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The End of Joint and Several Liability in Superfund Litigation: From Chem-Dyne to Burlington Northern

Aaron Gershonowitz*

I. INTRODUCTION

Change in the law often occurs slowly and without great fanfare. An exception to a rule develops and grows until at some point, the exception overtakes the rule and a new rule is created. In such cases, it is difficult to determine precisely when the old

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rule was overtaken by the exception and the new rule was created. Legal commentators sometimes proclaim the existence of a new rule, and just as it is difficult to determine precisely when a rule has changed, it is sometimes difficult to determine whether the commentators are describing a change or predicting a change.

This article will describe how the Supreme Court's decision in *Burlington Northern & Santa Fe Railway Co. v. United States*\(^1\) represents a fundamental change in the law regarding whether responsible parties at Superfund sites\(^2\) are subject to joint and several liability. The original rule, set forth in *United States v. Chem-Dyne Corp.*, was that responsible parties at Superfund sites are jointly and severally liable.\(^3\) Over the years, the case law developed a number of exceptions to that rule.\(^4\) For example, a number of cases held that where the responsible parties contributed the same hazardous substances to the site, each party would be liable only for its share based on the volume of waste it released.\(^5\) A second exception provided that where responsible parties engaged in different activities at different times, each would be responsible only for harm created during the time period while the party was connected to the site.\(^6\) The starting point of the court's discussion, however, was always *Chem-Dyne's* rule of joint and several liability, and any other analysis fell under an exception.

In *Burlington Northern*, the Court reversed a Ninth Circuit decision that applied joint and several liability in a case that may have fit into one of the exceptions to *Chem-Dyne*.\(^7\) The Court, however, did not present its holding as an exception to an existing rule.\(^8\) Rather, it went beyond the established exceptions, disagreeing with *Chem-Dyne* on several important points.\(^9\)

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2. The Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601–9675 (West 2006), is often referred to as the Superfund Law, because of the fund that was created for the investigation and remediation of inactive hazardous waste sites. Sites being investigated or remediated pursuant to this law are often referred to as Superfund sites.
4. In re Bell Petroleum Servs., Inc., 3 F.3d 889, 895 (5th Cir. 1993) (citing United States v. Monsanto Co., 858 F.2d 160, 171 (4th Cir. 1988)).
5. See, e.g., *In re Bell*, 3 F.3d at 902-04.
9. *Id.* at 1880-83.
The key indicators that Burlington Northern represents fundamental change, as opposed to merely incremental development of the Chem-Dyne rule, are three areas where the Court disagreed with the Chem-Dyne court: (1) the procedure for addressing joint and several liability versus divisibility of harm;\(^1\) (2) the alternative to joint and several liability, i.e., if divisibility is the rule, what should be divided;\(^11\) and (3) whether volume can be a basis for divisibility when the contamination consists of different chemicals that may have interacted with each other.\(^12\) This article will assess the impact of the Burlington Northern decision on each of these areas.

II. BACKGROUND

Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA" or the "Superfund Law") in 1980.\(^13\) CERCLA lists four parties who may be held liable: (1) the current owner or operator of the facility;\(^14\) (2) an owner or operator of the facility at the time of the disposal of hazardous substances;\(^15\) (3) a person who arranged for disposal of hazardous substances;\(^16\) and (4) a person who transported hazardous substances to the facility, if that person chose the facility.\(^17\) These four parties are commonly referred to as potentially responsible parties ("PRPs").\(^18\) In enacting CERCLA, Congress had two main policy goals: (a) to facilitate prompt cleanup of inactive hazardous

10.  Id. at 1880-81.
11.  Id. at 1882-83.
12.  Id. at 1883.
14.  42 U.S.C. § 9607(a)(1) ("Notwithstanding any other provision or rule of law, and subject only to the defenses set forth in subsection (b) of this section—(1) the owner and operator of a vessel or a facility . . . shall be liable . . . .").
15.  Id. § 9607(a)(2) ("[A]ny person who at the time of disposal of any hazardous substance owned or operated any facility at which such hazardous substances were disposed of . . . shall be liable . . . .").
16.  Id. § 9607(a)(3) ("[A]ny person who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person, by any other party or entity, at any facility or incineration vessel owned or operated by another party or entity and containing such hazardous substances . . . shall be liable . . . .").
17.  Id. § 9607(a)(4) ("[A]ny person who accepts or accepted any hazardous substances for transport to disposal or treatment facilities, incineration vessels or sites selected by such person, from which there is a release, or a threatened release which causes the incurrence of response costs, of a hazardous substance, shall be liable . . . .").
waste sites and (b) to impose liability for the costs of cleanup on those who contributed to the presence of the waste.\(^9\)

In addition to listing the liable parties, CERCLA outlines what costs these parties may be liable for and to whom.\(^{20}\) Section 9607(a)(4)(A) provides that the above listed parties “shall be liable for all costs of removal or remedial action incurred by the United States Government or a State . . . .”\(^{21}\) Section 9607(a)(4)(B) provides that the same parties shall be liable for “any other necessary costs of response incurred by any other person . . . .”\(^{22}\) Because “response” is defined in the statute to include “remove, removal, remedy, and remedial action,”\(^{23}\) the “costs of response” that a private party can recover under § 9607(a)(4)(B) include the same “costs of removal or remedial action” that the government can recover under § 9607(a)(4)(A).

The Superfund Law makes no reference to joint and several liability.\(^{24}\) Both the House and Senate versions of the bill that ultimately became the Superfund Law contain language authorizing joint and several liability, but that language was removed shortly before passage.\(^{25}\) The legislative history contains two different explanations of the removal of joint and several liability.\(^{26}\) Senator Helms argued that joint and several liability would lead to unfair results, because a party who sent a small portion of the waste to a site could be required to pay for the entire remediation.\(^{27}\) Others explained that the removal of the joint and several language from the bill was not a rejection of joint and several liabili-

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19. 1 JAMES T. O’REILLY, Reviewing the Rationale for the CERCLA Statute, in SUPERFUND & BROWNFIELDS CLEANUP § 3:1 (2010-2011).
20. § 9607(a)(4)(A)-(D).
21. Id. § 9607(a)(4)(A) (emphasis added).
22. Id. § 9607(a)(4)(B) (emphasis added).
23. Id. § 9601(25).
25. Chem-Dyne, 572 F. Supp. at 806. The Senate amendments eliminating joint and several liability were passed on November 24, 1980. Id. at 806 (citing 126 CONG. REC. S14,964 (daily ed. Nov. 24, 1980)). The House amendments eliminating joint and several liability were passed on December 3, 1980. Id. (citing 126 CONG. REC. H11,787 (daily ed. Dec. 3, 1980)). These amendments are discussed by the Chem-Dyne court, which quoted extensively from Senator Randolph’s speech. Id. Senator Randolph stated that “we have deleted any reference to joint and several liability, relying on common law principles to determine when parties should be severally liable.” Id. (quoting 126 CONG. REC. H11,787 (daily ed. Dec. 3, 1980) (statement of Sen. Jennings Randolph)).
27. Id. at 806.
ty, but rather was merely intended to provide courts with flexibility in determining whether to apply joint and several liability.\textsuperscript{26}

III. \textit{CHEM-DYNE}

The \textit{Burlington Northern} court described \textit{Chem-Dyne} as the "seminal decision" on the subject,\textsuperscript{29} so we will begin our analysis with that decision. In \textit{Chem-Dyne}, the United States sued twenty-four defendants, alleging that they were liable for the government's response costs under the Superfund Law.\textsuperscript{30} Defendants made a motion for a determination of the scope of liability,\textsuperscript{31} arguing that they should not be jointly and severally liable.\textsuperscript{32} The court recognized that there was "no case authority specifically addressing this point" and proceeded with an analysis of the statute and its legislative history.\textsuperscript{33}

Defendants argued that the removal of joint and several liability language from the bill prior to its passage indicated a rejection of joint and several liability.\textsuperscript{34} In support of their position, defendants quoted from the statements of Senator Helms.\textsuperscript{35} The court, however, rejected reliance on the statements of Senator Helms, because he was an opponent of the bill.\textsuperscript{36} The court concluded that a more complete reading of the legislative history required the conclusion that common law principles would be used to determine when to apply joint and several liability.\textsuperscript{37} The court described the common law rule of joint and several liability as follows:

\begin{itemize}
\item \textsuperscript{28} Id. at 806-07. The \textit{Chem-Dyne} court relied on statements in the legislative history that indicate congressional intent to utilize common law principles in determining whether joint and several liability should be applied. Id. ("[W]e have deleted any reference to joint and several liability, relying on common law principles . . . ." (quoting 126 CONG. REC. S14,964 (daily ed. Nov. 24 1980) (statement of Sen. Jennings Randolph)); see also id. ("Issues of joint and several liability not resolved by this shall be governed by traditional and evolving principles of common law." (quoting 126 CONG. REC. H11,787 (daily ed. Dec. 3, 1980) (statement of Representative James Florio))).
\item \textsuperscript{29} Burlington N. & Santa Fe Ry. Co. v. United States, 129 S. Ct. 1870, 1880 (2009).
\item \textsuperscript{30} \textit{Chem-Dyne}, 572 F. Supp. at 804.
\item \textsuperscript{31} Id.
\item \textsuperscript{32} Id. at 810.
\item \textsuperscript{33} Id. at 804-08.
\item \textsuperscript{34} See id. at 806.
\item \textsuperscript{35} \textit{Chem-Dyne}, 572 F. Supp. at 806.
\item \textsuperscript{36} Id. (quoting 126 CONG. REC. S14,988 (daily ed. Nov. 24, 1980) (statement of Sen. Jesse Helms)).
\item \textsuperscript{37} Id. at 808.
\end{itemize}
[W]hen 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. But where two or more persons cause a single and indivisible harm, each is subject to liability for the entire harm.\textsuperscript{38}

The court cited, among several other sources, section 433A of the \textit{Restatement (Second) of Torts} as the applicable common law rule.\textsuperscript{39}

Applying that rule to the facts before it, the court noted that defendants’ motion, which requested a determination of the scope of liability, was in the form of a motion for partial summary judgment and would be denied unless there was no genuine issue of material fact.\textsuperscript{40} The court noted that the site contained waste from 289 parties and that the mixture of the waste raised questions about the divisibility of harm.\textsuperscript{41} Volume, the court stated, would not be an adequate basis for divisibility, because the volume of waste would not predict the “risk associated with the waste,” the toxicity, or the migratory potential.\textsuperscript{42} The divisibility of harm and possible apportionment thus raised genuine issues of material fact.\textsuperscript{43} Because the court denied Chem-Dyne’s motion for partial summary judgment,\textsuperscript{44} Chem-Dyne was potentially subject to joint and several liability.

The \textit{Chem-Dyne} court left many questions unanswered. First, it never defined what a defendant seeking to avoid joint and several liability must show, even though it determined that the burden of proof on that issue was on the defendant.\textsuperscript{45} Specifically, when a court finds that there is no reasonable basis for divisibility,\textsuperscript{46} is it saying that the resulting harm cannot be reasonably divided, or is it saying that the actions causing the harm cannot be reasonably divided? The court spoke in terms of “risk” as if the risk to human

\textsuperscript{38} \textit{Id.} at 810 (citations omitted).
\textsuperscript{39} \textit{Id.} (citing \textit{RESTATEMENT (SECOND) OF TORTS} § 433A (1965)).
\textsuperscript{40} \textit{Chem-Dyne}, 572 F. Supp. at 811. The court’s decision to treat defendants’ motion, which asked for an interpretation of law, as a motion for summary judgment is difficult to understand and is questioned infra.
\textsuperscript{41} \textit{Id.}
\textsuperscript{42} \textit{Id.}
\textsuperscript{43} \textit{Id.}
\textsuperscript{44} \textit{Id.}
\textsuperscript{45} \textit{Chem-Dyne}, 572 F. Supp. at 811.
\textsuperscript{46} \textit{Id.}
health and the environment was the harm to be divided. This would suggest a focus on the actions that caused the harm. One problem with that approach, however, is that CERCLA does not require any proof of risk. All a plaintiff needs to prove to establish liability under CERCLA is that it incurred costs in response to the release, or threatened release, of hazardous substances and that the defendant fits into one of the four status-based categories of responsible parties: (1) present owner or operator, (2) owner or operator at the time of disposal, (3) person who arranged for disposal, or (4) transporter. On the other hand, the court also referred to toxicity, which would suggest a focus on the resulting injury. This focus suffers from the same problem as a focus on risk, because a Superfund plaintiff does not need to prove toxicity. Without clearly identifying what it is seeking to divide, the court provided no guidance regarding how a defendant can prove divisibility.

Second, it is unclear why the court chose to treat the defendants’ motion, which requested a ruling of law, as a motion for summary judgment, which implies the application of the law to the facts. The Chem-Dyne court’s decision to treat the defendants’ motion for a determination of the scope of liability as a motion for summary judgment made it very difficult to prove divisibility. The court, in effect, created a presumption in favor of joint and several liability, because motions for summary judgment must be denied if there is any dispute of fact. The court did not cite to anything in the Restatement or other court opinions to support such a presumption, and it did not explain why it created this presumption.

Third, the Chem-Dyne court looked to section 433A of the Restatement (Second) of Torts as a source for understanding when joint and several liability would apply. The court, however, cited section 433A for the proposition that each party is liable for its portion “if the harm is divisible and if there is a reasonable basis for apportionment of damages.” In the Restatement, that “and” is

47. See id.
49. Id. § 9607(a).
51. See §§ 9601–9675.
52. Chem-Dyne, 572 F. Supp. at 810.
53. Id. (citing RESTATEMENT (SECOND) OF TORTS § 433A (1965)).
54. Id. at 811 (quoting § 433A(1)) (emphasis added).
Did the court intend to add to the defendants’ burden by requiring both?

IV. MONSANTO

The earliest appellate analysis of the application of section 433A in Superfund litigation was in United States v. Monsanto Co.\footnote{858 F.2d 160 (4th Cir. 1988).} Like Chem-Dyne, the Monsanto case arose out of a multi-generator site at which there had been disposal of a variety of hazardous substances.\footnote{Monsanto, 858 F.2d at 164.} The court essentially followed Chem-Dyne and gave what would become somewhat standard answers to the three questions that the Chem-Dyne court left open and that are posed above.\footnote{Id. at 172.} The Monsanto court’s reasoning made clear that while citing section 433A as authoritative, it had adopted Chem-Dyne’s small steps away from section 433A.\footnote{Id. at 171-74.} Additionally, in affirming the trial court’s conclusion that the “harm at Bluff Road was ‘indivisible,’”\footnote{Id. at 172.} the court stated that volume not providing a basis for divisibility, because volume says nothing about the harm created by the combination of chemicals.\footnote{Id. at 172.} This indicates that what one needs to find divisible is the resulting harm. Because the court found that the result could not be divided,\footnote{Monsanto, 858 F.2d at 171.} there was no reason to examine whether there was a reasonable basis for apportionment. Thus, the court drew its conclusion by only assessing whether the resulting harm was divisible without ever reaching the issue of whether there was a reasonable basis for divisibility. This indicates that, as in Chem-Dyne, a defendant would need to prove both that “the harm is divisible and [that] there is a reasonable basis for apportionment.”\footnote{United States v. Chem-Dyne Corp., 572 F. Supp. 802, 811 (S.D. Ohio 1983) (citing RESTATEMENT (SECOND) OF TORTS § 433A (1965)).} Finally, as a matter of procedure, the court placed a heavy burden on the defendants to prove divisibility.\footnote{See Monsanto, 858 F.2d at 172 (“To meet this burden, the generator defendants had to establish that the environmental harm at Bluff Road was divisible among responsible parties. They [had to present] . . . evidence . . . showing a relationship between waste volume, the release of hazardous substances, and the harm at the site.”).}
The Monsanto court’s application of Chem-Dyne became the standard analysis of that case and the standard means of interpreting the Superfund Law, which resulted in near universal acceptance of joint and several liability in Superfund cases. The Monsanto court also provided a new policy reason for the imposition of joint and several liability—the need to make the government whole for response costs. This policy has become something of a recurring theme in Superfund litigation—one that becomes less compelling as the government chooses to sue fewer and fewer of the total number of potentially responsible parties at a particular site. While the Monsanto court stated that section 433A of the Restatement (Second) of Torts was the basis for the law on the issue of joint and several liability, nothing in section 433A suggests that making the plaintiff whole is an overriding goal. In fact, the Restatement suggests that there are times when it is entirely appropriate not to make the plaintiff whole. For example, apportionment is appropriate even when dividing between negligent and innocent causes, in which case the plaintiff will only collect the portion attributable to the negligent cause.

V. WHAT IS THE COMMON LAW RULE?

When determining whether CERCLA defendants are jointly and severally liable, the appellate courts agree that section 433A of the


66. Monsanto, 858 F.2d at 173 (explaining that “making the governments whole . . . was the primary consideration and that cost allocation was a matter more appropriately considered . . . after [the] plaintiff [was] . . . made whole”) (internal quotation omitted).


68. If the government identifies fifty potentially responsible parties and chooses to litigate against only the five largest, it is difficult to argue that each defendant should be jointly and severally liable so that the government recovers all of its costs.

69. Monsanto, 858 F.2d at 172 (citing RESTATEMENT (SECOND) OF TORTS § 433A (1965)).

70. See RESTATEMENT (SECOND) OF TORTS § 433A cmt. e (1965) (stating that apportionment should be made between innocent and non-innocent causes so that a defendant is not held responsible for harm it did not cause). For example, where the harm that would result from defendant’s dam is exacerbated by an unprecedented and unforeseeable rainfall, the defendant is not responsible for damage caused by the unforeseeable rainfall. Id.
Restatement (Second) of Torts is the common law rule that must be applied. Section 433A(1) states that "[d]amages 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."71

The Restatement provides two examples of a single harm for which there is a reasonable basis to determine contribution.72 In Comment d, the Restatement discusses pollution of a stream by several parties.73 While we cannot recognize distinct parts of a polluted stream to say that one party is responsible for one part and another party is responsible for another part, damages are typically apportioned based on how much contamination each party contributed.74 Comment d also discusses a case in which a farmer’s crop is destroyed by cows that were owned by two neighbors.75 The result is a single, undivided destroyed crop.76 The Restatement provides, however, that it is reasonable to divide the damages based on how many cows each neighbor owned.77 Thus, the apportionment is not based on the resulting harm, but rather is based on the causes of the harm.78 Distinct or separable parts of the harm do not need to be identified. It is sufficient that there were distinct actions causing the damage and that there is some reasonable basis for determining what portion of the harm each contributed.

The Restatement further addresses harms that cannot be reasonably divided.79 Illustration 12, for example, discusses an automobile accident caused by two negligent drivers, which results in a bystander's leg being broken.80 Illustration 14 addresses two parties that negligently discharge oil, which is ignited by a spark and causes a fire that burns down a building.81 Neither of these harms can be reasonably divided.82

What is the difference between the cows that destroy the field and the harms that are not divisible? In their hornbook on torts,
Professors Prosser and Keeton note that the cases in which divisibility is appropriate are those in which neither cause alone is necessary to the creation of the harm or where neither cause alone is sufficient to create the harm. The stream pollution and cow illustrations fit into this category. If one party's cows are removed, there is likely to be less damage to the field. In such cases, the harm may be divisible. Where either of the tortious causes would be sufficient to cause the entire harm, however, or where both are necessary to create the harm, it is not unfair to impose joint and several liability.

Prosser and Keeton understand illustration 12 (the auto accident) as a case in which neither cause was sufficient to cause the harm, but both were necessary. The bystander would not have been injured but for both acts of negligence working together. In such cases, it is not unfair to say that each party may be deemed responsible for the whole injury. Neither party can claim they are being held responsible for something they did not cause. Similarly, in illustration 14 (the oil spill and resulting fire), both parties' actions are independently sufficient to cause the harm. If only one party negligently discharged the oil, the result would have been the same. In such cases, it is also not unfair to impose joint and several liability, because neither party can claim that they are being required to pay for something that they did not cause.

The divisible harms illustrations are all cases in which the harm is cumulative or scalable. The second person merely adds to the harm caused by the first. More cows means more of the same harm, not a different harm from what the other party caused. In such cases, no one should be responsible for the whole, because his act was neither sufficient for the development of the whole harm nor necessary for the resulting harm. In such cases, joint and several liability is not appropriate because it will result in a defendant paying for something he or she did not cause.

VI. ALCAN

The first significant steps away from Chem-Dyne and Monsanto came in the Third Circuit’s decision in United States v. Alcan
Aluminum Corp. The Alcan case arose out of the cleanup of a Superfund site in Pennsylvania, and all of the defendants except Alcan settled their liability with the government. The government moved for summary judgment against Alcan on the issue of liability and Alcan cross-moved for summary judgment, arguing that its waste did not constitute a hazardous substance, because the trace amounts of metals in its waste were less than the naturally occurring background levels for those metals. Alcan argued that because its waste consisted of an emulsion that contained such low levels of trace elements, it could not have caused any response costs. Despite Alcan's arguments, the trial court concluded that Alcan's waste contained hazardous substances and that commingled waste required the application of joint and several liability, thus following Chem-Dyne.

On appeal, the Third Circuit noted that CERCLA does not contain any quantity or concentration level requirements for hazardous substances. Because Alcan's waste contained hazardous substances, the Third Circuit concluded that Alcan was a PRP. The court also noted that CERCLA does not require the plaintiff to prove that the defendant's waste caused the response costs. Thus, Alcan could not use lack of causation as a defense.  

87. 964 F.2d 252 (3d Cir. 1992).
88. Alcan, 964 F.2d at 255. "In November 1989, the Government filed a complaint against 20 defendants, including Alcan, for the recovery of costs incurred as a result of the release of hazardous wastes . . . into the Susquehanna River." Id.

In response, 17 of the 20 defendants executed a consent decree, reimbursing the Government for certain removal costs, and the district court entered that decree on January 17, 1990. On June 8, 1990, two of the three remaining defendants entered into a second consent decree with the Government . . . . The Government then moved for summary judgment against Alcan, the only non-settling defendant, to collect the balance of its response costs.

89. Id. at 257.

90. Id. at 257. "During the rolling process, fragments of the aluminum ingots, which also contained copper, chromium, cadmium, lead and zinc, . . . broke off into the emulsion." Id. at 256. "According to Alcan, however, the level of these compounds in the post-filtered, used emulsion was far below the EP toxic or TCLP toxic levels and, indeed, orders of magnitude below ambient or naturally occurring background levels." Id. (internal quotation marks omitted).

91. Id.
92. Id. at 260.
93. Alcan, 964 F.2d at 263. Because Alcan admitted that it disposed of the substances in question, the court reasoned that the only question relevant to Alcan's PRP status was whether the substances in question were hazardous substances. Id. The court concluded that they were. Id.

94. Id. at 265.
95. See id.
The court did, however, examine Alcan's special circumstances (i.e., that the concentrations of hazardous substances in its waste were "orders of magnitude below ambient or naturally occurring background levels") from the perspective of divisibility. The court began its discussion of section 433A by explaining that the Restatement provides that "harm [is] 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." In its discussion, the Third Circuit specifically noted that the drafters of the Restatement found that joint pollution of water is typically divisible. The court recognized that under similar circumstances, courts, including the Chem-Dyne and Monsanto courts, had found that defendants face a very difficult burden of proof due to factors such as differences in toxicity and synergistic properties of the pollutants. Despite such analyses, the Alcan court concluded that whether harm is divisible depends greatly on the facts and the court vacated and remanded the case so that Alcan could have an opportunity to develop the facts and prove divisibility. The court further concluded that "commingled waste is not synonymous with 'indivisible harm.'"

What made this case factually unique was Alcan's argument that there was no need for a hearing on divisibility, because its contribution to the harm was zero. The court rejected that assertion, but noted that upon remand "if Alcan proves that the emulsion did not or could not . . . contribute to the release and the resultant response costs, then Alcan should not be responsible for

96. Id. at 256. Therefore, Alcan argued, its waste could not have caused any of the response costs. Id. at 257.
97. Id. at 267-71.
98. Alcan, 964 F.2d. at 268 (quoting RESTATEMENT (SECOND) OF TORTS § 433A(1)(1965)).
99. Id. at 269 n.27. Section 433A, comment d provides that "[t]here 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 rational basis, and of fair apportionment among the causes responsible." § 433A cmt. d. "Such apportionment is commonly made in cases of private nuisance, where the pollution of a stream . . . has interfered with the plaintiff's use and enjoyment of his land." Id.
100. See id. at 269. "Alcan's burden in attempting to prove the divisibility of harm to the Susquehanna River is substantial, and the analysis 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." Id. (citing United States v. Monsanto Co., 858 F.2d 160, 172 n.26 (4th Cir. 1988); United States v. Chem-Dyne Corp., 572 F. Supp. 802, 811 (S.D. Ohio 1983)).
101. Id.
102. Id. at 270 n.29 (internal quotation marks omitted).
103. Alcan, 964 F.2d. at 269-70.
any response costs." Note what is being divided. The resulting harm may not be divisible, but court still needs to see if it can divide among the actions that caused the result. Thus, while the contamination may be an undivided whole, there may still be a reasonable basis for distinguishing among causes of the contamination.

One problem the court noted with this analysis is that the Restatement divides among causes and a Superfund plaintiff does not need to prove that the defendant caused the response costs. The court recognized that its result brought causation back into the analysis, but concluded that such a result is consistent with CERCLA and is the only way to assure that there is some rationale for the imposition of CERCLA liability.

While the Alcan case was working its way through the Third Circuit, a case with substantially the same facts, but at a different site, was being litigated in New York. In that case, also entitled United States v. Alcan Aluminum ("Alcan-PAS"), the Second Circuit essentially adopted the reasoning of the Third Circuit, but with some minor differences.

The Second Circuit began by noting that in order "to defeat the government's motion for summary judgment on the issue of divisibility, Alcan need only show that there are genuine issues of material fact regarding a reasonable basis for apportionment of liability." Apportionment, the court stated, is "intensely factual." Once the question is framed that way, a defendant does not need to do much to avoid summary judgment and obtain a hearing on the issue of divisibility. This does not mean that divisibility will

104. Id. at 270.
105. Id.
106. Id.
107. United States v. Alcan Aluminum Corp., 990 F.2d 711, 717 (2d Cir. 1993). "Having assessed CERCLA's plain meaning, its legislative history, and the case law construing it,..." the United States Court of Appeals for the Second Circuit "essentially adopted the Third Circuit's reasoning in United States v. Alcan Aluminum Corp., 964 F.2d 252, 261-71 (3d Cir. 1992)." Alcan Aluminum Corp., 990 F.2d at 717. This approach "will permit such a defendant to avoid liability only when its pollutants contribute no more than background contamination." Id.
108. Id. at 722. "[T]he polluter bears the ultimate burden of establishing a reasonable basis for apportioning liability." Id. (citing United States v. Monsanto Co., 858 F.2d 160, 172 (4th Cir. 1988); United States v. Chem-Dyne Corp., 572 F. Supp. 802, 810 (S.D. Ohio 1983)).
be the general rule; it merely makes it unlikely that the issue will be determined without a hearing on the facts.  

The Alcan-PAS court gave significant attention to the argument that dividing among causes, as suggested by the Restatement, was not appropriate in Superfund cases, because a Superfund plaintiff does not need to prove causation.  

The court recognized that causation was being brought into the case “through the backdoor after being denied entry at the front door.” The court, however, stated that this procedure was acceptable, because it was only permitting causation as the defendant’s burden, and causation could result in a finding of no liability only where a party shows that background levels are not exceeded. In other words, the court concluded that examining causation as a means of proving divisibility was not inconsistent with the fact that causation was not required to prove liability. The court did, however, recognize the apparent inconsistency that follows from its reasoning, making it possible for a court to conclude that a party is liable in the liability phase even if it caused no response costs, and then that the same party is not liable in the divisibility stage for the same reason.

The court did not address the Restatement’s examples of divisibility, perhaps because none were analogous. In the cases of the cows and the pollution of a stream, each defendant did essentially the same thing and the effects were cumulative. Alcan’s claim, on the other hand, was that what it did was significantly different. Alcan was not arguing that it had fewer cows and thus that it should pay less. Alcan was arguing that the field was trampled by cows and it did not have a cow; it had something that was totally harmless. While the Restatement example of the cows could

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110. Id. The commingling of Alcan’s waste emulsion and metallic and organic hazardous substances created an issue as to indivisibility. See id. The differing contentions by experts on both sides “raise[d] sufficient questions of fact to preclude the granting of summary judgment on the divisibility issue.” Id. at 723. On remand, the factual question should be—is there a reasonable basis for apportionment—not is there a precise basis. Otherwise, the phrase “reasonable basis” would be written out of the Restatement.

111. Id. at 721-23.

112. Alcan Aluminum Corp., 990 F.2d at 722. The court explained that causation is being brought back into the case—through the backdoor, after being denied entry at the frontdoor—at the apportionment stage.” Id.

113. Id. The court then added that placing the burden of proving causation on the defendant was reintroduced as a “special exception,” which only allowed it to escape payment where its pollutants did not contribute more than background levels, as in Alcan-PAS. Id.

114. See id. at 723.

115. See id. at 722. “Contrary to the Government’s position, commingling is not synonymous with indivisible harm. . . .” Id. The response costs were attributed “to substances
present a means to limit the extent of a defendant’s liability, Alcan did not rely on that example, because Alcan sought to avoid liability in its entirety, not to merely limit its liability.\textsuperscript{116}

VII. IN RE BELL PETROLEUM

The next significant step away from the Chem-Dyne rule came in In re Bell Petroleum Services, Inc., where the responsible parties were consecutive owners and operators of the same industrial facility.\textsuperscript{117} The contamination consisted largely of one hazardous substance that had been disposed of by different parties at different times.\textsuperscript{118} Two of the parties entered consent agreements with the EPA; while the remaining party objected to being held jointly and severally liable for the entire remainder of the costs.\textsuperscript{119}

The court began its analysis of joint and several liability by noting that courts have generally imposed joint and several liability in CERCLA cases.\textsuperscript{120} The court then addressed section 433A of the Restatement,\textsuperscript{121} which provides that joint and several liability is not appropriate either where “there are distinct harms” or where “there is a reasonable basis for determining the contribution of each cause to a single harm.”\textsuperscript{122} In a statement that echoes much such as PCB’s, nitro benzene, phenol, dichlonoethene, toluene, and benzene. [Alcan] . . . contends that no soil contamination due to heavy metals was found there, and insists that the metallic constituents of its oil emulsion are insoluble compounds . . .” and were therefore capable of reasonable apportionment. \textit{Id.}

\textsuperscript{116} The example of the cows is based on the assumption that each cow caused some damage to the field and it is, therefore, appropriate to divide based on the number of cows. Alcan’s argument, on the other hand, is that its waste was cleaner than the local, naturally-occurring background and could, therefore, not have caused any damage.

\textsuperscript{117} 3 F.3d 889, 892 (5th Cir. 1993).

\textsuperscript{118} \textit{In re Bell}, 3 F.3d at 903. The facility had three operators and the evidence demonstrated that:

Leigh owned the real property at the site from 1967 through 1981, and conducted chrome-plating activities there in 1971 and 1972. In 1972, Bell purchased the assets of the shop [chrome-plating business] and leased the property from Leigh. It continued to conduct similar, but more extensive, chrome-plating activities at the site until mid-1976. In August 1976, Sequa purchased the [business] assets from Bell, leased the property from Leigh, and conducted similar chrome-plating activities at the site until late 1977.

\textit{Id.}

\textsuperscript{119} See \textit{id.} at 894. The consent decree with Bell was ultimately approved on July 24, 1990 whereby the EPA “settled its claim against Bell for all costs, past and future for $1,000,000.” \textit{Id.} In December 1990, another consent decree was approved, “pursuant to which the EPA settled its claims against Leigh for past and future costs-for $100,000.” \textit{Id.}

\textsuperscript{120} \textit{id.} at 895 (explaining that “[a]lthough joint and several liability is commonly imposed in CERCLA cases, it is not mandatory in all such cases.”) (citation omitted).

\textsuperscript{121} \textit{Id.}

\textsuperscript{122} \textit{Id.} (quoting \textit{RESTATEMENT (SECOND) OF TORTS § 433A(1) (1965)).
of the earlier court decisions on the issue, the court noted that “the nature of the harm is the key to determining whether apportionment is appropriate.” That conclusion seems to focus on the result and whether it is divisible, ignoring the Restatement, which holds that even if the harm is single and indivisible, apportionment is appropriate where there is “a reasonable basis for determining the contribution of each cause to a single harm.”

The court then discussed some of the examples of divisible harm that are provided in the Restatement. One of those examples addresses “successive harm,” such as when two defendants, independent of each other, pollute the same stream at different times. In such cases, apportionment is appropriate, because each party caused a separate amount of harm and neither party is responsible for what the other caused. It is important to note that the reason for apportionment is because neither party is responsible for what the other caused—not that we can establish with certainty what the other party caused. Instead of looking at the polluted stream as one harm, the Restatement suggests looking at it as two independent harms: the harm caused by the first polluting party, which would have existed even if the other party did not exist, and the separate harm caused by the second polluting party, which also would have existed, even if there was no other party. This reasoning suggests that what is being apportioned is the act causing the harm, not the result.

The court also noted that the Restatement provides for apportionment where a field is trampled by cows from two or more

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123. In re Bell, 3 F.3d at 895. “Apportionment is inappropriate for other kinds of harm, which, ‘by their nature, are normally incapable of any logical, reasonable, or practical division.’ Examples of such harm are death, a single wound, the destruction of a house by fire, or the sinking of a barge.” Id. at 896. In these cases, two or more causes have combined to cause a single result, which is incapable of division. Id.
124. § 433A(1)(b).
125. See In re Bell, 3 F.3d at 895-96. Examples of “distinct” harms are “where two defendants independently shoot the plaintiff at the same time, one wounding him in the arm and the other wounding him in the leg . . . . Although some of the elements of damages (such as lost wages or pain and suffering) may be difficult to apportion, it is still possible . . . . to make a rough estimate which will fairly apportion such subsidiary elements of damages.” Id. at 895 (quoting § 433A cmt. b) (internal quotation marks omitted).
126. Id. at 895 (citing § 433A cmt. c).
127. Id. (citing § 433A cmt. c). “Apportionment is appropriate, [with regards to “successive harms”], because it is clear that each has caused a separate amount of harm, limited in time, and that neither has any responsibility for the harm caused by the other.” Id. (internal quotation marks omitted).
128. Id. (citing § 433A cmt. c).
neighboring fields. Regarding the cows, the Restatement holds that the number of cows owned by each trespassing neighbor provides a reasonable basis for apportionment. The court found that the illustration of the stream and the illustration of the cows indicate that, with regard to pollution, the Restatement views the quantity of pollution material as a reasonable basis for apportionment. Thus, despite the EPA's argument that there was no adequate means to verify the relative volumes of material that each party contributed, the court concluded that the volume of each parties' waste is a reasonable basis for division.

At the conclusion of its discussion of the Restatement, the court noted that CERCLA cases present some special difficulties with regard to divisibility, because the Restatement suggests division based on the amount of harm each party caused. Like the other appellate courts, however, the Fifth Circuit recognized that causation is not necessarily an element of a CERCLA claim.

After analyzing the case law and concluding that there is uniformity of opinion on many key issues, including: (1) that CERCLA does not mandate joint and several liability and (2) that the Restatement is the primary source for determining when to impose joint and several liability, the court examined some of the issues about which there is disagreement. First, the court stated that the issue of joint and several liability should be dealt with early in the proceedings, even though some courts have concluded that it is better dealt with after liability is determined. Second, the court overturned the trial court's conclusion that in

129. Id. at 895-96 (citing § 433A cmt. d). “The Restatement points out that apportionment also is appropriate where part of the harm is the result of an innocent cause, or where the plaintiff is responsible for a portion of the harm.” Id. at 896 n.8 (citing § 433A cmts. e, f).
130. In re Bell, 3 F.3d at 895-96 (quoting § 433A cmt. d).
131. Id. at 896 (quoting § 433A cmt. d).
132. Id. at 903.
133. See id. at 896.
134. Id. at 893 n.4. “In Amoco, we noted that, ‘in cases involving multiple sources of contamination, a plaintiff need not prove a specific causal link between costs incurred and an individual generator’s waste.’” Id. (quoting Amoco Oil Co. v. Borden, Inc., 889 F.2d 664, 670 n.8 (5th Cir. 1989)). “Other courts have likewise concluded that proof of causation is not required in CERCLA cases.” Id. (quoting United States v. Alcan Aluminum Corp., 990 F.2d 711, 721 (2d Cir. 1993); United States v. Alcan Aluminum Corp., 964 F.2d 252, 266 (3d Cir. 1992); United States v. Monsanto Co., 858 F.2d 160, 170 (4th Cir. 1988)).
135. In re Bell, 3 F.3d at 901.
136. Id. at 901. The Bell court stated that “[w]ith respect to the timing of the ‘divisibility’ inquiry, . . . that an early resolution is preferable,” which leaves the ultimate discretion in the hands of the district court. Id.
order to avoid joint and several liability, a defendant has to prove with certainty that there is a basis for apportionment, concluding instead that all that is needed is a reasonable basis for apportionment.\footnote{137} Applying the law to the facts of the case, the court concluded that the defendant met its burden.\footnote{138}

VIII. TOWNSHIP OF BRIGHTON

The next evolutionary step away from joint and several liability was the Sixth Circuit's decision in United States v. Township of Brighton.\footnote{139} The land in question in this case, located in Brighton Township, was “use[d] . . . as a dump for town residents.”\footnote{140} The Township used it as a dump from 1960 until 1973, when it was closed.\footnote{141} Brighton Township argued that it should not be held jointly and severally liable for the hazardous materials found at the site, because it did not control the entire site and should not be held responsible for hazardous substances disposed of on property that it did not control, and because it cannot be held responsible for costs related to the cleanup of hazardous substances that were deposited after it completed its operations at the site in 1973.\footnote{142}

Like many other courts, the Sixth Circuit began its discussion of divisibility by pointing out that joint and several liability is generally imposed in CERCLA cases and that in order to determine divisibility, the court would rely on section 433A of the Restatement (Second) of Torts.\footnote{143} Section 433A would not impose joint and several liability where there is “a reasonable basis for determining the contribution of each cause to a single harm.”\footnote{144} The issue upon which there is no consensus, the court noted, is what constitutes “a reasonable basis.”\footnote{145}

\footnote{137} Id. at 902-03.
\footnote{138} Id. at 903. “Sequa met its burden of proving that there is a reasonable basis for apportioning liability among defendants on a volumetric basis.” Id. at 904.
\footnote{139} 153 F.3d 307 (6th Cir. 1998).
\footnote{140} Brighton, 153 F.3d at 310. The township did not own the site, but had a contract with the owner of the site to use it as a dump. Id.
\footnote{141} Id. at 310-11.
\footnote{142} Id. at 312, 316-17.
\footnote{143} See id. at 317-18. “The Restatement says that ‘[d]amages 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.’” Id. at 318 (quoting RESTATEMENT (SECOND) OF TORTS § 433A(1) (1965)).
\footnote{144} See § 433A(1)(b).
\footnote{145} Brighton, 153 F.3d at 318 (“Although most courts have looked to the Restatement to at least some degree, there is no consensus as to what constitutes ‘a reasonable basis.’”).
The court then contrasted what it saw as two distinct views on divisibility: (1) a fairness-type approach and (2) a causation analysis. The fairness approach would look to equitable factors in an attempt to determine responsibility. The causation analysis is essentially that proposed by the In re Bell and Alcan courts. The Brighton Court preferred the causation analysis, reasoning that such analysis is more in line with the Restatement and "Congress's intent to incorporate the Restatement into CERCLA." The court acknowledged, however, that this analysis weakens the strict liability aspect of CERCLA, because it is possible that a defendant will be found responsible under CERCLA but still found to have zero liability based on causation. This anomaly, the court stated, is built into the Restatement.

The court then made some statements about divisibility that are potentially inconsistent. The court said that "if they are in doubt about divisibility, they should impose joint and several liability." The court then noted that divisibility would be permitted where there is a reasonable basis for apportionment based on causation. The decision is unclear regarding what doubt is to be resolved in favor of joint and several liability. The doubt at issue cannot be doubt regarding apportionment, because "reasonable basis" implies uncertainty. The court appears to be promulgating a two-step analysis. First, there is a legal question regarding whether the harm is divisible. If the court finds the harm divisible, then there is a factual issue as to whether there is a reasonable basis for apportionment. The doubt that will be resolved in

146. Id. at 319. The Brighton Court distinguished "the divisibility defense to joint and several liability from the equitable allocation principles . . . under CERCLA's contribution provision," stating that "[t]he former is legal, [while] the latter [is] equitable; the respective tests . . . should reflect this distinction." Id.
147. See id. at 318-19.
148. See supra text accompanying notes 117-138.
149. See supra text accompanying notes 87-106.
150. Brighton, 153 F.3d at 319.
151. Id. at 318 n.14.
152. See id. at 318 ("This is because defendants who can show that the harm is divisible, and that they are not responsible for any of the harm, have effectively fixed their own share of the damages at zero.").
153. See id. at 318 n.14.
154. Id. at 319.
155. Brighton, 153 F.3d at 319.
156. Id.
157. Id. (noting that the standard of review on this issue was "clear error").
158. Id. (sending the issue back to the district court for an assessment of the facts).
favor of joint and several liability is the legal doubt in the first step.

The standard set forth in *Brighton* is thus essentially the same as in *In re Bell*—if the court finds the harm to be divisible, then it should hear evidence regarding whether there is a reasonable basis for apportionment. If the trier of fact finds that it is more likely than not that a party caused only a particular portion of the harm, i.e., that there is a reasonable basis for apportionment, then that party is responsible only for that portion.159

In a concurring opinion, Judge Moore analyzed the use of causation in divisibility.160 She began by noting that language requiring a causal connection between the generator of the waste and the release causing the response costs was removed from the bill that became CERCLA.161 Courts have viewed that as a rejection of a causation requirement, even though a similar removal of joint and several liability language has not been seen as a rejection of joint and several liability.162 This leads to an apparent anomaly: a plaintiff does not have to prove causation to establish liability, but a defendant can avoid liability by proving a lack of causation.163

Judge Moore correctly noted that what made the *Brighton* case unique is that the defendant was potentially being held liable as an operator, while prior discussions of divisibility have all involved generators.164 She viewed the divisibility defense to joint and several liability as a means of “temper[ing] the harshness of unlimited liability” for someone who did not cause the contamination, or who caused only a small part of it.165 Because owners and operators do not, however, directly cause contamination, there is a concern that issues of equity and culpability will creep into an

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159. *See id.; In re Bell Petroleum Servs., Inc.*, 3 F.3d 889, 902-03 (5th Cir. 1993).
161. *Id.* (Moore, J., concurring). “[T]he legislative history supports the absence of a causation requirement, as the final version of the bill ultimately passed by Congress deleted the requirement that liability be imposed only on those who ‘caused or contributed to the release or threatened release’ contained in the earlier version passed by the House of Representatives.” *Id.* (citing H.R. 7020, 96th Cong. § 3071(a)(1)(D), 126 CONG. REC. 26,779 (1980)). This deleted language required a causal nexus between a generator and the release causing the incurrence of response costs. *Id.*
162. *Id.* at 329.
163. *See supra text* accompanying notes 154-55.
164. *See Brighton*, 153 F.3d at 329-30. Judge Moore opined that “the courts should allow an operator to show divisibility of harm,” despite the fact that such a defense has been used primarily in conjunction with generators of hazardous waste. *Id.*
165. *Id.* at 329.
analysis of the liability of owners and operators. To prevent this, Judge Moore suggests limiting the divisibility defense for such parties to temporal division (i.e., where defendant operated a facility for only a portion of the time that waste was disposed of at the facility).

IX. HERCULES AND ROHM & HAAS

While Alcan, Brighton, and In re Bell appear to have created momentum toward divisibility, most courts continued to treat joint and several liability as the rule, viewing the exceptions narrowly and accepting only the Chem-Dyne departures from the common law rules expressed in the Restatement. Thus, the general rule remained that PRPs were presumed to be jointly and severally liable.

The Eighth Circuit first addressed the divisibility issue in United States v. Hercules, Inc. Hercules owned a manufacturing facility located at the site in question. It was one of several parties that was sued for the disposal costs incurred in removing hazardous substances from the site. Despite the variety of divisibility arguments that Hercules made, the trial court found Hercules jointly and severally liable for over one hundred million dollars, plus interest and costs.

166. Id. at 329-330 (discussing the differences between operators and persons who arranged for disposal).
167. Id. at 330-31. The court noted: [Apportionment is appropriate only where the previous owner or operator presents sufficient evidence from which the court can determine the portion of harm caused by the hazardous substances disposed of at the time of its ownership or operation of the facility, as distinguished from the portion of harm caused by hazardous waste amassed on the property at a time when the defendant was not the owner or operator of the facility.]
Id. See also In re Bell Petroleum Servs., Inc., 3 F.3d 889, 902-04 (holding that there was a reasonable basis for apportioning liability among former owners where only a portion of harm was caused by hazardous waste disposed of at the time the defendant owned the facility).
168. See United States v. Hercules, Inc., 247 F.3d 706 (8th Cir. 2001) and United States v. Rohm & Haas Co., 2 F.3d 1265 (3d Cir. 1993), overruled by United States v. E.I. Dupont De Nemours & Co. Inc., 432 F.3d 161 (3d Cir. 2005), both of which are discussed in this section.
169. See discussion infra at end of this section.
170. 247 F.3d 706.
171. Id. at 711-12.
172. Id. at 711-13.
173. Id. at 713-14.
On appeal, the Eighth Circuit addressed divisibility as a "defense" based on causation.\textsuperscript{174} It noted that such a "defense" was problematic because no such defense exists in CERCLA and because the plaintiff in a CERCLA case does not need to prove causation.\textsuperscript{175} It cited \textit{Alcan-PAS}, \textit{Brighton}, and \textit{In re Bell} as decisions that had recognized "the defense of divisibility of harm, a special exception to the absence of causation requirement . . . ."\textsuperscript{176} The court noted, however, that "defendants are jointly and severally liable, unless a particular defendant can establish that his harm is divisible, a very difficult proposition."\textsuperscript{177} Thus, the court accepted the \textit{Chem-Dyne} court's view that a defendant must establish that harm is divisible,\textsuperscript{178} as opposed to the Restatement's view that a defendant must prove either that the harm is divisible or that there is a reasonable basis for apportionment.\textsuperscript{179}

In its analysis, the court noted that the "universal starting point for divisibility" is the \textit{Restatement (Second) of Torts}, but only those sections that are compatible with CERCLA.\textsuperscript{180} The court reitered how difficult it is to prove divisibility and that "responsible parties rarely escape joint and several liability."\textsuperscript{181} Citing \textit{In re Bell} and \textit{Brighton} for the proposition that a defendant is jointly and severally liable unless it can show that it is responsible for a separate amount of the harm, the court concluded that Hercules was jointly and severally liable.\textsuperscript{182}

The importance of \textit{Hercules} is thus not a further development of the exceptions, but to show that an appellate court, fully aware of the \textit{In re Bell} and \textit{Alcan-PAS} decisions, stated that joint and several liability is the rule, that it is very difficult to prove divisibility, and that Superfund defendants are almost always jointly and severally liable.\textsuperscript{183}

The Third Circuit did much the same thing in \textit{United States v. Rohm & Haas Co.},\textsuperscript{184} just a year after its \textit{Alcan} decision. The

\begin{footnotesize}
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\item\textsuperscript{174} Id. at 715-16.
\item\textsuperscript{175} Hercules, 247 F.3d at 715-16.
\item\textsuperscript{176} Id. at 716 (citations omitted) (internal quotation marks omitted).
\item\textsuperscript{177} Id. (citation omitted) (quoting Control Data Corp. v. S.C.S.C. Corp., 53 F.3d 930, 934 n.4 (8th Cir. 1995)).
\item\textsuperscript{178} See supra text accompanying note 45.
\item\textsuperscript{179} See supra text accompanying note 71.
\item\textsuperscript{180} Hercules, 247 F.3d at 717 (citations omitted).
\item\textsuperscript{181} Id. (citations omitted).
\item\textsuperscript{182} Id. at 718-19 (citations omitted).
\item\textsuperscript{183} Id. at 716-17.
\item\textsuperscript{184} United States v. Rohm & Haas Co., 2 F.3d 1265 (3d Cir. 1993), overruled by United States v. E.I. Dupont De Nemours & Co. Inc., 432 F.3d 161 (3d Cir. 2005).
\end{itemize}
\end{footnotesize}
unique issue raised in *Rohm & Haas* was whether the defendant, Chemical Properties, Inc. ("CP"), was liable as an owner, even though it was not the owner of the entire site. In the trial court, CP argued that it was not liable because of the third party defense; it does not appear that the issue of divisibility was raised in the trial court.

The Third Circuit began its discussion of apportionment by noting "that although joint and several liability is generally appropriate [in CERCLA actions] apportionment may be warranted in certain circumstances." The court noted that courts have relied on section 433A of the *Restatement (Second) of Torts* for the rule of divisibility, but stated the rule, as so many other courts have, that a defendant is required to show "that the harm is divisible and that the damages are capable of some reasonable apportionment."

CP argued that two distinguishing factors support apportionment in this case. First, it did not own the entire site for the entire time. Second, most, if not all, of the hazardous substances disposed of at the property were disposed of by others. The court of appeals rejected CP's arguments. First, the court reasoned that simply stating that a party owns only a portion of the facility is not sufficient to warrant apportionment. Rather, the defendant must connect its ownership with facts about what activities occurred on what portions of the property, but CP did not make that connection. Second, the Court of Appeals noted that disposal by others is also not a sufficient basis for apportionment. Significant waste-related activities occurred on the property during CP's period of ownership, and CP's argument did not take these into account in its apportionment argument.

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188. *Rohm & Haas*, 2 F.3d at 1280.
189. *Id.* (emphasis added) (citation omitted) (internal quotation marks omitted) (citing *RESTATMENT (SECOND) OF TORTS* § 433A (1965)).
190. *Id.*
191. *Id.*
192. *Id.*
194. *Id.*
195. *See id.*
196. *Id.*
197. *Id.*
The *Rohm & Haas* court was probably correct in stating that CP had failed to meet its burden. The real significance of the decision, however, is that it shows that courts continued to impose a burden on defendants that is inconsistent with the *Restatement*. The decision thus continued the view that CERCLA defendants are jointly and severally liable and that proving divisibility is very difficult.

X. **BURLINGTON NORTHERN**

*Burlington Northern*\(^{198}\) presented a very strong case against the application of joint and several liability. The case arose out of contamination at a chemical storage facility owned and operated by Brown & Bryant, Inc. ("B&B").\(^{199}\) B&B began operations in 1975 on a 3.8 acre parcel and in 1975 expanded their facility onto an adjacent parcel owned by Burlington Northern.\(^{200}\) B&B went out of business, so the government focused its enforcement activities on Shell Oil Co. ("Shell"), on the ground that Shell, as seller of chemicals to B&B, had arranged for disposal of hazardous substances at the B&B facility, and Burlington Northern, on the ground that it owned a portion of the site for part of the time it was operated.\(^{201}\) The district court held both Shell and Burlington Northern liable, but did not impose joint and several liability.\(^{202}\) "The [district] court found that the site contamination created a single harm but concluded that the harm was divisible and therefore capable of apportionment."\(^{203}\) Burlington Northern was held liable for 9% of the costs based on: (1) the percentage of the site owned by Burlington Northern, (2) the years of the lease to B&B, and (3) which chemicals were spilled on the Burlington Northern portion of the site.\(^{204}\)

The Governments appealed the district court's apportionment and the Ninth Circuit reversed.\(^{205}\) The court found that the harm

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200. *Id.* at 1874. The property was owned jointly by Burlington Northern and the Union Pacific Railroad Company and the Court referred to them collectively as "the Railroads." *Id.*
201. *Id.* at 1876-78.
202. *Id.* at 1876.
203. *Id.*
205. *Id.* at 1877. Because both the EPA and California's Department of Toxic Substances Control both filed CERCLA actions, the Court referred to these parties collectively as "the Governments." *Id.*
was capable of apportionment, but that the district court erred in finding that "the record established a reasonable basis for apportionment."\textsuperscript{206} Because Burlington Northern and Shell had the burden of proof of apportionment and did not provide a sufficient basis for apportionment, Burlington Northern and Shell were jointly and severally liable for all of the Governments' costs.\textsuperscript{207}

The Supreme Court began its discussion of joint and several liability with a discussion of \textit{Chem-Dyne}, which the Court described as the "seminal opinion on the subject of apportionment."\textsuperscript{208} It summarized \textit{Chem-Dyne} as concluding that the scope of CERCLA liability should be determined by "traditional and evolving principles of common law."\textsuperscript{209} That approach, the Court noted, "has been fully embraced by the Courts of Appeals."\textsuperscript{210} The Court then stated that "[f]ollowing \textit{Chem-Dyne}, . . . the universal starting point for divisibility of harm analyses in CERCLA cases is § 433A of the Restatement (Second) of Torts."\textsuperscript{211} The Court summarized the Restatement rule in one simple statement: "apportionment is proper when 'there is a reasonable basis for determining the contribution of each cause to a single harm.'"\textsuperscript{212} The Court then noted that the basic rules of apportionment were not in dispute by either the parties or the lower courts,\textsuperscript{213} and that the dispute concerns "whether the record provided a reasonable basis for the District Court's conclusion that the Railroads were liable for only 9% of the harm caused by the contamination at the . . . facility."\textsuperscript{214}

The district court stated that the issue of divisibility was made more complicated by the fact that neither party argued in favor of divisibility.\textsuperscript{215} The Governments took the position that the harm was not divisible and that the Railroads should be jointly and severally liable,\textsuperscript{216} while the Railroads argued that they had no liability.\textsuperscript{217} The district court used the following figures to calculate the Railroads' share: (a) the Railroads owned only 19% of the surface

\begin{itemize}
\item \textsuperscript{206} \textit{Id.}
\item \textsuperscript{207} \textit{Id.}
\item \textsuperscript{208} \textit{Id.} at 1880 (citation omitted).
\item \textsuperscript{209} \textit{Burlington}, 129 S. Ct. at 1881 (citations omitted).
\item \textsuperscript{210} \textit{Id.} at 1881 (citations omitted).
\item \textsuperscript{211} \textit{Id.} (citation omitted) (internal quotation marks omitted).
\item \textsuperscript{212} \textit{Id.} (quoting \textit{RESTATEMENT (SECOND) OF TORTS} § 433A(1)(b) (1965)).
\item \textsuperscript{213} \textit{Id.} \textit{See infra} text accompanying notes 223 through 230 for a discussion of what principles, if any, are generally agreed to.
\item \textsuperscript{214} \textit{Burlington}, 129 S. Ct. at 1881.
\item \textsuperscript{215} \textit{Id.}
\item \textsuperscript{216} \textit{Id.}
\item \textsuperscript{217} \textit{Id.}
area of the site; (b) the Railroads had leased their property to B&B for only 45% of the time that B&B operated; (c) the “volume of hazardous-substance-releasing activities on the B&B property was at least 10 times greater than the releases that occurred on the Railroad parcel,” and (d) spills of only two of the three chemicals that contaminated the site originated on the Railroad parcel.\(^{218}\) The court multiplied 0.19 by 0.45 by 0.66\(^{219}\) to find that the Railroads were liable for only 6% of the remediation costs.\(^{220}\) The district court then added 50% to take into account potential errors and held the Railroads liable for 9% of the remediation costs.\(^{221}\) The Supreme Court ultimately found that the evidence supported the district court’s allocation and concluded that there was a reasonable basis for apportionment.\(^{222}\)

XI. DOES EVERYONE REALLY AGREE?

The starting point for understanding the Court’s decision in \textit{Burlington Northern} is its statement that “neither the parties nor the lower courts dispute the principles that govern apportionment in CERCLA cases . . . .”\(^{223}\) That statement is true looking down from twenty thousand feet. The basic rules on which everyone agrees are that courts should look to the common law for principles of apportionment and that section 433A of the \textit{Restatement (Second) of Torts} is an important element of the common law principles.\(^{224}\) The Court, however, disagreed with the court of appeals on several important elements of the “principles that govern apportionment in CERCLA cases.”\(^{225}\) Among those are (1) what is to be apportioned,\(^{226}\) (2) what is the role of the \textit{Restatement},\(^{227}\) (3) what is the role of causation in CERCLA apportionment,\(^{228}\) (4)

\(^{218}\) \textit{Id.} at 1882.
\(^{219}\) The number 0.66 was based on the conclusion that the two chemicals found on the property accounted for two-thirds of the overall contamination. \textit{Burlington}, 129 S. Ct. at 1882.
\(^{220}\) \textit{Id.} at 1882.
\(^{221}\) \textit{Id.} at 1881.
\(^{222}\) \textit{Id.} at 1881-83.
\(^{223}\) \textit{Id.} at 1881.
\(^{224}\) \textit{Burlington}, 129 S. Ct. at 1881 (citation omitted) (internal quotation marks omitted) (citing \textit{RESTATEMENT (SECOND) OF TORTS § 433A (1965)}).
\(^{225}\) \textit{Id.} at 1881-83.
\(^{227}\) \textit{Burlington}, 520 F.3d at 935-37.
\(^{228}\) \textit{Id.} at 937-38 (citations omitted).
what procedure should be followed in the trial court, and (5) what does the phrase “reasonable basis for apportionment” mean?

A. What is to be Apportioned?

The Ninth Circuit provided a fairly thorough assessment of what is to be apportioned, analyzing whether the “harm” is the disposal of hazardous substances, the contamination that resulted from that disposal, or the costs of remediation. The Ninth Circuit concluded that the “contamination traceable to each” is the harm to be apportioned, as the goal of CERCLA is to recoup the cost of eradicating contamination. Costs, the court reasoned, are not the harm, because they are more analogous to the damages in tort rather than the injury. The Ninth Circuit’s view of what is to be apportioned is in line with Chem-Dyne and much of its progeny, which focused on the result and whether the result could be divided.

The Supreme Court, on the other hand, found that the costs of remediation should be apportioned, thus the Supreme Court is dividing liability or costs. The product known as D-D was present on the Railroad property, i.e., there was disposal and contamination. The level of the D-D on the Railroad property was not at a level that required remediation, i.e., there was no incurrence of costs. Therefore, the Court concluded that the Railroad had no responsibility for costs related to the remediation of D-D.

There is an important difference between apportioning the contamination and apportioning the cost of remediation. If the result or the contamination is divided, then the potential for the interaction of chemicals affecting toxicity makes it very difficult to find a basis for apportionment between the parties releasing the various chemicals. This is because the result does not have separate parts and the resulting toxicity may be different than the toxicity of

229. Id. at 934 n.16.
230. Id. at 939-41 (citation omitted).
231. Id. at 938.
232. Burlington, 520 F.3d at 939.
233. Id.
234. See id. at 934-35.
236. Burlington, 129 S. Ct. at 1874-76.
237. Id. at 1882-83.
238. See id.
each contaminant that was released. The Chem-Dyne court recognized this problem, and thus its theory was that because the combination may be worse than each component part, there is no way to appropriately limit each party’s responsibility to the part that it contributed.

On the other hand, if the costs are to be apportioned, it is easier to find a basis for apportionment, because apportioning costs eliminates the argument that commingled waste is necessarily so different from each individual part that it cannot be separated. In many cases, the costs related to the remediation of commingled wastes will not be greater than the costs related to remediating the individual substances. This is particularly true where soil removal is the remedy. Often, regardless of how toxic the chemicals are, if the remedy is soil removal, the volume and the location of the soil will play a significant role in the costs; and toxicity is not likely to play a role at all.

To illustrate the difference between the Ninth Circuit’s approach (dividing the resulting contamination) and the Supreme Court’s approach (dividing the costs), assume that A and B both dispose of hazardous substances at a site, and the hazardous substances combine to form one plume of contamination in the groundwater. Under the Ninth Circuit’s approach, there is one resulting harm which cannot easily be divided, and the goal is to remove all of the contamination, so joint and several liability will likely be the rule. Under the Supreme Court’s analysis, the costs are to be divided, where there is a reasonable basis to determine the costs contributed by each party. Thus, whether joint and several liability is imposed will depend largely on the remedy. If two treatment systems are needed, one to remove A’s substance from the groundwater and one to remove B’s substance from the groundwater, each party should pay for its treatment system. If one treatment system can remove both contaminants, there are a number of ways to estimate the contribution of each, including the incremental cost each adds to the system (some substances are more costly to treat than others) and the relative volume contributed by each party (the means used by the trial court in Burlington Northern). And, if the two substances combine so that the remediation for the combination is significantly different from the remediation of the two substances individually, joint and several liability may be appropriate.

Because of this difference regarding what is being apportioned, the Burlington Northern Court found that there was a reasonable
basis for apportionment in precisely the type of case in which most other courts would have found the result to be non-divisible as a matter of law.\textsuperscript{239} The groundwater was contaminated with a combination of the chemicals that had been released.\textsuperscript{240} The Court accepted the district court's view that this was a "classic case of divisible in terms of degree."\textsuperscript{241} In other words, more contamination means more costs and because the increase in costs could be calculated, the Railroads would be liable only for costs attributable to them.\textsuperscript{242} Thus, the \textit{Burlington Northern} Court could find a reasonable basis for apportionment when the contamination contained commingled chemicals, without any discussion of chemical interaction or changes in toxicity.\textsuperscript{243}

Does that mean that commingled waste will always be apportionable? No. Sometimes the combination will create a whole new substance, the remediation costs of which are different from the costs related to the individual components. However, in most cases, each different chemical will contribute to the costs in its own way. For example, at a site in which the soil is contaminated by a combination of volatile organics ("VOCs") and metals, treating the VOCs may be a different process from treating the metals, and there is no reason to require someone who contributed only metals to pay for the remediation of the VOCs. At other sites, where a groundwater pump and treat remedy is used, the same remedy may be used for many of the chemicals. Thus, each PRP's contribution to the costs is measurable, and where a different treatment is needed for each chemical (e.g., a treatment system for TCE may not be able to treat vinyl chloride), the cost of the combination is cumulative and should also be measurable. For example, if TCE and PCE can both be treated effectively by the same system, then the cost to remediate a combined plume should not be more than the sum of the costs of the two plumes. On the other hand, where the presence of an additional contaminant will either interfere with the attempts to treat the first or will create a third substance that is more difficult to treat, the cost to remediate the combina-

\begin{itemize}
\item 239. \textit{Id.} at 1878-79.
\item 240. United States v. Burlington N. & Santa Fe Ry. Co., 520 F.3d 918, 942 (9th Cir. 2008), \textit{rev'd sub nom} 129 S. Ct. 1870 (2009) (noting that "[t]he different toxic substances vary in their likelihood to leak and in the manner and speed in which they disseminate in ground water").
\item 241. \textit{Burlington}, 129 S. Ct. at 1882 (internal quotation marks omitted).
\item 242. \textit{See id.} at 1883. The Ninth Circuit recognized that this is conceptually true, but questioned whether adequate proof had been provided. \textit{Burlington}, 520 F3d at 942.
\item 243. \textit{Burlington}, 129 S. Ct. at 1882-83.
\end{itemize}
tion may be greater than the sum of the costs of remediating the two separately. Thus, in many cases there will be a reasonable basis for apportionment, and the determining factor will be the selected remedy.

B. Role of the Restatement

Courts agree that section 433A of the Restatement (Second) of Torts plays a role in defining the common law rule of divisibility. There has been significant debate, however, regarding how to apply the Restatement’s rule. Some courts, such as Alcan, recognized potential inconsistencies between the Restatement rule and CERCLA, but decided that CERCLA would determine liability and the Restatement would determine divisibility. If that meant that causation is not relevant to liability, but is relevant to divisibility, so be it. The Alcan Court noted that this result is consistent with CERCLA and congressional intent, even if causation is barred at the front door and allowed in through the back door. The Ninth Circuit in Burlington Northern, however, agreed with those courts that held that the Restatement must be modified to apply it appropriately to CERCLA cases. The Ninth Circuit noted that causation and the definition of harm were two areas in which the Restatement needs to be modified.

The Supreme Court, however, did not say a word in its Burlington Northern decision about modifying the Restatement rule to better fit it into CERCLA. Indeed, the Restatement is quoted and applied as written without question. The Court’s literal application of the Restatement is all the more striking when viewed against the fact that the Governments’ brief argued for use of a modified version of the Restatement, because they believed that the policies underlying CERCLA are at odds with the Restate-

246. See Alcan, 964 F.2d at 264-66.
247. See id.
249. Burlington, 520 F.3d at 936.
ment. Specifically, the Governments argued that Congress intended that, as between private parties who have a connection to the site and the government, private parties should fund the remediation. The Court rejected that position, apparently because Congress intended common law principles to define the scope of liability and the Restatement is the best statement of those common law principles.

It is important to note that most of the courts that concluded that the Restatement needs to be modified for CERCLA cases did so in the context of concluding that finding a reasonable basis for apportionment needs to be more difficult in CERCLA cases. The proposed modifications were all intended to make joint and several liability more likely. The Court’s unaltered application of the Restatement thus must be viewed as making it easier to find a reasonable basis for apportionment.

Chem-Dyne and many other courts had interpreted the Restatement as requiring both a divisible harm and, if divisible, a reasonable basis for apportionment. The Restatement, however, provides that harm will be apportioned when there is either a divisible harm or a reasonable basis for apportionment. The Burlington Northern Court left no doubt that it was not modifying the Restatement rule in this regard. Indeed, it merely stated the rule as “apportionment is proper when ‘there is a reasonable basis for determining the contribution of each cause to a single harm.’”

Is it possible that the Supreme Court required only a reasonable basis for apportionment, because the lower courts had held that the harm was divisible? That is, is it possible that the Court would require the two-step process required by Chem-Dyne (first finding that the result is divisible and then only if the answer is yes, asking if there is a reasonable basis for apportionment), but did not do so here because the lower courts had held that the harm

251. See Brief for the United States, Burlington, 129 S. Ct. 1870 (Nos. 07-1601, 07-1607), 2008 WL 5266416 at *35 n.16.
252. See id., 2008 WL 5266416, at *39.
254. See, e.g., Burlington, 520 F.3d at 936 (citation omitted).
255. See supra text accompanying note 63.
256. RESTATEMENT (SECOND) OF TORTS § 433A(1) (1965)
258. Id. at 1881 (citing § 433A(1)(b)).
was divisible? No. The Court was clear in stating that “not all harms are capable of apportionment.” It followed that statement by noting that defendants have the burden of proving “that a reasonable basis for apportionment exists.” The Court did not follow that up, as the Chem-Dyne court and many other courts would have, by stating that the defendant also has the burden of proving that the harm is capable of apportionment.

C. Causation

As noted above, a CERCLA plaintiff does not need to prove that the defendant’s actions caused the pollution that led to the response costs. It is sufficient for the plaintiff to prove that the defendant is a PRP and that the plaintiff incurred response costs consistent with (or in the case of a governmental plaintiff, not inconsistent with) the National Contingency Plan (“NCP”). For example, a person who purchases a contaminated site with no knowledge of the contamination has liability as an owner, even though his or her actions did not cause or contribute to the contamination or the response costs.

CERCLA contains a very limited list of defenses and lack of causation is not one of them. Thus, apportionment based on causation presents a potential inconsistency between the CERCLA liability scheme and the common law rules of apportionment. The Alcan-PAS court noted this potential inconsistency when it concluded that a PRP may be found liable under CERCLA in the liability phase and then avoid liability in the apportionment phase if its waste did not cause any response costs.

The Ninth Circuit in Burlington Northern addressed this issue by noting that where negligence law requires proof of causation, CERCLA merely requires a connection to the site. Once that connection is proven, to allow causation to “whittle their liability

261. Id.
262. See supra text accompanying note 105.
263. Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9607(a)(4)(A)-(B) (West 2006). A governmental entity may collect as long as its costs are “not inconsistent with” the NCP, while a private party must prove that its costs are consistent with the NCP. Id.
264. See id. §§ 9601–9675.
265. Id.
266. See United States v. Alcan Aluminum Corp., 990 F.2d 711, 723 (2d Cir. 1993).
"down" would violate the basic structure of CERCLA, because one of the concepts underlying CERCLA is that cleanup costs should be borne by a person with some connection to the site, rather than imposing those costs on the government.\footnote{268}

The Supreme Court, in reversing the Ninth Circuit, saw no difficulty in imposing a significant portion of the costs on the government, rather than imposing those costs on a party to whom those costs are not attributable.\footnote{269} Apportionment thus can and did allow a defendant to "whittle their liability down."\footnote{270}

The Ninth Circuit is correct in pointing out that apportionment based on causation may conflict with the CERCLA liability scheme, particularly where one of the parties is an owner of the contaminated property. It is difficult to say that an owner who purchased the property after the contamination occurred caused any of the contamination. Nevertheless, a person who owned the site during the entire disposal period and benefited financially from the contamination may have the necessary connection to the site that justifies imposing liability for the whole harm.\footnote{271}

The Supreme Court, thus, for the most part, did not speak in terms of what was caused by each party. Rather, it permitted apportionment based on what was "attributable" to the parties.\footnote{272} Contamination that results during the defendant's period of ownership may be attributable to the defendant even though the defendant did not cause the contamination.\footnote{273} This means that the same contamination may be attributable to more than one party, but sorting that out is the role of contribution claims among defendants.\footnote{274} It is not the role of apportionment. Thus, the Supreme Court disagreed with the Ninth Circuit regarding the policies underlying CERCLA and, consequently, whether the Res-
Joint and Several Liability

Joint and Several Liability needed to be modified to be used in CERCLA actions. In practice, where the Restatement clearly apportions among causes, the Court recognized a rule whereby a court apportions among those to whom the contamination may be attributable.

D. How Precise Must the Evidence Be?

The Court also differed with the Ninth Circuit regarding how precise the evidence must be to support apportionment. The Ninth Circuit noted "a lack of sufficient data to establish the precise proportion of contamination that occurred on the relative portions of the . . . facility . . . ." The Court, however, found that while precision could not be achieved, the trial court was reasonable in assessing that the Railroads' parcel did not contribute more than ten percent of the contamination and in using estimates that were then adjusted upward to account for potential errors. The result was less a conclusion that 9% of the waste was attributable to the Railroads than a conclusion that no more than 9% could be attributable to the Railroads.

Note that regarding how precise the evidence needs to be, the difference of opinion between the courts was not great. The Ninth Circuit recognized that precision is not required, stating that "it is neither unusual nor fatal to the validity of the resulting allocation that an apportionment determination includes estimates of contribution to contamination based on extrapolation . . . ." The difference between the courts may actually be more in the way that the parties provided their proof. Burlington Northern's experts focused on what contamination could not be attributable to Burlington Northern. The Court of Appeals responded by saying that more evidence regarding what Burlington Northern is responsible for was needed. The Supreme Court, on the other hand, accepted as a reasonable basis, the idea that if most of the harm cannot be attributable to one party, then it is reasonable to

275. See Burlington, 129 S. Ct. at 1882-83.
276. Id. at 1882.
277. Id. at 1882-84.
278. See id.
281. Burlington, 520 F.3d at 927 n.18.
apportion it in a manner that attributes less than half of the waste to that party.\textsuperscript{282} Thus, what a party cannot be responsible for can be used to create an inference regarding what that party's share should be. Or more precisely, what a party cannot be responsible for creates a cap on their share.

\textit{E. What is a Reasonable Basis for Apportionment?}

The issue of what constitutes a reasonable basis for apportionment is probably the sharpest difference of opinion between the Ninth Circuit and the Supreme Court. The Ninth Circuit noted that the district court "relied on the simplest of considerations," such as "percentage of land area [owned], time of ownership, and types of hazardous products."\textsuperscript{283} These considerations, the court of appeals concluded, were not sufficiently related to the issue of how much contamination was attributable to each party.\textsuperscript{284}

The court of appeals dealt with each consideration separately. First, regarding land area, the court relied on the \textit{Rohm & Haas} case for the proposition that "simply showing that one owns only a portion of the facility is not sufficient to warrant apportionment," using that to eliminate use of land area as a basis for apportionment.\textsuperscript{285} While the court of appeals was correct that land area alone says very little about who is responsible for what contamination, the Supreme Court correctly pointed out that land area can play a role in determining who is or is not responsible for certain contamination.\textsuperscript{286} For example, if B&B released hazardous substances on B&B's property, it is very difficult to attribute the costs related to that release to the Railroads. Thus, the \textit{Rohm & Haas} court's conclusion that land area alone is not a reasonable basis for apportionment says nothing about whether land area combined with other factors creates a reasonable basis for apportionment.

Next, the court of appeals dealt with the period of ownership and again found it to be unrelated to responsibility.\textsuperscript{287} If there was evidence of how much waste was released on a yearly basis, the

\begin{itemize}
\item \textsuperscript{282} \textit{See Burlington}, 129 S. Ct. at 1882-83.
\item \textsuperscript{283} \textit{Burlington}, 520 F.3d at 943.
\item \textsuperscript{284} \textit{Id.} at 943-44.
\item \textsuperscript{285} \textit{Id.} at 943 (alterations in original) (quoting United States v. Rohm & Haas Co., 2 F.3d 1265, 1280 (3d Cir. 1993), \textit{overruled by United States v. E.I. Dupont De Nemours & Co. Inc., 432 F.3d 161 (3d Cir. 2005)}) (internal quotation marks omitted).
\item \textsuperscript{286} \textit{Burlington}, 129 S. Ct. at 1883 (citations omitted).
\item \textsuperscript{287} \textit{Burlington}, 520 F.3d at 945.
\end{itemize}
court noted, that information could be helpful in apportionment. Additionally, the court noted that if more information were available, it would be reasonable to hold that the Railroads are not responsible for releases prior to the time that they became owner of a part of the site.

On this issue, what is a reasonable basis is closely related to the issue of how precise the evidence must be. To the court of appeals, there was no specific evidence on year-to-year contamination, and that ended the analysis. The Supreme Court, on the other hand, was willing to accept estimates and then adjust for possible errors. Just as in the Restatement's case of the cows destroying the crops, where the assumption is that the cows are approximately equal and the Restatement does not require examination of the size, age, and health of each party's cows to determine apportionment, here the Court is willing to accept reasonable estimates in place of precision.

The next consideration that the court of appeals analyzed was the use of the type of chemical product in the apportionment process. All of the products were used on the Railroads' property. All were released on the Railroads' property. Thus, the Railroads should have responsibility for all of the products. The Supreme Court, on the other hand, looked to the costs. There was no D-D on the Railroads' parcel in concentrations requiring remediation. Thus, the Railroads could not be responsible for costs related to the spill or release of D-D. Here, what was being allocated played an important role in determining what constitutes a reasonable basis for apportionment. When costs are being allocated (rather than trying to allocate among components of harm), the Court could examine whether the Railroads could be held liable for the costs related to D-D. Because none of the spills of D-D on the Railroads' property resulted in cleanup costs,

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288. See id (citation omitted).
289. Id. (citation omitted).
290. See id. (citation omitted).
291. See Burlington, 129 S. Ct. at 1882-83.
292. RESTATEMENT (SECOND) OF TORTS § 433A cmt. d (1965)
293. See Burlington, 520 F.3d at 945.
294. Id.
295. Id.
296. See Burlington, 129 S. Ct. at 1882-84.
297. Id. at 1882-83.
298. See id.
299. Id.
the Railroads were not liable for costs related to the remediation of D-D.\textsuperscript{300}

The Governments argued that joint and several liability was appropriate, because this was a case in which neither party's activities were necessary, as in the \textit{Restatement}'s illustration of the fire.\textsuperscript{301} The Governments argued that because there was one plume of contaminated groundwater that contained several contaminants, and the remediation may have been the same even if either party's contribution was removed, joint and several liability was appropriate.\textsuperscript{302} That argument, however, misinterprets the crucial distinction between when the two events are cumulative (and joint and several liability is not applied) and when they are interactive (and joint and several liability is applied).

In the illustration of the fire, the result is the same regardless of whether there was one act of negligence or two.\textsuperscript{303} There is only one fire and it causes the same destruction; the second act of negligence adds nothing.\textsuperscript{304} In \textit{Burlington Northern}, on the other hand, the district court saw it as a "classic divisible in terms of degree" case,\textsuperscript{305} and the Supreme Court agreed.\textsuperscript{306} This would indicate that the Court saw the contamination as cumulative. The groundwater remedy was a granulated activated carbon system, which is a "mass-driven removal scheme."\textsuperscript{307} That means that the cost of operating the system is directly related to the mass of contaminants. Thus, contamination would be cumulative. In such cases, the situation is more analogous to the cows, and each party is responsible only for its part.

\textsuperscript{300} See id.

\textsuperscript{301} See Brief for the United States, supra note 251, 2008 WL 5266416, at *35-43 (citing \textsc{Restatement (Second) of Torts} § 433A cmt. i (1965)).

\textsuperscript{302} Id., 2008 WL 5266416, at *35-36.

\textsuperscript{303} § 433A cmt. i, illus. 14. Illustration 14 states that:

\begin{quote}
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.
\end{quote}

See supra text accompanying notes 85-86.

\textsuperscript{304} See § 433A cmt. i, illus. 14.

\textsuperscript{305} Burlington, 129 S. Ct. at 1882 (citation omitted).

\textsuperscript{306} Id. at 1885-86 (Ginsburg, J., dissenting).

F. So What is the Rule That Results from This Decision?

If there is a reasonable basis for allocation of harms, Superfund defendants will not be subject to joint and several liability. A reasonable basis does not have to be a precise or certain basis; it only has to be a reasonable basis. The standard is a fairly low one, as the Supreme Court upheld a trial court finding of reasonable basis, even though neither party presented any theory regarding a reasonable basis for allocation.

To establish a reasonable basis for allocation, a defendant does not need specific evidence regarding what he or she is responsible for. It is enough that the defendant can show through volumetric evidence, geographic evidence, or some combination thereof, what contamination the defendant cannot be responsible for. Once that is established, rather than impose joint and several liability, the court should impose several liability and relieve the defendant of the obligation to pay for costs that cannot be attributed to said defendant.

There can be a reasonable basis for allocation even where multiple chemicals mix together and create one plume of contaminated groundwater. Does that mean that the Chem-Dyne theory that holds that a chemical interaction creates an indivisible harm is no longer applicable? No. It may be that some chemical interactions create a harm that is distinct from the harm that would have been created by any of the chemicals alone. In Alcan, for example, joint and several liability was probably appropriate, because the trial court on remand found that Alcan’s relatively benign emulsion enhanced the ability of the other contaminants to migrate, resulting in contamination that would not have occurred, but for the interaction. Because neither cause was sufficient and both were necessary, joint and several liability may have been appropriate.

Where there is a reasonable basis for allocation, each is allocated a share of the costs attributable to their contamination, not
a share of the contamination.\textsuperscript{317} Does that mean that the volume of waste contributed alone is never a reasonable basis for allocation? No. Volume alone can be a reasonable basis in cases like \textit{In re Bell}, where each of the PRPs engaged in essentially the same activity and each was alleged to have contributed the same contaminant.\textsuperscript{318} Additionally, volume alone can be a reasonable basis where all of the parties are arrangers and each party's waste is merely cumulative.\textsuperscript{319} Volume alone would not have provided a reasonable basis for allocation in \textit{Burlington Northern}, however, because Burlington Northern was an owner, and an owner and arranger will both have responsibility for the same waste.

Reasonable basis is a fact-based analysis\textsuperscript{320}—thus we cannot list all of the circumstances in which there will be a reasonable basis for allocation. It is important to note, however, that there will be times when the same waste is attributable to more than one party and thus, a party can be responsible for the whole even without the interaction of causes discussed by the \textit{Chem-Dyne} court.\textsuperscript{321} For example, where one party is an owner for the entire period of waste disposal and the other party is an operator, joint and several liability may be appropriate. All of the waste disposal can be attributed to the owner, because all of the waste disposal was on his or her property during his or her period of ownership. Similarly, all of the waste disposal may be attributed to the generator, because he or she generated and disposed of the waste. There may be equitable reasons to treat the different PRP's differently, but equitable factors play a role in the contribution claims among liable parties, not in the decision regarding whether to impose joint and several liability.\textsuperscript{322}

Finally, because it is a fact based analysis, the more facts a defendant can provide to indicate a reason for allocation, the better. Note how ownership of only part of the contaminated property played a role in \textit{Burlington Northern}.\textsuperscript{323} The Ninth Circuit correctly pointed out that ownership of only part of the property cannot alone be a reasonable basis for allocation.\textsuperscript{324} An argument that A

\textsuperscript{317.} See supra text accompanying notes 235-39.  
\textsuperscript{318.} See supra text accompanying notes 117-38.  
\textsuperscript{319.} See supra text accompanying notes 238-39.  
\textsuperscript{320.} See supra text accompanying notes 108-09.  
\textsuperscript{321.} See supra text accompanying notes 29-55.  
\textsuperscript{322.} See supra text accompanying notes 146-53.  
\textsuperscript{323.} See supra text accompanying notes 219-55.  
\textsuperscript{324.} See supra text accompanying notes 285-92.
owned only half the contaminated property and should not be responsible for more than half the costs is entirely unpersuasive, because it is possible that most of the contamination is on the portion of the property owned by A. The key to understanding what A could be responsible for is not what A owned, but what happened on the property A owned. In Burlington Northern, the Court recognized that the combination of ownership of only part of the contaminated property, ownership for only part of the time, less handling of hazardous substances on the part owned by the Railroads, and less contamination on the Railroads’ property allowed the Court to conclude that the Railroads could not be responsible for most of the costs.325

In the absence of facts regarding what the Railroads were responsible for, the Court accepted an allocation based primarily on what the Railroads could not be responsible for. Because many Superfund sites were contaminated long ago, records will often be difficult to find. There will, therefore, be many cases in which a party does not have a reasonable basis for establishing his or her share, but can point out things that he or she clearly did not do. Based on the Court’s decision in Burlington Northern, that should be sufficient to limit a defendant’s liability.

XII. CONCLUSION

After the Chem-Dyne decision, nearly all courts and commentators concluded that PRPs at Superfund sites were jointly and severally liable. The first significant move away from joint and several liability came in the Alcan decisions, in which the Second and Third Circuits recognized an “exception” to joint and several liability where a PRP sent such small quantities of hazardous substances to a site that its waste may not have caused any response costs.326 In a sense, if the PRP did not cause any of the response costs, it would be unfair to impose joint and several liability and make that PRP potentially responsible for all of the costs.

The next significant step away from joint and several liability came in the In re Bell decision, where the Fifth Circuit recognized that there was a reasonable basis for apportioning liability between consecutive owners and operators of the same facility who disposed of the same hazardous substances, but at different

325. See supra text accompanying notes 219-55.
326. See supra text accompanying notes 87-116.
times. The Sixth Circuit then created an “exception” to the rule of joint and several liability in its Brighton decision, where the court recognized that a person who is alleged to have liability as an owner or operator for a portion of the disposal period should not be responsible for costs related to waste disposed of at the facility after it no longer had any connection to the facility. Burlington Northern can be seen as completing the process, whereby the former exceptions created a rule based on apportionment, and cases in which joint and several liability are applied will be exceptions to that new rule.

There is a large gap between Chem-Dyne and its presumption that PRPs are jointly and severally liable, and Burlington Northern and its conclusion that parties who submitted no arguments in support of any basis for allocation can nevertheless be found to have a reasonable basis for allocation. After Burlington Northern, many courts will be addressing the issue of a “reasonable basis for allocation” for the first time, because commingled waste was generally seen as indivisible. If trial courts pay close attention to the Burlington Northern Court’s reasoning and to the facts of each case, joint and several liability in CERCLA actions will become the exception and not the rule.

327. See supra text accompanying notes 117-38.
328. See supra text accompanying notes 139-67.
329. See supra text accompanying notes 29-55.
330. See supra text accompanying notes 198-222.