (causation requires tortfeasor's conduct to be "substantial factor in bringing about the harm").

the square peg/round hole quality of apportioning liability based on causation in the context of a statutory scheme in which liability does not depend on causation.²³⁷

The most obvious incongruity results from Congress's decision to make current owners of facilities liable, even if they play no role in the operations that result in a release and even if no disposal of hazardous substances occurs during their ownership.²³⁸ In the MSL hypothetical, imagine an additional defendant, *O3*, who recently bought the property from *O2*. *O3* takes due care with respect to the HOS at the facility, takes precautions against foreseeable acts of third parties that might make the situation worse, cooperates with and does not impede the responding government, and complies with required land use restrictions.²³⁹ *O3* is nevertheless liable, because *O3* purchased the facility with full knowledge of the HOS contamination.²⁴⁰ Yet during *O3*'s ownership the environmental problem at the facility only improves. By the tempting volumetric measure of causal apportionment, *O3* should have a zero share. But a zero share for *O3* would contradict the plain language of CERCLA that makes current owners liable based solely on their ownership status.²⁴¹

237. *Capital Tax*, 545 F.3d at 535 (“Some courts have noted that the ‘fit’ between § 433A and CERCLA is actually quite unclear”); see *Alcan*, 964 F.2d at 269 (arguing that allowing defendant to avoid liability based on lack of causation is “consistent” with holding that plaintiff may establish liability without proving causation); *Alcan*, 990 F.2d at 722 (divisibility analysis brings causation back into case “through the backdoor, after being denied entry at the front door”).

238. See 42 U.S.C. § 9607(a)(1) (2006) (making “owner or operator of a vessel or a facility” liable); see also *Kerr-McGee Chem. Corp. v. Lefton Iron & Metal Co.*, 14 F.3d 321, 325 (7th Cir. 1994) (current owner liable, although it did not cause disposal, because it could not satisfy “innocent landowner” standard); *United States v. Wedzeb Enters, Inc.*, 809 F. Supp. 646, 652 n.8 (S.D. Ind. 1992) (Although section 107(a)(1) refers to “owner and operator,” liability also attaches to entity that either owns or operates facility but does not do both.); cf. 42 U.S.C. § 9601(35) (2006) (providing so-called “innocent landowner exception,” which narrows term “contractual relationship” in CERCLA’s third-party defense to allow successful assertion of defense by current owners who acquired facility after all placement of hazardous substances there and who meet additional conditions); see *id.* § 9622(g)(1)(B) (authorizing expedited settlements with “de minimis landowners” who did not conduct operations involving or contribute to the release of hazardous substances, implying that absent settlement such landowners would be liable).

239. See §§ 9601(35), 9607(b)(3) (listing requirements for innocent landowner exception).

240. § 9601(35)(A)(i).

241. This facial inconsistency with the statute distinguishes the case of a “non-contributing” current owner from the “special exception” of a “backdoor” causation defense that the *Alcan* cases recognized, which allows an arranger, at least in theory, to establish that the harm is reasonably capable of apportionment and that its correct apportioned share should be zero. *United States v. Alcan Aluminum Corp.*, 990 F.2d 711, 722 (2d Cir. 1993); see *United States v. Alcan Aluminum Corp.*, 964 F.2d 252, 269 (3d Cir. 1992) (similarly distinguishing use of causation in apportionment inquiry from use of causation in liability inquiry). Of course, a court balancing the equities in a contribution case might well decide that such an owner, despite being liable to the government, should contribute nothing to other responsible parties.

The difficulty is not limited to current owners, but arises in any case that involves a single harm to which liable parties have “contributed” in incommensurable ways. If an arranger’s hazardous substance travels on a transporter’s truck to an operator’s disposal business on an owner’s property, by what metric can a court compare the extent to which each of those liable parties contributed to the eventual environmental contamination? If the answer is that each should bear an equal share, because all contributed equally to causing the entire harm, then per capita apportionment would prevail in every case. That outcome would contravene the manifest will of Congress as well as the legal standard approved in *Burlington Northern*. On that view, each liable party would benefit because of the addition of more parties (such as hauling by a transporter instead by the arranger or operator, or the non-identity of the owner and the operator). If each liable party caused the entire harm individually and equally with the others, it makes just as much sense for a court to hold each party jointly and severally liable.

The MSL hypothetical extends the problem to a somewhat more realistic, if still oversimplified, situation. It might be tempting to array the volume of HOS that each responsible party “touched” in its particular role and divide by the sum of all the individual shares to apportion, for example, 1/9th of the liability to *A1* and 2/9th of the liability to *T1*. This calculation assumes that cause is proportionate to volume and independent of activity: arranging for disposal is equivalent to transporting which is equivalent to operating the facility. A court might hold that assumption reasonable, but only by its *ipse dixit*—volume can be measured, therefore I will apportion by it. The assumption is essentially arbitrary. It becomes more arbitrary as the actual facts become more complex—if, say, causal contribution varies not only with each defendant’s class but with its behavior within that class,²⁴² or if some parties’ liability results purely from ownership status.²⁴³ Ultimately, a court attempting a quantitative causally based apportionment

242. For example, operators might conduct different activities involving different substances with different frequencies of releases. Another imponderable, on the facts of the MSL hypothetical, is whether *A1* should be charged with a “double” share as both an arranger and its own transporter. *A1* would presumably argue, with some force, that its causal contribution is what it is, and that *A1* made its contribution only once, not twice.

243. See generally *United States v. Northernair Plating Co.*, 670 F. Supp. 742, 748 (W.D. Mich. 1987) (Holding harm indivisible where defendants were owner, corporate operator, and individual operator; although presence of hazardous substances was “directly attributable to the activities of” operators, “plain language” of CERCLA making owners liable shows that “Congress clearly intended that the landowner be considered to have ‘caused’ part of the harm. As such, the harm is indivisible, and all of the defendants are jointly and severally liable.”), *aff’d*, *United States v. R. W. Meyer, Inc.*, 889 F.2d 1497 (6th Cir. 1989).

among parties that contribute to a CERCLA harm in qualitatively different ways must engage in something “like judging whether a particular line is longer than a particular rock is heavy.”²⁴⁴

Not surprisingly, CERCLA case law does not support the idea that a court can apportion a single harm among different classes of liable parties. *Chem-Dyne*, the archetype, held that section 433A would govern “where a court performing a case by case evaluation of the complex factual scenarios associated with multiple-generator waste sites will assess the propriety of applying joint and several liability on an individual basis.”²⁴⁵ The *Alcan* cases, *O’Neil*, and many others similarly confronted courts with arrangers attempting to apportion their liability against other arrangers.²⁴⁶ Another typical fact pattern, and one that has provided the greatest success for defendants seeking apportionment, has involved owner/operators of distinct parcels or with distinct time periods of involvement.²⁴⁷ Serious claims of divisibility in CERCLA cases have generally involved attempts to compare the comparable.²⁴⁸

Burlington Northern might have been an exception. Brown & Bryant and the Railroads were both liable as owners/operators, but the district court

244. *Bendix Autolite Corp. v. Midwesco Enters., Inc.* 486 U.S. 888, 897 (1988) (Scalia, J., concurring) (concurring in a case neither related to CERCLA nor involving apportionment). It is of course true that in contribution actions, courts (or the parties to the contribution case, if they settle) must perform allocations across responsible party classes all the time—although only after defendants have some common liability to the plaintiffs. The contribution context can be distinguished. First, it invokes equity, which allows consideration of numerous factors beyond causation and increases the amount of discretion with which factors can be weighed. *Cf. Burlington N. & Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870, 1882 n.9 (2009) (equitable factors not considered in apportionment analysis). Second, it does not invoke the principal statutory objectives that warrant imposition of joint and several liability to plaintiffs in the first instance. For the same reasons, the apportionment analysis under CERCLA is not the same as that undertaken by “any factfinder that has been called on to apportion fault under comparative negligence statutes.” *In re Bell Petroleum Servs.*, 3 F.3d 889, 903 n.16 (5th Cir. 1993).

245. *United States v. Chem-Dyne Corp.*, 572 F. Supp. 802, 808 (S.D. Ohio 1983) (emphasis added). “Generators,” as used in *Chem-Dyne*, refers to “arrangers” liable under § 9607(a)(3).

246. The arrangers framed the issue that way for the courts, in any event, regardless of whether an owner/operator, such as Mr. Picillo, originally was a defendant in the case. *See, e.g., O’Neil v. Picillo*, 883 F.2d 176, 178 (1st Cir. 1989).

247. *E.g., Bell Petroleum*, 3 F.3d at 904 (remanding for district court to perform apportionment after successive operators that engaged in similar activity involving same chemical proved that reasonable basis for apportionment existed); *Dent v. Beazer Materials and Servs., Inc.*, 156 F.3d 523, 530 (4th Cir. 1998) (owner/operator of separate plant on separate parcel, that contributed different hazardous substances, not jointly and severally liable with owner/operator of other plant); *United States v. Rohm & Haas Co.*, 2 F.3d 1265, 1280 (3d Cir. 1993) (defendant in case involving successive owner/operators not entitled to apportionment because it failed to meet burden of proving a reasonable basis “for determining the extent of its contribution to the harm”).

248. *Cf. Boston*, *supra* note 235, (proposing a general tort rule that would make joint and several liability less available, yet in cases of causal apportionment requiring that “contributing causes . . . are reasonably capable of measurement or comparison”).

also held Shell liable as an arranger and apportioned a six percent share to Shell.²⁴⁹ Thus, the Supreme Court almost had an opportunity to provide guidance on how, if at all, to apportion CERCLA liability among different classes of liable persons. But the Court dodged that bullet when it held that Shell was not liable as an arranger at all.²⁵⁰ Instead, *Burlington Northern* actually demonstrates that a rule precluding apportionment of CERCLA liability among responsible parties in disparate liability classes would not necessarily preclude apportionment in every case involving a single harm.

D. Of Pollution As Paradigm and the Difference of Death: A Closer Look at Section 433A

In *Burlington Northern*, the Railroads argued to the Supreme Court that “the law has recognized pollution as the ‘paradigmatic’ apportionable harm.”²⁵¹ In CERCLA cases, many courts have seemed to acquiesce in this view, at least in principle, even if they held that defendants had failed to meet their burden of establishing a reasonable basis for a court to carry out the “paradigmatic” apportionment.²⁵² One passage in the Second Restatement commentary on section 433A seems to have had particular influence:

d. Divisible harm. There are other kinds of harm which, while not so clearly marked out as severable into distinct parts, are still capable of division upon a reasonable and

249. There is a fair argument that, even assuming the possibility of a reasonable basis of apportionment among two owner-operators and an arranger, the district court performed the apportionment improperly. The district court’s finding that operations on the B&B Parcel contributed at least ten times as much contamination as operations on the Railroad Parcel, as well as the way in which the district court computed the Railroads’ apportioned share of liability, suggests an implicit apportionment of 91% to Brown & Bryant. *United States v. Atchison, Topeka & Santa Fe Ry. Co.*, No. CV-F-92-6058, 2003 U.S. Dist. LEXIS 23130, at *146, *260 (E.D. Cal. July 14, 2003). The independent computation of a 6% share for Shell implies that the district court actually allocated 106% of the liability to the three responsible parties. This illustrates the problem of incommensurable bases of liability: there is no logical way to address the overlap between the arranger’s causal contribution and the owners’/operators’ contribution. On the other hand, if one assumes that the district court really meant to apportion 9% to the Railroads, 6% to Shell, and 85% to Brown & Bryant, then when the Supreme Court held that Shell was not liable, Shell’s share should have been reallocated to keep the total apportioned liability at 100%—the Railroads’ share would have increased to about 9.6%.

250. *Burlington N. and Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870, 1880 (2009).

251. Brief for Petitioners the Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company at 26, *Burlington N. and Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870 (2009) (No. 07-1601).

252. As noted above, *see supra* note 82, in *Burlington Northern* the Supreme Court simply noted that both the district court and the court of appeals had treated the harm at the Brown & Bryant site as a single harm that was theoretically capable of apportionment.

rational basis, and of fair apportionment among the causes responsible

. . . .

Such apportionment is commonly made in cases of private nuisance, where the pollution of a stream, or flooding, or smoke or dust or noise, from different sources, has interfered with the plaintiff's use or enjoyment of his land. Thus where two or more factories independently pollute a stream, the interference with the plaintiff's use of the water may be treated as divisible in terms of degree, and may be apportioned among the owners of the factories, on the basis of evidence of the respective quantities of pollution discharged into the stream.²⁵³

The Restatement provides an example, Illustration 5, in which oil negligently discharged from two factories onto the surface of a stream deprives a downstream riparian owner of the use of the water for industrial purposes. "There is evidence" that seventy percent of the oil came from one factory and thirty percent from the other; on that basis, each factory owner is liable for the corresponding proportion of the plaintiff's damages.²⁵⁴

Courts have taken for granted the analogy between CERCLA liability to the government and private nuisance liability to the Restatement's downstream landowner.²⁵⁵ A careful analysis of the treatment of pollution cases in section 433A reveals that the analogy has been flawed from the start.

1. Section 433A As a Whole

First, section 433A takes multiple views of pollution cases. The loss of a stream's use for industrial purposes by the combined effect of two oil discharges is divisible if the basis for apportionment is proven, the Restatement says in Illustration 5, but "[c]ontrast Illustrations 14 and 15":

253. RESTATEMENT (SECOND) OF TORTS § 433A cmt. d (1966). This text is quoted or closely paraphrased in, *inter alia*, *United States v. Alcan Aluminum Corp.*, 964 F.2d 252, 269 (3d Cir. 1992); *In re Bell Petroleum Servs.*, 3 F.3d 889, 896 (5th Cir. 1993); *United States v. Hercules, Inc.*, 247 F.3d 706, 718 (8th Cir. 2001).

254. RESTATEMENT (SECOND) OF TORTS § 433A cmt. d, illus. 5 (1966).

255. The assumed analogy has often made little difference, because evidence to provide a reasonable basis for apportionment has usually been lacking.

14. A Company and B Company each negligently discharge oil into a stream. The oil floats on the surface and is ignited by a spark from an unknown source. The fire spreads to C's barn, and burns it down. C may recover a judgment for the full amount of his damages against A Company, or B Company, or both of them.

15. The same facts as Illustration 14, except that C's cattle drink the water of the stream, are poisoned by the oil and die. The same result.²⁵⁶

How can courts reconcile Illustrations 5, 14, and 15? The Restatement does not hinge the difference on the legal characterization of the claim in Illustration 5 as sounding in "nuisance," but rather on the nature of the harm:

Certain kinds of harm, by their very nature, are normally incapable of any logical, reasonable, or practical division. Death is that kind of harm, since it is impossible, except upon a purely arbitrary basis for the purpose of accomplishing the result, to say that one man has caused half of it and another the rest. The same is true of . . . the destruction of a house by fire²⁵⁷

Thus, according to section 433A, those who contribute to the "indivisible" burning of a barn or fatal poisoning of cows are liable, jointly and severally, for all of the damage to which they contributed. The unmistakable implication is that loss of use or enjoyment of land, by contrast, is inherently capable of logical, reasonable, or practical division. The coherence of this distinction can be criticized from both ends.²⁵⁸ However, the Supreme Court has directed courts to apply section 433A to claims of divisibility in CERCLA cases. To do so, courts must consider a novel question: is a CERCLA cost recovery claim more like a claim for lost use of water, or more like a claim for a burned barn or poisoned cattle?

256. *Id.* § 433A cmt. I, illus 14, 15.

257. *Id.* § 433A cmt. i.

258. From one end, Gerald Boston argued that determining the causal contributions of, say, cigarette smoking and asbestos exposure to death from lung cancer ought to be no different from determining their contributions to illness from lung cancer. Boston, *supra* note 235, at 331. *See generally* RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY (2000). From the other end, the loss of use of the water in Illustration 5 seems just as total as the loss of the burned barn or the dead cattle; is it really possible to say, "except . . . for the purpose of accomplishing the result" that each contribution of oil made some of the water unusable or made all of the water partly unusable?

Certainly, hazardous substance contamination, and/or the required response action, can make property unmarketable and virtually unusable. But then, burning down a house makes it pretty unusable too. So the lost use analogy does not help much. The key, rather, is that many, if not all, CERCLA cost recovery claims are for response actions that result from the totality of an environmental situation. In the MSL hypothetical, the remedial investigation and feasibility study would necessarily have been conducted in response to the (as yet uncharacterized) contamination as a whole; the cap and pump-and-treat systems are similarly comprehensive responses to an overall problem. The facility from which hazardous substances are released is the burning barn; each individual contribution of HOS (whether by arrangement for disposal, transportation, or operation of the landfill) is one of the individual fires that combined to create the conflagration. The analogy may not be perfect, but it is no more imperfect than the analogy of a typical CERCLA site to water rendered unusable by a single substance in assumed proportion to the amount of the substance.

The Restatement illustrations include another apparent paradox that further highlights this distinction. Illustration 15 treats cattle killed by poisoned water as an indivisible harm.²⁵⁹ The apparent explanation is that the cattle are dead, and death is an indivisible harm. But Illustration 3 holds that if three dogs belonging to one owner and two dogs belonging to another kill ten of plaintiff's sheep, the harm is divisible in proportion to the number of dogs of each owner, provided there "is evidence . . . that all of the dogs are of the same general size and ferocity."²⁶⁰ The sheep in the latter illustration are no less dead than the cattle in the former. The best explanation for the varying outcomes is that intuition tells us that the dogs likely set upon the sheep individually or nearly so, and no sheep died by the act of all of the dogs. By contrast, although it is theoretically possible that a single steer drank only oil emitted from one factory, intuition tells us that the cattle were poisoned by both defendants' oil, just as a CERCLA response action usually responds to environmental conditions created by all of the responsible parties.

Neither the nature of the harm (e.g., death) nor the nature of the cause (e.g., pollution) seems to explain satisfactorily all of these examples. Looking beneath the text of the Restatement commentary to the court decisions from which its illustrations are extracted confirms that these distinctions are inadequate.

259. RESTATEMENT (SECOND) OF TORTS § 433A cmt. d, illus. 15 (1966).

260. *Id.* illus 3. The importance of the evidentiary qualification to CERCLA cases, where defendants often cannot prove that their hazardous substances are of equal environmental ferocity, is immediately obvious.

Illustration 14, where an oil slick contributed by two defendants catches fire and the fire burns a barn, “is taken from *Northup v. Eakes*,”²⁶¹ an Oklahoma Supreme Court opinion.²⁶² In *Northup*, numerous holders of oil leases allowed crude oil to flow into a creek that ran past plaintiff’s land; just as in the illustration, the oil ignited and the resulting fire spread to and destroyed plaintiff’s barn. The court held that “the lessees holding separate leases acted independent of each other, yet their several acts in permitting the oil to flow into the stream combined to produce but a single injury. In these circumstances each is responsible for the entire result”²⁶³

Illustration 15, where two defendants discharge oil that poisons plaintiff’s cattle, also derives from an Oklahoma case, *Tidal Oil Co. v. Pease*.²⁶⁴ Multiple defendants discharged petroleum well waste containing oil and salt water onto their own properties, which eventually drained into two creeks that crossed plaintiff’s land.²⁶⁵ Some defendants discharged into only one of the creeks, but plaintiff produced evidence that his livestock drank from both creeks.²⁶⁶ Some of the stock died from drinking the contaminated water, but—contrary to the Restatement illustration—most of the animals were merely “injured . . . in loss of flesh, appearance, class and condition.”²⁶⁷ Again the court held that joint and several liability was appropriate.²⁶⁸ The same court reached similar results in a case of pollution causing crop damage²⁶⁹ and even in a case involving multiple causes of flooding.²⁷⁰

In an industrializing America, it became commonplace for the effluvia of numerous manufacturing or extractive firms to combine and to injure their neighbor. The scope of each tortfeasor’s liability for those injuries

261. RESTATEMENT (SECOND) OF TORTS § 433A Rptrs’ Note, cmt. i (1966).

262. *Northup v. Eakes*, 178 P. 266 (Okla. 1918).

263. *Id.* at 268.

264. *Tidal Oil Co. v. Pease*, 5 P.2d 389 (Okla. 1931); see RESTATEMENT (SECOND) OF TORTS § 433A Rptrs’ Note, cmt. i (1966).

265. *Id.* at 390.

266. *Id.*

267. *Id.*

268. “While the defendants were acting independent of each other, if their acts combined to produce the alleged injury to plaintiffs’ live stock . . . each so acting is responsible for the entire result, even though the act of any one defendant might not have caused it.” *Id.* at 391; accord *Kanola Corp. v. Palmer*, 30 P.2d 189, 190 (Okla. 1934). Interestingly, while *Tidal Oil* presents a case of indivisible harm, it also illustrates the principle of distinct harms—the court held that plaintiff could not recover damages for harm to certain cattle that were injured while plaintiff unlawfully pastured them on a defendant’s land. *Pease*, 5 P.2d at 392.

269. *Indian Terr. Illuminating Oil Co. v. Bell*, 46 P.2d 481, 482 (Okla. 1935).

270. *City of Skiatook v. Carroll*, 21 P.2d 498, 499 (Okla. 1933). The application of joint and several liability in *City of Skiatook* cannot be squared with Restatement (Second) of Torts section 433A cmt. d, illus. 4.

was a pressing question for the common law courts. Downwind of the smelters of Ducktown,²⁷¹ in the Pennsylvania coal fields,²⁷² and in many other places,²⁷³ the courts protected industry from joint liability. In Oklahoma, where the battle was between oil production and cattle production, the ranchers won a principle of joint and several liability. Louisiana, too, declined to apportion similar harm under its civil law.²⁷⁴

The pollution illustrations that accompany section 433A are incoherent because the underlying decisions do not reflect the distinctions the Restatement essays as explanations. The decisions, rather, presented two different themes in response to the problem of multiple discharges combining to harm receptors downstream—even in the early years of the twentieth century. Courts adjudicating CERCLA claims that have been directed to apply “traditional and evolving” common law standards should consider which of these two views of divisibility of harm best fits both the fact patterns and the statutory scheme of CERCLA.

2. Illustration 5 on Its Own

The foregoing discussion demonstrated that section 433A and associated commentary, read as a whole, can support the view that most, if not all, CERCLA harms are not divisible; courts need not feel chained to Illustration 5. But courts have focused on Illustration 5, so it is worth asking whether they properly have understood it. A look at the common law source material for the illustration demonstrates that Illustration 5’s treatment of private nuisance claims, even on its own terms, does not support the view that CERCLA liability is analogously capable of apportionment.

The Reporter’s Note to section 433A includes a long string citation of cases that Illustration 5 is “based on.”²⁷⁵ Few of these decisions actually involve a court conducting or reviewing an apportionment of liability, but nearly all²⁷⁶ articulate in some way the proposition that, in the absence of

271. *Swain v. Tenn. Copper Co.*, 78 S.W. 93 (Tenn. 1903).

272. *Little Schuylkill Nav. R.R. & Coal Co. v. Richards’ Adm’r*, 57 Pa. 142, 143 (1868).

273. See generally RESTATEMENT (SECOND) OF TORTS § 433A(1) Rptrs’ Note (1966) (citing to cases in many states).

274. *Williams v. Pelican Natural Gas Co.*, 175 So. 28, 34 (La. 1937) (imposing *in solido* liability on three defendants where salt water discharged independently from each defendant’s oil well entered plaintiff’s pond, killing fish and timber and making the water unfit for sale or swimming or watering stock).

275. RESTATEMENT (SECOND) OF TORTS § 433A(1) Rptrs’ Note (1966).

276. Two decisions the Reporter’s Note cited as sources of Illustration 5 actually imposed joint and several liability. *Id.* *Phillips Petroleum Co. v. Hardee*, 189 F.2d 205, 212 (5th Cir. 1951) (Applying Louisiana law and stating that if “though acting separately, [defendants’] negligence combined to

concerted action, multiple defendants who contribute to pollution that combines to cause a downstream private nuisance are only severally liable.²⁷⁷ The question is why they so hold.

It turns out that within those dusty old reporters (or rarely viewed corners of electronic databases) lurks some pretty hoary doctrine. The cases are infused with procedural impediments to joinder of parties²⁷⁸ and, most importantly, with the concept that joint liability could only attach where the defendants committed a “joint tort.”²⁷⁹ The joint tort analysis viewed the situation from the point of view of the tortfeasor rather than the injured plaintiff. It focused on what act the tortfeasor did, not on the harm its act caused. This issue dominates the cases cited in support of Illustration 5, and to the courts deciding those cases it was fundamental.

In the earliest of those cases, the defendants and other parties operated coal mines and deposited “coal-dirt” into streams.²⁸⁰ All the coal-dirt filled a pond behind plaintiff’s dam.²⁸¹ The trial court instructed the jury that if the defendants threw coal-dirt into the river with the knowledge that other miners were doing so at the same time, the defendants were liable for “the

produce the pollution damage, plaintiffs may recover for the whole damage against one or all of those contributing.”); *City of Valparaiso v. Moffitt*, 39 N.E. 909, 911 (Ind. App. 1895) (distinguishing public nuisance from “general rule” that joint liability requires concert of action).

277. *E.g.*, *Snively v. City of Goldendale*, 117 P.2d 221, 224 (Wash. 1941) (Allowing, contrary to prior authority, joinder of multiple independent tortfeasors in such a case, because “the several liability of such tort-feasors . . . may be more accurately and justly determined in an action in which they are all defendants.”); *Mitchell Realty Co. v. City of West Allis*, 199 N.W. 390, 396 (Wis. 1924) (remanding for apportionment in case of nuisance caused by several sewage dischargers); *Thomas v. Ohio Coal Co.*, 199 Ill. App. 50, 56 (1916) (holding that plaintiff adduced sufficient evidence to support jury verdict estimating contribution of individual defendant to oil and brine pollution discharged from various parties’ wells).

278. *E.g.*, *Watson v. Pyramid Oil Co.*, 248 S.W. 227, 228 (Ky. App. 1923) (plaintiff declined to elect against which defendant he would proceed); *Standard Phosphate Co. v. Lunn*, 63 So. 429, 432 (Fla. 1913) (“For separate and distinct wrongs in no wise connected by the ligament of a common purpose . . . wrongdoers are liable only in separate actions and not jointly in the same action.”).

279.

“Joint tort” has historically been used to describe the situation in which there was a connection among defendants that justified holding each of them liable for the acts of others, such as concerted action or the vicarious liability of an employer for an employee’s negligence. The term “joint tort” has also been used to describe the procedural issue of whether multiple defendants may be joined in the same action, especially under the restrictive joinder requirements imposed by common-law pleading.

RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 10 Rptrs’ Note, cmt. b (2000) (citations omitted).

280. *Little Schuylkill Nav. R. & Coal Co. v. Richards’s Adm’r*, 57 Pa. 142, 144 (1868).

281. *Id.*

combined results of all the . . . deposits”²⁸² The Pennsylvania Supreme Court reversed:

[T]he fallacy lies in the assumption that the deposit of the dirt by the stream in the basin is the foundation of liability. It is the immediate cause of the injury, but the ground of action is the negligent act above. The right of action arises upon the act of throwing the dirt into the stream—this is the tort, while the deposit below is only a consequence. The liability, therefore, began above with the defendant’s act upon his own land, and this act was wholly separate, and independent of all concert with others. His tort was several when it was committed, and it is difficult to see how it afterwards became joint, because its consequences united with other consequences. The union of consequences did not increase his injury.²⁸³

This logic, and even language, reverberated for decades.²⁸⁴ The physical separation between the wrongdoers’ individual tortious acts and those acts’ combined harmful consequences provides a persistent explanation for why private nuisance developed as the “one area”²⁸⁵ in which the common law diverged from “the doctrine applicable to the ordinary negligence cases.”²⁸⁶

282. *Id.* at 146.

283. *Id.*

284. *E.g.*, *Johnson v. City of Fairmont*, 247 N.W. 572, 573 (Minn. 1933) (“[A]cts of independent tort-feasors, each of which cause some damage, may not be combined to create a joint liability at law for damages.”); *Standard Phosphate Co. v. Lunn*, 63 So. 429, 432 (Fla. 1913) (“Torts that are several, separate, and independent acts when committed do not become joint by the subsequent union or intermingling of their consequences”); *Chipman v. Palmer*, 77 N.Y. (32 Sickels) 51, 53 (1879) (“[R]ight of action arises from the discharge into the stream, and the nuisance is only a consequence of the act . . . [which], being several when it was committed, cannot be made joint because of the consequences which followed in connection with others”).

285. Brief for Petitioners the Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company at 27, *Burlington N. and Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870 (2009) (No. 07-1601).

286. *Mitchell Realty Co. v. City of West Allis*, 199 N.W. 390, 394 (Wis. 1924); *see Edmonds v. Compagnie Generale Transatlantique*, 443 U.S. 256, 260 (1979) (“[C]ommon law . . . allows an injured party to sue a tortfeasor for the full amount of damages for an indivisible injury that the tortfeasor’s negligence was a substantial factor in causing, even if the concurrent negligence of others contributed to the incident.”); *see generally Phillips Petroleum Co. v. Hardee*, 189 F.2d 205, 212 (5th Cir. 1951) (applying joint and several liability to claim for damage to crops and land resulting from pollution despite recognizing nuisance as “exception” to rule that each of two persons whose independent tortious acts comprise substantial factor in causing harm is liable for entire harm) (citing RESTATEMENT (FIRST) OF TORTS § 879 (1939)). This does not mean to imply that causal considerations played no role in the decisions approving apportionment in pollution cases. Some courts openly worried about the possibility

CERCLA liability is different. It derives only from the status of the responsible party in relation to the facility that released hazardous substances. Arranger liability does not arise when the hazardous substance leaves the arranger's property; transporter liability does not arise when the transporter puts the hazardous substance on its truck. The liability exists regardless of whether the liable party's hazardous substances exceeded some threshold quantity that would have occasioned the response action.²⁸⁷ By tying the liability-creating conduct to the facility at which the release and response occur, CERCLA unites conceptually the liable parties' separate "torts" and unites geographically the "tort" and the "consequence" in a way that the private nuisance claims cited in the Restatement do not.²⁸⁸

Finally, the private nuisance cases are inapposite because they are, well, private. *City of Valparaiso v. Moffitt*,²⁸⁹ a nineteenth-century case cited in the Restatement in support of Illustration 5, held that "all persons who created or continued" a public nuisance "are jointly and severally liable for all the damages resulting therefrom, although they are not joint tortfeasors."²⁹⁰ If a government CERCLA claim is like a nuisance claim at all, it is much more like a claim for public nuisance than private nuisance. It is based not on lost use and enjoyment of the facility that is the subject of the cleanup, but on the need to protect human health, welfare, and the

of disproportionate liability, particularly for actors whose own conduct alone would have caused no harm, such as a party that discharges sewage in amounts too small to constitute a nuisance, but which creates a nuisance when combined with others' similarly small contributions. *E.g.*, *Martinowsky v. City of Hannibal*, 35 Mo. App. 70, 78 (1889) (holding that liability must be apportioned to avoid having a person who dumps "some putrid matter" become liable for "a pestilence that depopulates a city" only because others did the same thing). But similar, if less extreme, concerns can also arise in personal injury cases, and causation doctrines short of a general rule of several liability can address them.

287. *See* *United States v. Alcan Aluminum Corp.*, 964 F.2d 252, 260 (3d Cir. 1992) ("CERCLA liability does not depend on the existence of a threshold quantity of a hazardous substance.") (citation omitted).

288. CERCLA is different from the common law antecedents of Illustration 5 in at least one other significant way. A number of the common law opinions, especially ones that worried about disproportionate liability, also noted the common law rule precluding joint tortfeasors from obtaining contribution from fellow tortfeasors. *E.g.*, *Chipman*, 77 N.Y. at 53–54 (noting that a defendant held jointly and severally liable would be "without any means to enforce contribution or to adjust the amount among the different parties"); *Watson v. Pyramid Oil Co.*, 248 S.W. 227, 228 (Ky. App. 1923) (identifying that such a defendant would have no remedy against the fellow tortfeasors).

289. *City of Valparaiso v. Moffitt*, 39 N.E. 909, 909 (Ind. App. 1895).

290. *Id.* at 911. In that case, the defendant city, which had built sewers that polluted a stream, alleged an affirmative defense that an operator of a private gas works, with whom plaintiff had settled separately, had caused part of the pollution; the court affirmed a plaintiff's verdict. *Id.* at 910. The Restatement cites the opinion as support for Illustration 5, presumably because of dicta stating a general rule that "[i]f several distinct acts of several persons have contributed to a single injury, but without concert of action or common intent, there is generally no joint liability." *Id.* at 911.

environment, a governmental function that the statute specifically authorized.²⁹¹

Judge Rubin apparently understood this: the *Chem-Dyne* opinion cites *City of Valparaiso* (and not any of the private nuisance cases).²⁹² The idea that the common law's treatment of public nuisance is a relevant and appropriate source of guidance for courts defining the contours of joint and several liability under CERCLA has simply vanished from the jurisprudence.²⁹³ It is time to bring it back from the phantom zone. *Burlington Northern*, after all, instructs courts to consult the common law for guidance and endorses the *Chem-Dyne* analysis.

In sum, neither *Burlington Northern* nor section 433A binds federal courts to assume willy-nilly that CERCLA harms, simply because they consist of pollution, are theoretically capable of apportionment. Courts should engage that question anew. If they do, they will find in Illustrations 14 and 15, as well as in the differences between CERCLA and private nuisance, strong grounds to reason that single CERCLA harms most closely resemble harms that are "indivisible" under section 433A.

Would this mean that all parties liable under CERCLA will be jointly and severally liable all the time? No. First of all, as described above,²⁹⁴ even if courts were to determine that there is never "a reasonable basis for determining the contribution of each cause to a single [CERCLA] harm,"²⁹⁵ apportionment would still be available in CERCLA cases that present "distinct harms."²⁹⁶ Congress wanted the courts to impose joint and several liability in "appropriate" cases; courts would not violate that intent by deciding that it is always "appropriate" in one of two Restatement categories. Second, the re-analysis of section 433A suggested here would not necessarily foreclose holding a single harm divisible in the case where

291. An analogy to public nuisance may be pertinent to a court's consideration of common law sources to determine the scope of CERCLA liability, but this does not mean courts are free to import into CERCLA's comprehensive statutory liability scheme the substantive common law requirements of public nuisance, e.g., RESTATEMENT (SECOND) OF TORTS §§ 821B, 821C (1966).

292. *United States v. Chem-Dyne Corp.*, 572 F. Supp. 802, 810 (S.D. Ohio 1983).

293. Only one other CERCLA decision that addresses the appropriateness of joint and several liability has cited *City of Valparaiso*: *United States v. Ottati & Goss, Inc.*, 630 F. Supp. 1361, 1395 (D.N.H. 1985) (quoting *Chem-Dyne Corp.*, 572 F. Supp. at 810). There the court refused to apportion liability even though there was evidence of the number of drums that various arrangers of hazardous substances had dumped at the site, because the subsequent mixing of the drums' contents had created an indivisible harm that could not be apportioned "with any degree of accuracy." *Id.* at 1396.

294. See *supra* note 42 and accompanying text.

295. RESTATEMENT (SECOND) OF TORTS § 433A(1)(b) (1966).

296. *Id.* § 433A(1)(a).

the degree of harm displayed true proportionality or dose-dependence. The *Bell Petroleum* holding, for example, might well survive.²⁹⁷

CONCLUSION

In *Burlington Northern*, the Railroads joined a select group of CERCLA defendants that have succeeded in being liable to the government for cost recovery under CERCLA without being jointly and severally liable. And they got the highest court in the land to admit them to the group. This was no mean feat.

How much their accomplishment will redound to the benefit of liable parties in other CERCLA cases remains to be seen. The *Burlington Northern* opinion might become a landscape-changing earthquake, or it might—despite its august source—be a minor tremor with relatively few aftershocks, like *Bell Petroleum* turned out to be. The outcome could dramatically reduce CERCLA's ability to continue meeting its goals. This article has argued that courts can, and should, avoid that result without inconstancy to the *Burlington Northern* opinion itself.

Of course, there is a third, and unsettling, possibility. The Supreme Court might not be done remaking the liability scheme it let alone for twenty-plus years. Time will tell.

297. See *supra* notes 46–47 and accompanying text.

