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The Impact of BNSF on Sediment Mega-Sites; Will Apportionment become the Norm?

Bernard J. Reilly
DuPont Company
Wilmington, DE

Karyllan Dodson Mack
DuPont Company
Wilmington, DE

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I. Introduction

On May 4, 2009, the United States Supreme Court issued a landmark decision that addressed two fundamental issues relating to liability under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9601 *et seq.* CERCLA is a remedial statute, which has historically been broadly interpreted by Courts to ensure that those responsible for environmental harm bear the costs of any response action. Under CERCLA, there are four categories of "covered persons" who are deemed potentially responsible parties ("PRPs") and are therefore liable under the statute: (1) current owners and/or operators of a facility; (2) owners and/or operators of a facility at the time of disposal of hazardous substances; (3) any person who arranged for disposal of hazardous substances at a facility (known as "generators" or "arrangers"); and (4) transporters of hazardous substances to facilities they select for disposal. 42 U.S.C. § 9607(a). If a defendant falls within one of these categories, it may be held liable for the cleanup costs, without regard to fault (known as "strict" liability), even if the harm occurred prior to enactment of the statute. Thus, liability is retroactive and strict. The statute did not, however, specify whether the liability of multiple defendants would be several or joint and several. The legislative history of the statute made clear that Congress intended to leave the resolution of that question to evolving principles of common law, and the courts quickly adopted that view. *See United States v. Chem-Dyne Corp.*, 572 F. Supp. 802 (S.D. Ohio 1983).

In two consolidated cases decided on May 4, 2009, *Burlington No. & Santa Fe R. Co. v. United States* (No. 07-1601) and *Shell Oil Co. v. United States* (No. 07-1607) (collectively hereinafter "*BNSF*"), the Court both (1) clarified the outer limits of "arranger" liability; and (2) approved the apportionment of liability among multiple PRPs, reversing the holding of the Ninth Circuit Court of Appeals that all the PRPs were jointly and severally liable under

CERCLA. *United States v. Burlington Northern & Santa Fe Railway Co.*, 502 F.3d 781 (9th Cir. 2007). That decision, in turn, reversed the holding of the District Court that, although there was a single harm, there was also a reasonable basis for apportioning the harm, such that the defendants were only severally liable. *United States v. Atchison, Topeka & Santa Fe Railway Co.*, 203 WL 25518047 (E.D. Calif. 2003).

II. The BNSF Cases

A. The Facts

From 1960 to 1988, Brown & Bryant, Inc. ("B&B") operated an agricultural chemical distribution business, purchasing pesticides and other chemical products from suppliers such as Shell Oil Company ("Shell"). B&B received, stored, repackaged and distributed those chemicals to its customers. B&B opened its business on a 3.8 acre parcel in Arvin, CA, and in 1975, expanded operations onto an adjacent .9 acre parcel leased from predecessors of Burlington Northern & Santa Fe Railway and Union Pacific Railroad (collectively, the "Railroads").

B&B purchased chemicals from Shell, including a pesticide called D-D. The chemical was shipped via common carrier f.o.b. destination, and B&B was responsible for the product once it arrived at the facility. When the product arrived, it was transferred from tanker trucks to a bulk storage tank on B&B's primary parcel. During transfers, leaks and spills of D-D occurred. The District Court described B&B as a "sloppy operator" and, over the course of 28 years of operation, there were spills, equipment failures, and equipment and tank/truck wash-outs resulting in chemicals being released into an unlined sump. The unlined sump served as a source of contamination to the underlying groundwater, as did an unlined pond. Both the pond and the sump were located on a portion of the original B&B parcel most distant from the Railroad parcel.

B&B undertook some remediation efforts, but ultimately became insolvent and ceased operations by 1989. That same year, the facility was added to the National Priorities List, and the U.S. Environmental Protection Agency ("EPA") and California's Department of Toxic Substance Control ("DTSC") initiated cleanup activities. With B&B out of business, the U.S. and the State of California filed a cost recovery action against the Railroads and Shell seeking approximately $8 million in site investigation and cleanup costs.

B. District Court Opinion

The District Court conducted a six week bench trial, following which the Court authored a detailed, 191-page opinion finding in favor of the EPA and DTSC. In an order supported by 507 separate findings of fact and conclusions of law, the Court held that the Railroads and Shell were PRPs under CERCLA — the Railroads as owners of a portion of the facility, CERCLA § 9607(a)(1)-(2), and Shell as a "person who . . . arranged for disposal . . . of hazardous substances" through its sale and delivery of D-D to B&B. CERCLA § 9607(a)(3). However, although the District Court found the parties liable under CERCLA, it did not impose joint and several liability for the entire amount of response costs, rather the Court concluded that the "single harm" was divisible because it was possible to discern the degree to which different parties contributed to the damage. Therefore, apportionment of the harm was appropriate.

Shell as an Arranger

The District Court accepted the government's arguments that a supplier could be held liable as an "arranger" if the disposal of wastes was a foreseeable byproduct of its sales transactions. Specific intent to dispose is not required, the Court held; only acquiescence in the process. Shell was an active participant in the D-D shipment, delivery and receiving process at

Apportionment of Liability

Although, as noted earlier, CERCLA does not mandate that liability is joint and several, EPA and the Justice Department have long argued that it is, subject only to those rare circumstances where the defendant can prove that there are separate and divisible harms. Furthermore, courts have often agreed with the government with the result that conclusions that defendants are jointly and severally liable have been the norm, rather than the exception. However, the District Court clearly believed that the facts in the *BNSF* case necessitated application of the exception and exercised its discretion to apportion damages in order to mitigate the hardships of imposing joint and several liability upon defendants who had only contributed a small amount to a potentially large indivisible harm. 2003 WL 25518047 at 81. As the District Court said, "[t]he concept that a passive owner of a contiguous parcel, not representing more than 19% in area of a CERCLA site, operated less than 44% of the time, where substantially smaller volumes of hazardous substance releases occurred, should be strictly liable for the entire site remediation, because no other responsible party is judgment-worthy, takes strict liability beyond any rational limit." 2003 WL 25518047 at 87.

The Restatement (Second) of Torts § 433A provides for apportionment of liability if there are distinct harms *or* when there is a reasonable basis for determining the contribution of each cause to a single harm. The District Court performed its own apportionment analysis using information in the record, since the defendants, denying their liability altogether, had failed to proffer any divisibility arguments. Applying the Restatement (Second) of Torts, the Court refused to impose joint and several liability and instead held that the defendants were only severally liable, apportioning Shell 6% of the harm and the Railroads 9% of the harm. Thus, the governments were left unable to recover 85% of their response costs.

In determining an appropriate apportioned share of responsibility for the Railroads, the Court considered: (1) the size of the Railroads' parcel compared to the size of the entire site; (2) the length of time the Railroads leased their parcel to B&B compared to the length of time B&B operated at the Site; and (3) the percentage of hazardous products attributable to the Railroad parcel that contributed to overall contamination of the site. The size of the Railroad parcel was .9 acres, the size of the entire site was 4.7 acres (.9 plus 3.8). Thus, the Railroad parcel constituted 19% of the physical area of the site. The Railroads leased their parcel to B&B for 13 years, while B&B operated on the original site for 28 years. Thus, the Railroad lease was 46% of the period of operation. Two chemicals that were stored on the Railroad parcel contributed to 2/3 of the overall site contamination. Thus a factor of 66% was applied. When the factors were multiplied, the relative responsibility of the Railroads was found to be 6%, to which the Court added a 50% cushion for the error resulting from its estimates, and increased the Railroads' proportion of the total liability to 9%. For Shell, the Court estimated the volume of spills of Shell's product that were attributable to Shell, and set Shell's share of the total liability at 6%.

California and EPA appealed the Court's apportionment of responsibility; Shell cross-appealed the finding of its liability.

C. Ninth Circuit

The Ninth Circuit affirmed the District Court's holding that Shell was liable as an "arranger," but reversed the District Court's apportionment of responsibility and imposed joint and several liability on all the defendants. *United States v. Burlington No. & Santa Fe Railway*, 502 F.3d 781 (9th Cir. 2007).

Shell as an Arranger

The Ninth Circuit acknowledged that Shell was not a "traditional" arranger under CERCLA since it had not contracted with B&B for the purpose of disposing of hazardous waste. Nonetheless, Shell was still found to be liable under a broader category of arranger liability where the disposal of hazardous waste was a foreseeable byproduct of the transaction. Relying upon the CERCLA definition of "disposal," which includes passive or unintentional acts such as leaking and spilling, the Ninth Circuit concluded that Shell could arrange for disposal, even without any intent to dispose. The Court relied upon many of the District Court's findings of fact, noting that Shell had arranged for delivery through subcontractors, to some degree dictated the transfer arrangements, was aware that leakage was likely to occur during transfer, and provided advice and supervision concerning safe transfer and storage. Thus, the Court concluded that disposal was a necessary and foreseeable part of the sale and delivery process and liability was not precluded by the fact that Shell intended to transport and deliver a useful, unused product for sale.

The Ninth Circuit also rejected Shell's "useful product" defense; a defense that protects manufacturers from arranger liable when they sell a hazardous material that is a useful product, which is then later disposed of after it is used as intended. The Court's rationale was that leaked hazardous substances are, by definition, never used for their intended purpose. Therefore, the Court reasoned, the useful product doctrine cannot apply where the sale of the product immediately results in the leakage of hazardous substances. Since the District Court's findings of fact clearly indicated that Shell knew that leaks and spills were occurring during transfer, some of Shell's product was not to be sold as a useful product but was being immediately leaked to the ground; therefore, Shell could not avail itself of the "useful product" defense.

Apportionment of Liability

As an initial matter, the Ninth Circuit noted that defendants failed to meet their burden of proof as to divisibility. The District Court also identified this failure, but nonetheless found that the record included sufficient evidence to support a reasonable basis for apportionment. The question of whether or not the District Court erred in this regard became part of the review of the factual decision on the merits of the apportionment issue.

Although the Court acknowledged that apportionment may be appropriate under the Restatement (Second) of Torts approach, even in the case of a single harm, there must be a reasonable basis for calculating the contribution of each defendant to the harm. In this case, the Ninth Circuit did not deem the evidence sufficient to justify apportionment. The factors utilized by the District Court (e.g., site area, time of ownership, and types of hazardous materials), although sufficiently exact, did not a bear logical connection to the key question in the Court's mind — What part of the contaminants on the site was attributable to hazardous materials or activities on the Railroad parcel? The Ninth Circuit rejected the District Court's calculation and held that the Railroads had failed to prove any "reasonable basis" upon which to apportion liability for the cleanup costs.

The Railroads and Shell moved for *en banc* review, which was denied over the dissent of eight judges, including Chief Judge Kozinski. The dissenting opinion argued that the Ninth Circuit decision created a standard for proving apportionment of liability that was nearly impossible to satisfy.

D. Supreme Court Decision

The Supreme Court, by a vote of 8-1 (Ginsberg, J. dissenting), reversed both holdings of the Ninth Circuit, concluding that Shell did not qualify as an arranger under CERCLA and that the District Court reasonably apportioned the Railroads' share of the site remediation costs at 9%.

Shell as Arranger

To determine if Shell could be held liable as an arranger, the Court focused on the statutory language. CERCLA § 107(a)(3) applies to an entity that "arrange[s] for disposal . . . of hazardous substances." The language clearly controls, and thus liability would attach, where an entity enters into a transaction for the *purpose* of discarding hazardous waste that was no longer a useful product. The Court noted that it was similarly clear that an entity could not be held liable as an arranger where the transaction was for the sale of a new and useful product that, unbeknownst to the seller, was later disposed of in a way that resulted in contamination. The Court pointed out that cases on either end of the spectrum are relatively easy to analyze. Less clear are the multitude of arrangement scenarios that fall within these boundaries.

Although the question of whether arranger liability attaches is fact specific, the Court noted that such liability cannot extend beyond the limits of the statute. Since CERCLA does not provide a definition of "arrang[e] for," the Court looked to its ordinary meaning. The Merriam-Webster definition of "arrange" implies action directed to a specific purpose. The Supreme Court thus adopted Shell's argument that "arranged for disposal" requires intent to dispose, i.e., a purpose to dispose, and not mere knowledge of disposal. The Court did warn that an entity's knowledge that its product will be leaked, spilled, dumped, or otherwise discarded may provide evidence of the entity's intent to dispose of its hazardous substances, but knowledge alone is insufficient to prove that an entity "planned for" the disposal, particularly when the disposal occurs as a peripheral result of the legitimate sale of an unused, useful product. The claim against Shell was thus dismissed and Shell was held not to be liable under CERCLA for the B&B site, rendering moot the question of whether Shell's liability could be subject to apportionment.

Apportionment of Liability

Having concluded that Shell did not qualify as an arranger under CERCLA, the Court then focused on whether the Ninth Circuit had properly held the Railroads jointly and severally liable for the full cost of cleanup. The Court relied upon the Restatement (Second) of Torts, which provides that damages for harm are to be apportioned among two or more causes when (1) there are distinct harms *or* (2) there is a reasonable basis for determining the contribution of each cause to a single harm.

The Court focused on the second prong and the question of whether the record provided a reasonable basis for the District Court's apportionment of 9% of the harm to the Railroads. The Court concluded that the evidence contained in the record reasonably supported the apportionment of liability. In fact the Court noted that the "District Court's detailed findings make it abundantly clear that the primary pollution at the [] facility was contained in an unlined sump and an unlined pond in the southeastern portion of the facility most distant from the Railroads' parcel and that the spills of hazardous chemicals that occurred on the Railroad parcel contributed to no more than 10% of the total site contamination . . . some of which did not require remediation." 129 S.Ct. at 1883. With those background facts in mind, the Court was "persuaded that it was reasonable for the [District Court] to use the size of the leased parcel and the duration of the lease as the starting point for its analysis." 129 S.Ct. at 1883.

Because the District Court's apportionment of liability was supported by the record and followed the principles outlined above, the Court reversed the Ninth Circuit conclusion that the Railroads were subject to joint and several liability. The Supreme Court's decision thus approves the use of reasonable approximations supported by evidence in the record to determine a reasonable basis for apportioning harm. Factors such as the percentage of site owned, the percentage of time owned in relation to total site operations, and the percentage of hazardous materials attributable to one parcel that contributed to overall contamination of the site were deemed sufficient methods of proving the damage caused by the Railroads. Thus, the Court affirmed the 9% share for the Railroads, declining to hold the Railroads jointly and severally liable for the B&B orphan share.

III. Apportionment vs. Allocation

Apportionment

Apportionment is a legal concept that comes into consideration during the liability stage of a case. When apportioning liability, there is a determination as to what harm is caused by a particular defendant and the corresponding portion of liability for which that defendant is responsible. Of course, such a determination requires the defendant to provide evidence that shows how much of the harm it caused. It should be noted that the "scorched-earth," all or nothing liability strategy that was followed by the defendants in the *BNSF* case was criticized upon by all three courts. In *dicta*, the courts clearly believed that the defendants had failed to assist the court by presenting a reasonable basis upon which the harm could be apportioned, even though they had introduced sufficient evidence to support such arguments. However, the District Court took it upon itself to develop an appropriate division of liability — a different court might not independently search the record for the evidence to support the basis for apportionment and therefore might not reach the same result. The more prudent path would be to include divisibility of harm arguments, where applicable, in submissions to the court. Prudent practitioners should not depend upon the court, on its own, to perform the critically important task of marshalling the evidence.

Apportioned liability is several only — meaning that the defendant is only responsible for the share of the harm it caused and for which it was deemed liable. Therefore, the defendant cannot be held responsible for damage caused by other defendants, or for an orphan share, which is the concept of joint and several liability. However, as discussed above, apportionment of single or divisible harms involving multiple responsible parties is limited to those instances described in the Restatement (Second) of Torts, and thus is only appropriate where there are distinct harms or where there is a reasonable basis for determining the contribution of each cause to a single harm. The following illustration of several liability is included in the Restatement (Second) of Torts:

> The harm inflicted may be conveniently severable in point of time. Thus if two defendants, independently operating the same plant, pollute a stream over successive periods, 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. Restatement (Second) of Torts § 433A comment c.

The Court noted in *BNSF* that courts of appeals have acknowledged that the Restatement (Second) of Torts is the universal starting point for divisibility of harm analysis. This apparently continues to be true even though the American Law Institute has published the Restatement (Third) of Torts that also addresses apportionment issues.

The critical point is that once a harm is found to be divisible, or single but subject to a reasonable basis for apportionment, the defendant is liable only for its own several share of the harm, and not for the shares of others, or for the orphan share (the share of harm caused by parties who are not present).

Allocation

Allocation, on the other hand, is an equitable concept that applies only after a party has been found jointly and severally liable. The concept does not determine liability because, by definition, all the parties found jointly and severally liable, have already been found liable. Thus, the concept is applied after the liability phase, when the damages are being divided among the defendants who have been found liable.

Section 113(f)(1) of CERCLA famously requires the court, in a joint and several liability situation, to resolve contribution claims among the jointly and severally liable parties "using such equitable factors as the court determines are appropriate." 42 U.S.C. § 9613(f)(1). That means that the allocated share assigned to a particular party may be greater than its several share. For example, its share may include a proportionate amount of the orphan share. In other words, the application of equitable factors may result in a division of responsibility that is different from the several share of a party determined by the harm it caused.

Joint and several liability attaches where a single harm is indivisible *and* where there is no reasonable basis for apportioning that single harm. For example, under CERCLA, joint and several liability renders all potentially responsible parties liable for the entire amount of cleanup costs incurred by plaintiff. Although CERCLA's liability provision, found in Section 107(a), does not expressly require the imposition of joint and several liability, joint and several liability is commonly imposed in CERCLA cases to carry out the legislative intent by ensuring that parties responsible for the harm, as opposed to the taxpayers, pay for cleanup of the contamination they caused..

The legislative history of CERCLA is notoriously indefinite and even somewhat contradictory, but it is clear that Congress was aware of the impact joint and several liability could have on PRPs responsible for only a small share of the harm, but who could be held responsible for the lion's share of the cost of a cleanup. Following the introduction of various bills, including, S.1431, which contained an express provision that liability would be joint and several, the compromise that ultimately became CERCLA deleted any reference to joint and several liability. This approach was intended to give federal courts the flexibility if a particular case did not warrant the imposition of joint and several liability. *See BNSF* District Court decision, 2003 WL 25518047 at *86.

Congress was also aware of the need for discretion in allocating responsibility in CERCLA cases in which joint and several liability was to be imposed. Then Congressman Albert Gore introduced an amendment to a bill pending in the House of Representatives, which recommended several equitable factors for use by the courts in allocating joint and several liability. 126 Cong. Record H9366, H9366. The amendment was not included in the final version of CERCLA; however, courts frequently use Congressman Gore's equitable factors (termed the "Gore Factors") in allocating costs among jointly and severally liable parties. The Gore Factors include:

1. The ability of the parties to demonstrate that their contribution to a discharge, release or disposal of a hazardous waste can be distinguished;
2. The amount of the hazardous waste involved;
3. The degree of toxicity of the hazardous waste involved;

4. The degree of involvement by the parties in the generation, transportation, treatment, storage, or disposal of the hazardous waste;
5. The degree of care exercised by the parties with respect to the hazardous waste concerned, taking into account the characteristics of such hazardous waste; and
6. The degree of cooperation by the parties with Federal, State, or local officials to prevent any harm to the public health or the environment.

The Gore Factors mainly focus on equity and fairness and, aside from the first factor, have little to do with legal causation. At first glance, the equitable factors for allocation may appear to be somewhat different from the factors the *BNSF* court approved for apportionment; however, in practice, they are very similar. Courts universally agree that the Gore Factors are neither exhaustive nor exclusive. *See, e.g., U.S. v. Colorado & Eastern R. Co*., 50 F.3d 1530, 1536 (10th Cir. 1995). And courts have used information such as waste type, volume, area, cost-causation and toxicity/persistence (how long does it take to clean up one contaminant vs. another) to assist in developing an appropriate allocation. The underlying theme of these allocation factors is that allocation is proportionally related to the harm caused by each defendant. That's the same type of analysis the *BNSF* court approved for use in apportioning harm. In *BNSF*, the Supreme Court focused on the size of the parcel and duration of the lease to devise a percentage of harm that was proportionally related to the harm caused by the Railroads. The Supreme Court was silent as to other factors that might be considered but it is likely that courts will look at a range of similar factors in conducting both apportionments of harm and allocations of liability. The critical question in apportionment is not what is fair and equitable, but what caused the harm. Factors relevant to the causation of harm are likely to be considered by courts articulating reasonable bases for apportioning harm.

IV. The Orphan Share

Probably the most significant implication of the *BNSF* decision relates to liability for the orphan share of responsibility. The orphan share at a site will include harm caused by parties who have not been identified and harm caused by defunct parties or parties who are unable to pay (including bankrupts). If liability is joint and several, the orphan share attributable to parties that are insolvent or to defunct parties who cannot contribute to the cost of the cleanup, are absorbed by the viable PRPs. *See Interim Guidance on Orphan Share Compensation for Settlors of Remedial Design/Remedial Action and Non-Time Critical Removals*, June 3, 1996 (EPA Orphan Share Policy). By contrast, if the harm is divisible, or if there is a single harm in a situation where there is a reasonable basis for apportionment, the orphan share is absorbed by the party claiming relief from the viable parties. This is a critically important shift, one that is likely to prove to be particularly important in the context of contaminated sediment sites.

Following *BNSF*, PRPs have a much stronger argument for apportionment of liability; the likely outcome, if they succeed, being that defendants will be held liable only for the damage they are found to have caused. If a party is only responsible for the damage it caused, there is no responsibility to cover any orphan share. While EPA's orphan share policy contemplates the use of federal dollars to provide discounts against any orphan share in certain limited situations, there is no Congressional authorization or separate funding mechanism for providing dollars to EPA for any orphan share. Additionally, with the lapsing of the Superfund Tax in 1995, there is little chance that EPA will be able to secure funding to cover the anticipated increase in orphan shares following *BNSF*. Therefore, *BNSF* probably increases the probability that the Superfund Tax will be reinstated, otherwise, these costs would fall to the government to absorb.

V. The Impact of *BNSF* on Sediment Mega-Sites

Overview of Mega-Sites

CERCLA was designed to deal with discrete, easily discernable sites, with definable boundaries, like landfills, abandoned manufacturing sites and other disposal facilities. Most of these sites were upland sites. Even those with multiple PRPs tended to have relatively limited orphan shares. Over the years, however, CERCLA has come to be applied to very complicated sites, such as the contaminated sediment sites that are part of the Urban River Restoration Initiative. These "mega sites" are not discrete locations; with readily discernable borders; instead, they are the products of decades, or even centuries, of degradation caused by human activity. Distinguishing the harm resulting from releases of hazardous substances from the harm caused by other human activity presents a significant challenge. To make matters worse, the costs of remediation are typically much higher, perhaps by orders of magnitude, than at a "typical" upland CERCLA site. Moreover, the parties who are really responsible for the harm are often long gone, leaving a small group of surviving PRPs potentially liable for conduct they had little to do with, and for hundreds of millions, or even billions, of dollars in clean up and restoration costs.

The major river systems in the United States were the first areas of the country to be settled, the first to be urbanized and the first to be industrialized. Waterways were the first modes of significant transportation. America's urban rivers have been the setting for significant port facilities, coastal population centers, and substantial industrial and commercial activity since long before the industrial revolution. Thomas A. Newlon, *Contaminated Sediments in Urban Waterways and Embayments: How Best to Use Superfund*, ABA SITE REMEDIATION COMMITTEE NEWSLETTER, January 2007, at 10. To accommodate urban growth, rivers have been subjected to decades of dredging, wholesale destruction of wetlands and other habitat, hardening of the banks, industrial effluent releases, urban runoff, municipal waste discharges, and agricultural runoff. The typical urban river functioned as a public sewer for decades before the Clean Water Act, 33 U.S.C. § 1251 et seq. ("CWA") and CERCLA became law. Even after the CWA, many publicly owned treatment works ("POTW") have systems that are inadequate to handle their sewage loads or unable to provide a level of treatment needed to protect the rivers into which its effluent is discharged. Many older systems have combined sewers that are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. During periods of heavy rainfall, the wastewater volume in a combined sewer can exceed the capacity of the sewer system or treatment plant, resulting in the discharge of excess sewage waste directly to nearby streams and rivers. This discharge is referred to as a combined sewer overflow ("CSO").

Over time, these activities have resulted in the widespread degradation of urban rivers. Ecologically, the rivers suffer from contaminated sediments, degraded water quality, lost fish and wildlife habitat and lost human use. Contaminants may persist for decades because of slower degradation in aquatic environments. Contaminated Sediment Remediation Guidance for Hazardous Waste Sites 1-3 (2005), http://www.epa.gov/superfund/health/conmedia/sediment/guidance.htm ("Sediment Guidance"). Moreover, unlike a "typical" upland Superfund site, numerous public entities, hundreds of PRPs (to say nothing of hundreds of others who cannot be found or are no longer in business), and hundreds of thousands of persons throughout a river system may have contributed to its deterioration over hundreds of years.

BNSF Impact on Mega-Sites

The *BNSF* decision has several important implications for CERCLA mega-sites; however, the focus of this section is on three major areas: PRP Group formation, the orphan share, and preparing to develop a reasonable basis for apportioning harm.

PRP Group Formation

One potential outcome of the *BNSF* decision is that it may be more difficult to organize PRP groups to undertake voluntary cleanup activities at these large sites. More parties may be inclined to "hide in the weeds" and hope to escape liability, or to have their liability determined to be several only, rather than stepping forward and signing enforcement documents in which they may find themselves paying more than their several share of the liability. Following *BNSF*, PRPs may be unwilling to take that risk, particularly where the costs are likely to be significant, as will almost certainly be the case at most sediment mega-sites. Such inequities have traditionally been cured in allocation processes, but if liability is several only, there will be no such processes and the risk of paying too much becomes a potentially significant disincentive to early cooperation.

The Orphan Share

Another disincentive to early settlement at sediment mega-sites is the potentially massive orphan share. As a result of *BNSF*, defendants are likely to be focused on establishing their several liability as a means to avoid having the pay any portion of the orphan share. Agreeing to pay the full cost of a study or remedy in an early settlement is likely to shift the orphan share to the settling parties, since the regulatory agencies will typically not be willing or able to acknowledge, or to measure, the orphan share at an early stage of the process. The result is that early settlers are likely to have to depend upon recouping the portion of the orphan share they paid in an early settlement in a final settlement, or persuading the government to pay for the orphan share in a final settlement, making a final settlement, already difficult to achieve, that much more daunting.

Preparing for Apportionment

All this is further complicated by the fact that whether liability will be joint and several, or only several, is unlikely to be known until, as in *BNSF*, a judge makes a final ruling and all opportunities for appeal have been exhausted. Certainly, the regulatory agencies are unlikely to concede that the harm is divisible, or that there is a reasonable basis for apportioning a single harm, with the result that liability is several only, because the consequence of that concession would be that the government becomes responsible for the orphan share. With study costs at urban rivers in the $50 Million to $70+ Million dollar range and remedial activities in the hundreds of millions or billions of dollars range — these uncertainties are likely to make early settlements even more challenging than they have been in the past, when liability was generally assumed to be joint and several. At an urban river mega-site, with hundreds or even thousands of responsible parties contributing to the condition of the river over hundreds of years, it is safe to assume that a party entering into an early settlement will risk having paid more than its several share of the liability. Unless the regulatory agencies can devise an approach to deal with these uncertainties (such as by finding a means of funding the orphan share), *BNSF* is likely to be an impediment to early settlements.

The question then becomes when does it make sense for a party to volunteer to incur what might prove to be more than its several share of cleanup costs? The realistic answer is that such a determination will have to be made on a case by case basis, but there are a number of factors to be considered when faced with this question.

One factor, which is of primary importance, is whether or not the PRPs can positively impact the overall cost of the remedy, i.e., make it considerably less costly than it would otherwise be if the regulatory agencies do the work. This may depend upon how far along the agencies are in their evaluation and decision-making process or whether there appears to be a realistic chance of successfully avoiding an unreasonably costly remedy. Overall, there is still a very strong argument that by at least having a seat at the table with the agencies, and preferably taking the lead on response activities, PRPs have more control over the process and a better likelihood of reducing the overall scope and cost of the remedy.

Another factor to consider is the number of PRPs willing to come to the table to share the cost. If there is a reasonable number of parties willing voluntarily to undertake cleanup activity (sometimes referred to as a "critical mass"), the risk of a party paying more than its several share is somewhat reduced and the cost of any orphan share is shared among the critical mass of parties, subject to any discounts that may be given at the discretion of EPA and subject to any federal dollars that may be available.

Yet another factor to be considered is the potential magnitude of the orphan share. If possible, the potential orphan share should be estimated. EPA defines the orphan share as that share of responsibility which is specifically attributable to identified parties EPA has determined are: (1) potentially liable; (2) insolvent or defunct; and (3) unaffiliated with any party potentially liable for response costs at the site. EPA Orphan Share Policy. It should also be noted that there may also exist what is effectively a "semi-orphan" share in the form of municipalities, POTWs and other public organizations that may have a significant share of the liability, but not the ability, or the political will, to fund large shares which would impact individual citizens who are their taxpayers/ratepayers. That, too, should be estimated.

BNSF presents PRPs at sediment mega-sites with a number of dilemmas. At the outset of an enforcement action, the PRPs cannot know whether liability will be found to be joint and several or only several; indeed, as noted earlier, that determination will typically be made by a judge at the end of the day. That dilemma leaves PRPs with no choice but to prepare for both cases. They will need to produce evidence sufficient for a judge to find a reasonable basis for apportioning the harm, leaving the shares of the other parties, including the orphan share, to be funded by others (or by the government), but they will also need to prepare to argue that the application of relevant equitable factors should minimize their share should liability ultimately be found to be joint and several. In both connections, they will have an incentive to minimize the cost of the remedy, so as to limit their potential exposure to the greatest extent possible.

Preparing for apportionment can be approached from the top down or from the bottom up. From the top down, PRPs should marshal the evidence limiting the harm that can be attributed to them. They should develop evidence of the kinds of factors that were approved by *BNSF* as indicators of causation. From the bottom up, they should develop evidence of the size of the orphan share (and perhaps the shares of the other viable PRPs), so that the court will not impose the costs attributable to the orphan share (and the other PRPs) upon them. Most PRPs will probably elect to take both approaches.

Finally, with respect to the development of evidence to support a reasonable basis for apportioning harm, the massive costs associated with mega-sites are likely to drive PRPs to develop elaborate apportionment arguments by introducing evidence, including expert testimony, upon which a judge can find a reasonable basis for apportioning the harm.. Furthermore, the availability of apportionment may shift the dynamics of a PRP group away from trying to reduce

the overall exposure of the group as a whole and toward each member defending itself against their individual liability.

All of this is further complicated by the fact that *BNSF* does not provide clear guidelines about what evidence will suffice to support the apportionment of a single harm. Those guidelines will presumably develop over time as reported decisions provide direction, but in the meantime, PRPs will have to hedge their bets.

VI. CONCLUSION

The BNSF decision, like so many other efforts by the Supreme Court to construe CERCLA, is likely to produce years of litigation and appeals before a clear picture emerges as to when apportionment will be available. In the meantime, PRPs, particularly at urban river sediment sites, need to study the Restatement (Second) Torts § 433 and all the comments accompanying that provision. They need to design their fact gathering and evidence preparation to establish a basis for apportioning the harm, but they also need not to forget that at some distant point in the future, a judge may rule that liability is joint and several, with the result that the known PRPs will be forced to absorb an enormous orphan share.. The government, for its part, should be figuring out how to fund what are likely to be vastly greater orphan shares, both in size and numbers of sites implicated, than in the past.