

Superfund and Natural Resource Damages Litigation Committee Newsletter

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EDITORS' NOTE AND ISSUE OVERVIEW

Kirk T. O'Reilly and Andrew W. Homer

The articles in this issue discuss both CERCLA liability and natural resource damages. The first considers federal entities as PRPs and highlights obstacles the EPA can have in such situations. The second article reviews a case where the issue was whether ownership of a permit to operate issued by a municipal landowner was sufficient to trigger owner liability under CERCLA § 107. In the next, the authors describe Superfund's petroleum exclusion and discuss technical approaches for evaluating its application at legacy oil refinery sites.

As we begin planning the next issue, we again ask for your help in submitting articles or suggesting topics. While all submissions are welcome, we are specifically looking for someone who is interested in preparing a CERCLA case law update. As we wish to increase publication opportunities for law students, please pass the word to your alma mater that we welcome student submissions.

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RECENT DEVELOPMENTS ON FEDERAL LIABILITY UNDER CERCLA

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CERCLA section 120 provides that the federal government may be held liable for cleanup costs under CERCLA "in the same manner and to the same extent . . . as any nongovernmental entity." 42 U.S.C. § 9620(a)(1). This article addresses two recent developments regarding federal government liability under CERCLA. First, a federal district court recently held the U.S. government liable as both an arranger and operator for leasing mineral rights to a mining company, in part because of the government's oversight role in mine permitting and inspection. Second, the ongoing disagreement between EPA and the U.S. Air Force over the cleanup at the Tyndall Air Force Base (Tyndall AFB) in Florida illustrates the obstacles that EPA sometimes faces when seeking cooperation from the U.S. Department of Defense (DOD) regarding remediation of military facilities.

District Court Holds Federal Government Liable as Arranger and Operator

In *Nu-West Mining Inc. v. United States*, 768 F. Supp. 2d 1082 (D. Idaho 2011), an Idaho federal district court held the U.S. government liable as an arranger and operator at a site it leased to a mining company. The court concluded that the government's

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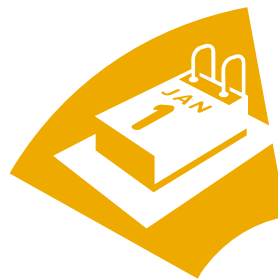
**Superfund and Natural Resource
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*Kirk T. O'Reilly and Andrew W. Homer,
Editors***

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permitting, inspection, and oversight functions at four mines located in the Caribou-Targhee National Forest in Idaho exposed it to CERCLA liability and rejected the government's argument that it was acting in a merely "regulatory" capacity.

Background

Nu-West arose from selenium contamination at four phosphate mines in the Caribou-Targhee National Forest in Idaho. Beginning in the 1960s, the government leased mineral rights in the National Forest to various mining companies. Under the twenty-year leases, the government inspected the mines to monitor environmental conditions, ensure that waste rock was properly disposed, and validate royalty payments. The government also issued special use permits for the construction of waste rock dumps adjacent to the mine sites.

One of the rock layers within the mines, known as the "middle waste shale," contained selenium—a naturally occurring element. In an effort to promote revegetation, the government required the companies to cover the waste rock dumps with middle waste shale. The selenium in this waste rock layer leached into the water flowing from beneath the piles, contaminating the site. The contamination was discovered in the 1990s, and Nu-West Mining, Inc. and Nu-West Industries, Inc. (Nu-West) incurred approximately \$10 million to clean up the sites. Nu-West then filed suit under CERCLA to recover these costs from the government.

On Nu-West's partial motion for summary judgment, the court held the government liable under CERCLA as both an arranger and an operator for the contamination at the four mine sites.

United States' Arranger Liability

The *Nu-West* court began with the U.S. Supreme Court's 2009 decision *Burlington Northern and Santa Fe Railway Co. v. United States (BNSF)*, explaining that an arranger under CERCLA means "someone who 'takes intentional steps to dispose of a hazardous substance.'" *Nu-West*, 768 F. Supp. 2d at

1088 (quoting *BNSF*, 129 S. Ct. 1870, 1879 (2009)). Relying on pre-*BNSF* Ninth Circuit case law, the court refined the arranger definition to include only those entities that had "direct involvement in [the] arrangements" for waste disposal. *Id.* (quoting *United States v. Shell Oil Co.*, 294 F.3d 1045, 1055 (9th Cir. 2002)). In this light, the court considered three elements to determine arranger liability—whether the government (1) owned the hazardous substance, (2) had the authority to control the disposal of that substance, and (3) exercised some actual control over the disposal of that substance. The court held that the government had satisfied all three elements.

The court easily disposed of the first two elements: the government not only owned the source of the hazardous substance (the selenium within the middle waste shale), it also had the authority to control the disposal of mining waste at the dump sites—indeed, "no mining or waste disposal could occur without its approval." *Id.* at *8. Looking to the third element, the court concluded that the government had exercised actual control over the disposal (and "showed its intent that disposal take place") by requiring the lessees to cover the waste dumps with the middle waste shale. In support, the court pointed to the fact that the government (1) required lessees to obtain the government's approval for their mining, waste disposal, and reclamation plans and (2) conditioned its approval of mining plans on requiring lessees to perform specific reclamation activities (including covering the waste dumps with a layer of middle waste shale to promote revegetation).

The court also rejected the government's argument that it should not be held liable because it was "acting in a purely regulatory role." *Id.* at 1088-89. The government asserted that it did not have the requisite intent required under *BNSF*, since it was merely acting to ensure that the lessees complied with the law and the terms of their leases, permits, and mine plans that the lessees entered into as a condition of mining on public land. "Regulatory oversight," the government argued, did not equate to "actual control" of the hazardous substances required under CERCLA. Therefore, it could not have taken any "intentional steps to dispose of a hazardous substance" as *BNSF* requires. Relying on a pre-*BNSF* Ninth Circuit

decision—*United States v. Shell Oil*—the court concluded that CERCLA’s broad waiver of sovereign immunity under 42 U.S.C. § 9620(a)(1) exposed the government to liability even when acting in a regulatory role. *Id.* at *9–10 (citing *Shell Oil*, 294 F.3d at 1045). On these grounds, the court held the government liable as an arranger for the mining contamination.

United States’ Operator Liability

Likewise, the court had no difficulty imposing operator liability on the government because the government had directly “manage[d], direct[ed], or conduct[ed] operations specifically related to pollution.” *Id.* at 1089 (quoting *United States v. Bestfoods*, 524 U.S. 51, 66–67, 118 S. Ct. 1876 (1998)). “In this case, the record shows conclusively that the government was managing the design and location of the waste dumps for the four mines.” *Id.* The court found that the government participated in decisions regarding waste-dump design, regularly inspected the dumps to ensure compliance with the mining plans and waste disposal guidelines, and directed the lessees to take specific actions at the waste dumps. The court held these actions sufficient as a matter of law to impose CERCLA operator liability on the United States. *Id.* at 1089–91. As of the date of this writing, the trial on the issue of damages is set for January 2012.

Ongoing Legal Conundrums at Contaminated Military Facilities

On the other side of the country, an ongoing disagreement between EPA and DOD regarding federal facility cleanups highlights continuing obstacles to cleaning up DOD sites under CERCLA. While DOD is subject to environmental laws including CERCLA and RCRA, its compliance with those statutes has sometimes lagged. Despite EPA’s efforts, noncompliance continues at contaminated military facilities and, in some circumstances, DOD has moved forward with cleanup—albeit on its own terms. At the Tyndall Air Force Base in Florida, the Air Force last year announced its intent to continue implementing a cleanup plan largely of its choosing, without EPA oversight and, according to EPA, in violation of EPA’s RCRA Order governing the site. But due to statutory restrictions, adherence to the unitary executive

principle and policy choices by the U.S. Department of Justice (DOJ), EPA has not effectively exercised its authority, if it has it, to compel DOD action under CERCLA.

CERCLA Section 120 and the Defense Environmental Restoration Program

In 1986, Congress passed the Defense Environmental Restoration Program (DERP) statute, 10 U.S.C. §§ 2700–10, as part of the Superfund Amendments and Reauthorization Act (SARA). DERP requires that the secretary of Defense “carry out a program of environmental restoration at facilities under the jurisdiction of the Secretary.” *Id.* § 2701(a)(1). DERP also applies to former DOD facilities, providing that the secretary of Defense

shall carry out (in accordance with the provisions of this chapter and CERCLA) all response actions with respect to releases of hazardous substances from . . . [e]ach facility or site which was under the jurisdiction of the Secretary and owned by, leased to, or otherwise possessed by the United States at the time of actions leading to contamination by hazardous substances.

Id. § 2701(c)(1)(B). DERP response actions must be carried out “subject to, and in a manner consistent with, section 120 (relating to federal facilities) of [CERCLA].” *Id.* § 2701(a)(2). Among other provisions, section 120 waives the federal government’s sovereign immunity for purposes of CERCLA and subjects it to CERCLA “in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity, including liability under section 107 of this Act.” 42 U.S.C. § 9620(a)(1).

As of October 2009, DOD had established performance measures and identified over 31,600 sites eligible for cleanup under DERP, including about 4,700 formerly used defense sites (FUDS), 21,500 sites on active installations, and 5,400 sites on installations that have been closed or are designated to be closed or realigned under the Base Realignment and Closure process. U.S. GOV’T ACCOUNTABILITY OFFICE (GAO),

GAO-10-46, REPORT TO COMM. ON ARMED SERVS., HOUSE OF REPRESENTATIVES: FORMERLY USED DEFENSE SITES: THE US ARMY CORPS OF ENGINEERS NEEDS TO IMPROVE ITS PROCESS FOR REVIEWING COMPLETED CLEANUP REMEDIES TO ENSURE CONTINUED PROTECTION (Oct. 29, 2009). As of July 2010, EPA had listed over 140 DOD installations on the Superfund's National Priorities List (NPL), containing the country's most contaminated hazardous waste sites. GAO, GAO-10-348, REPORT TO CONGRESSIONAL REQUESTERS: SUPERFUND: INTERAGENCY AGREEMENTS AND IMPROVED PROJECT MANAGEMENT NEEDED TO ACHIEVE CLEANUP PROGRESS AT KEY DEFENSE INSTALLATIONS (July 15, 2010) ("GAO 2010 EPA/DOD REPORT"). These sites are in addition to hundreds more across the country at which DOD qualifies as a PRP due to historical operations, but which are not designated as FUDS or governed by DERP due to a lack of current or former federal land ownership or control.

EPA Authority at DOD NPL Sites

Section 120 sets up a different path for CERCLA compliance at federal facilities than nonfederal sites. That path is still mandatory, however, and enforceable by EPA and through citizens' suits. For example, required actions by the federal department, agency, or instrumentality that owns or operates the federal facility at issue must be performed under statutory deadlines. A remedial investigation and feasibility study (RI/FS) must be commenced within six months of a facility's NPL listing, in consultation with EPA and appropriate state authorities. 42 U.S.C. § 9620(e)(1). Within 180 days of EPA's review of the RI/FS, EPA and the head of the federal agency (i.e., DOD) must enter into an interagency agreement (IAG) designed to ensure "the expeditious completion by [the responsible federal department] . . . of all necessary remedial action at such facility." The IAG must comply with CERCLA's public participation requirements, and the responsible department must commence "[s]ubstantial continuous physical onsite remedial action" within fifteen months of completing the RI/FS. *Id.* § 9620(e)(2). The IAGs must include, among other things, agreed-upon schedules, arrangements for operation and maintenance of the remedy, and remedial design selection. Should the responsible federal agency and EPA not reach agreement on selection of the remedial

action, section 120 provides that EPA shall select it. *Id.* § 9620(e)(4)(A).

Status of DOD Cleanup Progress

In addition to CERCLA section 120, which subjects the United States to CERCLA, former President Ronald Reagan's 1987 Executive Order No. 12,580 provides EPA with authority to issue administrative orders to federal agencies under CERCLA section 106.

However, EPA must obtain DOJ's concurrence before using this authority. Largely because of DOJ's adherence to the unitary executive principle—which provides that disputes between parties in the same governmental branch are not justiciable under Article III of the U.S. Constitution—EPA enforcement against federal agencies has been significantly more restrained than against private party, state, and local government PRPs. EPA officials have reported, for example, that they often do not seek DOJ assistance for litigation against DOD at Superfund sites because they are aware of "DOJ's policy that one department of the executive branch will not sue another in court." GAO 2010 EPA/DOD REPORT at 9 (citing *Environmental Compliance by Federal Agencies: Hearing Before the Subcommittee on Oversight and Investigations of the House Committee on Energy and Commerce*, 100th Cong. 668, 675 (1987) (memorandum from John Harmon, Assistant Attorney General, Office of Legal Counsel, to Michael J. Egan, Associate Attorney General, June 23, 1978) (stating that allowing EPA to sue another agency would violate established principle that "no man can create a justiciable controversy against himself")). As a result, federal PRPs are often effectively "insulated from direct administrative or judicial enforcement action by EPA." W.C. Tucker, *The Manacled Octopus: The Unitary Executive and EPA Enforcement Involving Federal Agencies*, 16 VILLANOVA ENV'T L.J. 149, 157 (2005). This void in enforcement also occurs because DOD has simply failed to enter into IAGs under CERCLA section 120 at several federal sites. See GAO 2010 EPA/DOD REPORT, *passim* (citing examples).

Over the past few years, at the request of members of Congress, the GAO has scrutinized cleanup progress at DERP, FUDS, and DOD-NPL sites. The GAO

identified several tensions and disconnects between EPA and DOD at these sites. For example, EPA and DOD use different terms, metrics, and principles to gauge and report on cleanup progress. As a result, while EPA may report that cleanups at DOD sites are in early investigative stages, DOD might simultaneously announce that cleanups at the same sites are almost done—resulting in distribution of inconsistent information to the public. Further, DOD does not always obtain EPA approval for its cleanup decisions, so EPA does not recognize DOD’s cleanup efforts in those circumstances.

In addition to procedural and reporting issues, the GAO noted significant delays in cleanup of serious contamination at federal facilities—including, for example, lead shot found on a school playground on Tyndall AFB in Florida in 2009. *See, e.g.,* GAO, GAO-09-278, *SUPERFUND: GREATER EPA ENFORCEMENT AND REPORTING ARE NEEDED TO ENHANCE CLEANUP AT DOD SITES* (Mar. 13, 2009).

Illustration of Tensions and Stalemates Between EPA and DOD

A late 2010 exchange between the U.S. Air Force and EPA regarding Tyndall AFB brought these issues into sharper public focus. Tyndall AFB has been listed on the NPL since 1997. Located southeast of Panama City, Florida, the 29,000-acre site has been an active Air Force installation since 1947. Contamination includes polychlorinated biphenyls, pesticides such as DDT, heavy metals, volatile and semi-volatile organic compounds, residues from exploded ordnance, and petroleum-based compounds such as jet fuel and oil. Those hazardous substances have been found in soils, sediments, surface waters, and groundwater at the base. *Superfund Site Progress Profile: Tyndall AFB*, EPA, <http://cfpub.epa.gov/supercpad/cursites/csitinfo.cfm?id=0401205> (last visited May 1, 2011).

The Air Force has not entered into an IAG with EPA at Tyndall AFB. EPA has objected to this failure, along with the Air Force’s reporting, remedy selection (largely, natural attenuation), and lack of progress at the base for years. These issues led EPA, in November 2007, to issue an Administrative Order (EPA Docket No. RCRA-04-2007-4011) under RCRA section 7003 to compel the Air Force to clean up the base. Through the order, EPA intended to hold the Air Force

to enforceable cleanup milestones. This strategy not been successful. EPA reports that Tyndall AFB is out of compliance with over twenty-four provisions of the RCRA 7003 Order, but that the parties are attempting to work out a Federal Facility Agreement during FY2011. *See Superfund Site Progress Profile: Tyndall AFB, supra.*

For its part, the Air Force announced plans to continue cleaning up Tyndall AFB largely on its own terms. It also described “a range of community involvement activities to solicit community input” that it has conducted. It reports that it “has and will continue to keep appropriate federal, state and local officials apprised of the work as it progresses. . . . The Air Force is fully committed to the protection of human health and the environment, and to full compliance with applicable laws, at all of its facilities, for all programs, including cleanup.” Press Release, Air Educ. & Training Command Pub. Affairs, *Air Force Moving Forward with Clean up at Tyndall* (Aug. 30, 2010), <http://www.aetc.af.mil/news/story.asp?id=123219799>.

On August 19, 2010, Terry Yonkers, Assistant Secretary for Installations Environment and Logistics of the Air Force, formally announced the Air Force’s intent to continue its unilateral cleanup of Tyndall AFB. In his memorandum, Assistant Secretary Yonkers asserts the Air Force action’s compliance with CERCLA, RCRA, DERP, and the May 2008 RCRA Order. Terry Yonkers, Assistant Sec’y for Installations Env’t & Logistics of the U.S. Air Force, to EPA, Re: Environmental Restoration Program ERP Progress at Tyndall AFB, FL (Aug. 19, 2010). EPA previously announced that, once the Air Force enters into a CERCLA IAG with EPA and the State of Florida, EPA will withdraw the RCRA Order, and cleanup will proceed under CERCLA. Assistant Secretary Yonkers, however, described the position of alleged compliance as “consistent with EPA’s recognition that RCRA corrective action and CERCLA response generally yield similar remedies in similar situations and that a cleanup under one program will satisfy the requirements of both.”

In September 2010, Cynthia Giles, EPA Assistant Administrator for Enforcement and Compliance Assurance, responded by letter to Secretary Yonkers’ memorandum “to express very serious concern.” Letter from C. Giles (EPA) to T. Yonkers (USAF)

(Sept. 13, 2010). She alleged that the memorandum is inaccurate regarding cleanup progress and potential risks to human health and the environment, which are “likely to confuse and mislead the public.” She therefore “urged” Secretary Yonkers to “immediately issue clarifications that will more accurately portray potential risks to human health and the environment . . . and fully disclose the Air Force’s noncompliance with federal environmental requirements.” She also criticized the Air Force’s August 2010 press release about cleanup progress, which she asserted “gives the incorrect impression that cleanup work at Tyndall is proceeding in an appropriate manner” when it is not. Assistant Administrator Giles described the Air Force’s unilateral actions at Tyndall AFB as “unprecedented” and emphasized the significance of the contamination that the Air Force’s actions have not addressed—including exceeding EPA risk-based standards for DDT in sediments by a factor of 200. She explained that Tyndall AFB is “one of only a few of more than 170 federal facility Superfund sites where EPA rates both ‘current human exposures’ and ‘groundwater migration’ as ‘not under control,’” as groundwater is only three to four feet below the surface and serves as a drinking water resource for humans and forty species listed under the Endangered Species Act. She concluded by stating that the Air Force’s actions violate EPA’s May 2008 RCRA Order and CERCLA: “Such unilateral action is clearly contrary to the intent of Congress and inconsistent with arrangements at other federal facility and private cleanup sites nationwide.” *Id.* at 3.

In March 2011, the Air Force reiterated its plans to continue its cleanup of the base, which it describes as a “unique . . . performance-based approach” that the Air Force expects will result in the cleanup of “the majority of contaminated sites . . . to state and federal standards protective of human health and the environment, and clos[ure] according to the CERCLA process within the next four to seven years[.]” Press Release, USAF, Officials Take Unique Approach to Clean up Tyndall AFB (Mar. 7, 2011), <http://www.af.mil/news/story.asp?id=123245603>.

Remaining Questions

Assistant Administrator Giles’ September 2010 letter, though strongly worded, illustrates EPA’s apparent

inability to effectively address a contaminated site that is allegedly within its jurisdiction, and where cleanup of which is straying out of its control.

Congressional, presidential, or judicial action may be required in order to enable EPA to hold DOD accountable under CERCLA at certain sites. In the meantime, the situation at Tyndall AFB and EPA/DOJ stalemates at other federal facilities present several questions relevant to EPA’s administration of CERCLA and RCRA and the achievement of those statutes’ objectives. For example, should DOD be allowed to proceed according to its own determinations as to compliance with environmental standards, or must it go through EPA’s standard Superfund process? Is DOJ’s policy decision not to sue federal agencies justified? Is it constitutional? Does it unfairly shift the burdens of Superfund liability? Should EPA discourage DOD and other federal agencies from taking any action if that action does not comply with the technical requirements of EPA’s Superfund process, or is some attempt at environmental restoration better than none? Is enforcement under RCRA alone adequate? If litigation is necessary in order to require DOD compliance with RCRA and CERCLA, would congressional action have any effect on the stalemate if DOJ continues to refuse to take DOD to court on EPA’s behalf?

Unless and until Congress sharpens EPA’s enforcement authority against federal agencies under CERCLA, a court holds the unitary executive principle unconstitutional, the president issues an Executive Order addressing the issue, and/or DOJ changes its policy on suits between executive agencies, then attempts to hold the U.S. military liable for its legacy of contamination at certain federal facilities—according to EPA standards, at least—may fall more and more to citizen suit plaintiffs. Potential plaintiffs include states, local governments, and private parties—none of which are entitled to the deference afforded to EPA in CERCLA litigation.

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NINTH CIRCUIT RELIES ON STATE LAW TO DETERMINE CERCLA OWNER LIABILITY

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On March 14, 2011, the Ninth Circuit Court of Appeals affirmed a California district court ruling that found BCI Coca-Cola Bottling Co. (BCI) not liable as an owner under CERCLA. In *Los Angeles v. San Pedro Boat Works*, the city of Los Angeles sued BCI to recover response costs it had incurred to remediate contaminated sediments in the Los Angeles Harbor. According to the complaint, the City alleged that the activities of BCI's predecessor-in-interest, Pacific American, Inc. (Pacific-American) contributed to the sediment contamination in the harbor. Pacific-American did not own the boat works facility outright but rather had historically operated the boat works facility pursuant to a permit that had been issued by the City of Los Angeles. In support of its CERCLA claims, the City argued that because Pacific-American owned the permit, it was an "owner" under CERCLA. The City also argued that Pacific-American was liable as an "operator" under CERCLA. The district court disagreed, finding that BCI was neither an "owner" nor an "operator" under CERCLA. The City appealed the district court's finding that BCI was not an "owner" under CERCLA; however, for reasons that are not clear from the record, the City elected not to appeal the "operator" liability determination.

On appeal, the Ninth Circuit looked first to the language in the CERCLA statute for guidance on whether BCI was an "owner" under the statute. CERCLA defines the term "owner" to mean "in the case of an onshore facility or an offshore facility, any person owning or operating such facility" (42 U.S.C. § 9601(20)(A)(ii)), which definition the court noted had already been found by the U.S. Supreme Court to be "entirely tautological, and thus useless." *San Pedro*, 2011 WL 855858, at *5 (9th Cir. 2011); *see also United States v. Bestfoods*, 524 U.S. 51, 66 (1998).

The Ninth Circuit noted that it had previously grappled with how to define the term "owner" under CERCLA in *Long Beach Unified School District v. Dorothy B.*

Goodwin California Living Trust, 32 F.3d 1364 (9th Cir. 1994). In *Long Beach*, the court was faced with the question of whether an entity that owned an easement over a parcel of property was an owner under CERCLA. Acknowledging that the statute itself provides little guidance as to what types of entities might constitute "owners" for purposes of CERCLA liability, the court concluded that CERCLA should be read as "incorporating the common law definitions of its terms." *Id.* at 1368. The *Long Beach* court therefore looked to California common law and found that numerous California courts had distinguished between an interest in an easement and outright property ownership. The court therefore concluded that an easement holder was not an owner for purposes of CERCLA. *Id.* at 1370. The Ninth Circuit acknowledged that its holding in *Long Beach* was not conclusive as to whether BCI qualified as an owner under CERCLA; however, the court stated that its *Long Beach* holding was instructive in that it illustrated the distinction applied by California state courts between absolute title to real property and less than fee title to a possessory interest in real property.

The *San Pedro* court also recognized, however, that courts in other circuits had not adopted the approach articulated by the *Long Beach* court. Rather, these courts had approached the issue by examining whether the holder of the property interest possessed "site control" over the facility. For example, the Second Circuit established a multifactor test for evaluating CERCLA owner liability, which included, among other things, an evaluation of whether a party was responsible for (i) the payment of taxes and insurance or (ii) making structural and other repairs. *See Commander Oil Corp. v. Barlo Equip. Corp.*, 215 F.3d 321 (2d Cir. 2000). Similarly, in *United States v. South Carolina Recycling & Disposal, Inc.*, 963 F. Supp. 984, 1003 (D.S.C. 1986), the district court concluded that a lessee was liable as an owner under CERCLA because it "maintained control over and responsibility for the use of the property and, essentially, stood in the shoes of the property owners."

Rather than adopting the more flexible (and, according to the Ninth Circuit, more nebulous) analytical framework employed by the Second Circuit in

Commander Oil, the Ninth Circuit instead affirmed the approach originally articulated by the *Long Beach* court and looked to California law to determine whether BCI was an “owner” under CERCLA. The *San Pedro* court noted that California state courts have consistently distinguished between possessory interests in property such as a revocable permit and title ownership. 2011 WL 855858, at *8 (citing *Auerbach v. Assessment Appeals, Bd. No. 1*, 137 P.3d 951, 956 (Cal. 2006)). As such, the court found that the holder of a permit for a specific use of real property is not the “owner” of that real property for purposes of CERCLA, especially where, as occurred in this case, the City of Los Angeles retained the power to control BCI’s use of the real property through the revocation of the permit.

The Ninth Circuit noted that its interpretation of the term “owner” was particularly appropriate in light of the permissive “authority to control” standard for CERCLA operator liability that had already been

adopted by the Ninth Circuit. See *Kaiser Aluminum & Chem. Corp. v. Catellus Dev. Corp.*, 976 F.2d 1338 (9th Cir. 1992) (holding that CERCLA operator liability has been expansively interpreted by this court to extend to any party with the authority to control the cause of the contamination when the hazardous wastes were released into the environment). This statement could lead one to conclude that had BCI elected to appeal the “operator” liability issue, the Ninth Circuit would have had an easier time imposing CERCLA “operator” liability on BCI as the successor-in-interest to Pacific-American.

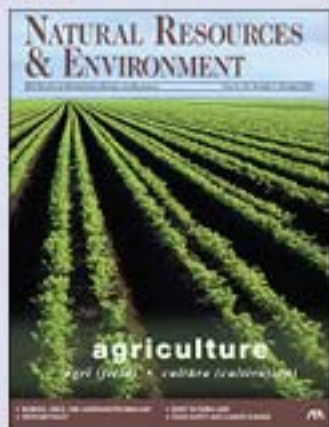
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CERCLA'S PETROLEUM EXCLUSION AND THE USE OF CHEMICAL FORENSIC METHODS

Tarek Saba and Paul Boehm
Exponent, Inc.

Legacies of Refineries and Petroleum Terminals

In the early 1980s, the increase in crude oil production coupled with a reduced demand for gasoline in the United States, resulted in what was known as the “oil bust” of the 1980s. One outcome to this oil bust was the closure of one-third of U.S. refineries. These refineries were at different stages of contamination at the time of their closure. Today, many former refinery sites are the focus of CERCLA cleanup actions. Owners of fuel terminals adjacent to urban river Superfund sites also have found themselves identified as potentially responsible parties.

In all of these cases, the presence of contamination is not much in doubt, but liability under CERCLA comes into question because of what is known as the *Petroleum Exclusion*. To incur CERCLA liability, a release of a hazardous waste into the environment must have occurred. However, under 42 U.S.C. § 9601(14), the definition of hazardous waste excludes “*petroleum, including crude oil, or any fraction thereof which is not specifically listed or designated as a hazardous substance.*” Therefore, for CERCLA to be applicable to an abandoned refinery site or a petroleum terminal, the contamination has to have been impacted by a hazardous waste. It is important to note that some state laws modeled after CERCLA do not include a petroleum exclusion.

In this article, we present chemical analytical tools that can be used to differentiate crude oil and petroleum products from other hazardous wastes to ultimately determine whether a site is subject to CERCLA’s petroleum exclusion clause.

What Is a “Hazardous Waste?”

Under RCRA, 40 C.F.R. Part 261, EPA defines hazardous waste as characteristic waste and listed waste.

- A **characteristic hazardous waste** meets one or more of the physical characteristics of ignitability, corrosivity, reactivity, and toxicity. These physical characteristics are defined by specific parameters (e.g., corrosivity has pH < 2 or pH > 12.5) that can be determined through waste analysis. Once a hazardous waste no longer exhibits the characteristic that caused the waste to be defined as hazardous, it is no longer labeled as a hazardous waste.
- A **listed hazardous waste** is a waste that appears on one or more of the specific lists of hazardous waste in 40 C.F.R. Part 261, Subpart D. These include nine specific waste streams (K048–K052 and K169–K172) associated with the petroleum refining industry.

Chemical compounds in many of the listed hazardous wastes are also present in crude oil and petroleum products. Examples include polycyclic aromatic hydrocarbons, benzene, lead, phenols, and MTBE, among other chemicals. Therefore, the mere presence of these common chemical constituents in a site’s soil or groundwater media does not, in itself, indicate the presence of a hazardous waste. In these cases, using chemical forensics supported by other methods to identify the origin of the chemicals in environmental media may be extremely important in determining whether CERCLA is applicable at abandoned or operating sites.

Some of the chemicals in crude oil, petroleum products, and their additives are described below, followed by a discussion of some of the chemical forensic tools that can be used to identify the origin of contamination to environmental media at former refinery sites.

Composition of Crude Oil, Petroleum Products, and Their Additives

Crude oil and petroleum products naturally contain a complex mixture of many organic compounds classified chemically by their structure. Some of these compounds include

- BTEX, the collective name for benzene, ethylbenzene, toluene, and xylenes.

- Polycyclic aromatic hydrocarbons (PAHs), including naphthalene, 2-methylnaphthalene, acenaphthene, anthracene, fluorene, fluoranthene, pyrene, phenanthrene, benz[a]anthracene, benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[ghi]perylene, chrysene, indeno[1,2,3-cd]pyrene, dibenz[a,h]anthracene.
- Metals that are indigenous to crude oils, including antimony, arsenic, barium, beryllium, cadmium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver, vanadium, and zinc, among other metals.

Additives that were used to improve the performance of petroleum products are subject to the petroleum exclusion. *Wilshire Westwood Assocs. v. Atl. Richfield Corp.*, 881 F.2d 801 (9th Cir. 1989). Some of the additives include

- Phenolic compounds (used as antioxidants), including amino phenols, and other ortho-alkylated phenols, and tert-butyl-p-cresol.
- Alcohols, glycols, amides, amines, organophosphate salts (used as anti-icing agents).
- Some halogenated hydrocarbons, such as dichloroethane and ethylene dibromide (used to improve flow in cold weather conditions).
- Tetraethyl lead and other organic leads (used as antiknock additives).
- MTBE (used as an additive to gasoline to reduce carbon monoxide emissions and increase fuel octane).

Chemical Forensics to Determine the Type and Source of Contamination

Ideally, a chemical fingerprinting program starts by collecting a set of samples representing petroleum and product from the refinery or terminal, waste samples, and background soil samples, which themselves can contain significant quantities of many naturally occurring metals (e.g., arsenic). In some cases, petroleum products of former refineries can be found in pipelines that may still exist onsite. Waste material samples may be obtained from waste lagoons or waste-carrying

pipes. Background samples can be collected from locations not impacted by the former refinery operations. These samples represent the potential “end-member” sources to contaminated areas. In addition to the source samples, contaminated areas will have to be sampled.

After sample collection, a laboratory analytical program is designed to focus on chemical characterization of the samples. Once analytical data are generated, several fingerprinting techniques can be used to determine the origin of contamination at the locations in question. Some of these techniques include

- Gas chromatograms, which can be analyzed to determine the general hydrocarbon composition (e.g., crude oil or petroleum products like gasoline or diesel).
- Statistical analysis tools (e.g., Principal Component Analysis), which can be used to analyze metals and other chemical groups’ data. These tools compare the chemical composition of different sample groups to determine whether the samples in question resemble waste, petroleum excluded material, background, or a mix.
- Chemical diagnostic ratios, which can be used to determine the concentration of one chemical compound divided by another, indicating relative amounts of both in a sample. These techniques are used in the published literature to characterize and identify contamination sources for a sample. For example, the lead to arsenic ratio was used to differentiate contamination sources from background sources of these metals in one study.
- Tracking chemical characteristics along a plume of light, nonaqueous phase liquid (LNAPL). Crude oil and refinery products along an oil plume beneath a former refinery site preserve their chemical fingerprint characteristics. If an LNAPL plume traveling under a waste unit is impacted by hazardous waste, there may be a change in the fingerprint (for example, the GC chromatogram, or the PAH and metal ratios). Comparison of LNAPL samples collected upstream and downstream from a waste unit could provide

clear evidence of hazardous waste impacts to the LNAPL plume, if any.

The ultimate goal of these listed fingerprinting techniques is to track chemical characteristics specific to wastes. For example, settling sludges in tank bottoms are typically associated with wax crystals and asphaltene material. Gas chromatograms can identify the presence of such compounds to determine whether a sample is impacted by sludge wastes. Also, some chemicals concentrate in hazardous wastes at levels higher than their typical ranges in crude oil, petroleum products, or background. Statistical techniques can analyze chemical concentration ranges in a sample to evaluate whether that sample has been impacted by a hazardous waste.

Challenges and Difficulties

In abandoned sites, petroleum products and wastes may no longer be available for sampling. In these instances, a forensic chemist has to rely on older chemical data that are not likely to be of fingerprinting quality. Depending on the available historical chemical data, some of the chemical fingerprinting analysis techniques can still be used for evaluating whether hazardous wastes had impacted the site samples, and for deciding the applicability of the petroleum exclusion. For example, statistical techniques can be used to determine whether the historical metals data for the site's soils exhibit a pattern similar to that of crude oil, petroleum products, and/or background versus hazardous wastes. Also, forensic evidence (e.g., operational histories, cleanup histories, historical

practices, aerial photographs) in addition to the chemical evidence will be significant in determining the presence of hazardous wastes and ultimately the applicability of the petroleum exclusion to those abandoned sites.

Knowledge of the chemical characteristics of wastes generated from refinery process units and petroleum terminals, an understanding of historical processes, and detailed knowledge of chemical fingerprinting tools are all required for successful determination of sources of contamination to environmental media.

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SEARCHING FOR BASELINE CONDITIONS

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Natural Resource Trustees have the burden to collect and analyze data to assess the extent of alleged injuries to natural resources. With this information they may then determine appropriate ways to restore and compensate for damages caused by alleged injuries. As part of their natural resource damage assessment (NRDA), the trustees must establish a resource's baseline condition. This process often involves the use of complicated scientific data for such things as fish histopathology and the accumulation of contaminants in avian populations and their eggs.¹ Notwithstanding the need to amass technical data, practitioners should be mindful to also compile a comprehensive factual record regarding other aspects of the history of the ecosystem in question. Such information may include, among other things, information related to development of industry and infrastructure as well as the changes in human uses of resources that impacted the system. When such information is combined with scientific data and literature concerning resource conditions, it should create a broad spectrum of evidence to support an accurate record of baseline resource conditions.

I. Establishing Baseline

The Department of Interior's (DOI) regulations set forth a suggested (but not required) process for undertaking an NRDA.² Under these regulations, the trustees can determine the baseline condition of an injured resource and compare that condition with the injured resource to quantify the injury.³ The DOI regulations define baseline as the "condition or conditions that would have existed at the assessment area had the discharge of oil or release of hazardous substances under investigation never occurred."⁴ This definition appropriately acknowledges that factors other than the alleged injury may be responsible for the current services provided by the resource. A baseline determination should "tak[e] into account both natural processes and those that are the result of human activities."⁵ Yet, although the regulations create a framework for establishing baseline, in practice,

establishing correct baseline conditions can be fraught with complications for trustees.

In many cases, there are numerous surrounding circumstances and factors that have the potential to influence baseline conditions. A full understanding of the facts leading up to an alleged injury, and the surrounding historical circumstances, is essential to a full understanding of resource baseline conditions. Accounting for all appropriate influences on conditions that may have impacted the injured resource, including the release of hazardous substances, leads to a more accurate record of baseline conditions.

II. Sites with Long Histories

It can be difficult to establish correct baseline conditions for sites that have been the subject of historical discharges from multiple and varied sources of contamination, as well as property development and other anthropogenic influences. Urban waterways in the United States have experienced numerous discharges and changes from varied sources over more than a hundred years. For example, the State of New Jersey has alleged that its NRD claim for the Lower Passaic River focuses on injuries resulting, in part, from releases of dioxin in the latter half of the twentieth century.⁶

Research indicates that a multitude of events severely downgraded the baseline condition of the Lower Passaic River prior to or independent of the alleged releases of hazardous substances.⁷ Historical records show that the waterway and related resource services have been degraded by such things as property development in the urban watershed area spanning in time back to the eighteenth century; construction, use, and expansion of public treatment systems dating back to the turn of the nineteenth century, including the use of combined sewer outfalls that discharge into the river system; historical straightening and dredging projects; urban traffic and sheet flows from roadways; and atmospheric deposition.⁸ Similar historical developments as well as construction of dams, river straightening, and dredging projects; use of tide gates; agricultural uses; and land filling may affect other waterway systems.⁹ Other influencing factors that may

effect baseline conditions include forest fires, flooding, storm events, normal urbanization, invasive species, and human uses.¹⁰

Investigating and gathering the basic facts to support these types of factors does not necessarily involve scientific analysis or data manipulation, but instead boots-on-the-ground (or sometimes hands-on-the-keyboard) research. Efforts to assemble historical evidence that demonstrates a more complete picture of the possible effects on baseline conditions may prove valuable to any attempt to truly understand and assess injuries.

III. Building the Record: Getting Started, Dusting off Old Files, and Following the Historical Trail

Visits to local agencies (e.g., county and municipal offices) can turn up abundant information about historical developments of a particular area, including the sewer systems, city outfalls, roadways, and construction, among other projects.¹¹ Similarly, local libraries, historical societies, and records centers may be treasure troves of information to help uncover the nature of impacts on resources over time. Although nothing is better than an in-person visit to the offices or libraries that house archives of historical records, sometimes substantial research can begin online, for free. For example, some online services exist that provide city sewer and water line maps, as well as other historical information such as aerial photographs, elevation maps, locations of combined sewerage outfalls, and storm water management plans.¹² The preliminary understanding provided by this type of initial online research, particularly of utilities such as sewer and water, may assist in preparing a detailed open public records request that is more efficient and more likely to yield helpful results.

A. Public Records, Libraries, and Online Research

Other information resources include the Army Corps of Engineers¹³ and other federal government organizations such as the National Archives and Records Administration.¹⁴ The Army Corps maintains historical dredging data that can offer insight into activities at a

site that may have significantly affected a resource but are unrelated to a potential responsible parties' (PRP) activities at a site. The National Archives maintains a select portion of documents and materials created in the course of business conducted by the federal government. Research is available online and through their Washington, DC, and regional locations.¹⁵

Local libraries and historical societies are also full of facts recorded in newspapers, photographs, maps, personal papers, and books. More and more, the digitization of such records is making such information remotely available; not only can an online search reveal descriptions of a library's holdings, but in many cases there are direct links to copies of materials that can be viewed from a computer.¹⁶ For example, a search for "Willamette River" on the Oregon Historical Society's library page resulted in 825 unique hits. A search of the same term on the Library of Congress Online Catalog¹⁷ resulted in 248 matches of varied and potentially useful baseline material, including soil surveys, archaeological surveys, essays on early life in the Willamette Valley, and old trail maps. Valuable baseline information might be gathered from trail maps or other similar recreational guides like fishing guides, catch records, or visitor pamphlets. For example, it may be the case that a particular resource, like a river or stream, has limited access because of terrain limitations or private property ownership, or has shown historical trends for different fish or bird species.¹⁸ Having this information may help refute or bolster baseline evaluations with respect to the true value of the resource to the public, regardless of whether it was in pristine condition.

Other online resources of local and sometimes untraditional information (like oral history and personal papers) are digital archives that are collected to cover a particular state or region. These free public access sites have descriptions of archival collections that can be found in regional repositories, including libraries, special collections, archives, historical societies, and museums.¹⁹ The Northwest Digital Archives, which houses reference to archival and manuscript collections relating to Idaho, Montana, Oregon, Alaska, and Washington, describes its collection as covering "the major economic forces in the region—agriculture,

forest, products, fisheries, and natural resources; urban and rural social and progressive movements; local state, regional, and national politics; outdoor recreation; Native American language and culture; and the place of religious communities in the region.”²⁰ In a case where trustees assert that tribal resources have been injured, or where overlapping trusteeship issues may arise, an oral history account of the use of the resource may provide an important historical perspective that relates to alleged damage claims.²¹

B. Minding Your Own and Your Neighbor’s Business

In addition to obtaining surrounding historical facts for context, it is necessary for a PRP to understand its own history and other third parties’ histories as they relate to the ecosystem in question. A grasp of the nature and extent of historical discharges is important to understand a party’s relationship to the overall injuries and potential losses. In connection with obtaining that understanding, it is important to determine the nature of the impact on the resources in the area of concern and whether substances attributable to historical developments, naturally occurring conditions, or another party’s discharges may be adversely affecting a resource. In such a situation, timing of releases, pathways of exposure, and the nature of discharges may be critical to understand a party’s relationship (or lack thereof) to an injury.²²

Courts have recognized there may be multiple sources of contamination that affect baseline conditions. The court in *In re Acushnet River & New Bedford Harbor* found that while the trustees only sought to recover for damages relating to PCB contamination, “the Harbor appears rife with a variety of contaminants.”²³ Indeed, difficulty in distinguishing whether injuries are caused by one set of pollutants, as opposed to others, may cause technical issues about impact to baseline as well as raise issues concerning potential divisibility of harm. In this regard, parties should work closely with technical consultants and experts who can analyze not only systemwide data, but also historical information and trends. This analysis should consider a party’s facility discharge data to determine both the proper baseline and where the party’s discharge stands in relation to baseline

conditions and in relationship to other influences and other parties’ discharges.²⁴

IV. Baseline Information and the Connection to Divisibility of Harm

Collecting facts that inform a party about baseline conditions may have the dual benefit of serving to assist or rebut a defense based on divisibility of harm.²⁵ Evidence concerning the operational and discharge histories of facilities, the history of the environmental conditions at the site, as well as the ecosystem itself bear on divisibility of harm arguments.

There may be a wide array of data collected during efforts to determine the baseline that could lead to concrete evidence to support divisibility arguments. These facts could simultaneously relate to major differences on the impact to resource services and causation of harm to those services. For example, while reproductive services may be adversely impacted by a particular contaminant of concern (COC) for one fish species, another COC may have little measurable impact. Similarly, while a COC may affect the availability of some resource services (prey for a particular predator species, for example), they may result in little to no net change in certain human-use services (like canoeing on a river). Thus, the same information that concerns changes in baseline conditions also may relate to differences in causes of harm.

V. Conclusion

There is much to consider when assessing baseline conditions. Gathering a wide array of information is one step in a process that may lead to a more complete picture of the elements that have affected resource services. In turn, a thorough review and integration of historical factors, as well as the science related to ecosystems, should provide a more accurate assessment of true baseline conditions. This also may help inform divisibility of harm arguments. Overall, a more comprehensive assessment process should facilitate restoration negotiations, or, if needed, assist parties who might choose to litigate NRD issues.

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Endnotes

¹ See, e.g., Jeremy Buck & James L. Kaiser, Portland Harbor Natural Res. Tr. Council, *Contaminant Concentrations in Osprey (Pandion haliaetus) Eggs from Portland Harbor and Surrounding Areas: Data Summary Report* (Mar. 7, 2011), <http://www.fws.gov/oregonfwo/Contaminants/PortlandHarbor/#DA>.

² 43 C.F.R. § 11.72(a) (2011); see also NOAA Reg., 15 C.F.R. § 990.52(a).

³ *Id.*

⁴ 43 C.F.R. § 11.14(e) (2011).

⁵ *Id.* § 11.72(b)(1).

⁶ *In re Matter of the Lower Passaic River*, Directive No. 2003-1 (Sept. 19, 2003), http://www.nj.gov/dep/nrr/directives/passaic_dir01.pdf.

⁷ TIMOTHY J. IANNUZZI ET AL., *A COMMON TRAGEDY: HISTORY OF AN URBAN RIVER 75–96* (Amherst Scientific Publishers 2002).

⁸ *Id.*

⁹ See Ira Gottlieb, Richard W. Dunford & Cynthia S. Betz, *A Practical Guide to Litigating Natural Resource Damage Claims*, in ENVIRONMENTAL LITIGATION: LAW AND STRATEGY 260 (Cary Perlman ed., Am. Bar Ass’n 2009).

¹⁰ *Id.* at n.108.

¹¹ Various types of consultants may be employed to investigate such sources of information. It is important to keep consultant and legal team efforts coordinated and focused so as to maximize the collection, analysis, and productive use of information. For a discussion of the use of historians as experts in coordination with other experts in environmental litigation, see Michael C. Reis & W. David Wiseman Jr., *The Historian’s Valuable Role as Expert and Advisor in Environmental Litigation*, 22:3 ENVTL. LITIG. 12 (Spring 2011).

¹² See PORTLANDMAPS, <http://www.portlandmaps.com> (displays city sewer and water lines); see also PORTLANDONLINE, <http://www.portlandonline.com> (links and information from various city agencies, including the Department of Environmental Services). Such information may be crucial to baseline research.

¹³ US ARMY CORPS OF ENG’RS, <http://www.usace.army.mil/about/Pages/Home.aspx> (last visited May 5, 2011).

¹⁴ National Archive website searches may be useful for obtaining World War II–era records (e.g., from the former Federal Bureaus of Ships and Yards and Docks) that may relate to ship repair or shipbuilding activities at ports, harbors, and facilities along rivers and in bays. See, e.g., *Military Records: World War II Records*, NAT’L ARCHIVES, <http://www.archives.gov/research/military/ww2/index.html> (last visited May 14, 2011).

¹⁵ See ARCHIVES.ORG, <http://www.archives.org> (last visited May 6, 2011).

¹⁶ See *Oregon Historical Society—Davies Family Research Library*, OREGON HISTORICAL SOC’Y, <http://librarycatalog.ohs.org/EOSWeb/OPAC/Index.asp> (last visited May 6, 2011); *Library*, N.Y. HISTORICAL SOC’Y, <https://www.nyhistory.org/web/> (last visited May 6, 2011); *Online Resources*, CHICAGO HISTORY MUSEUM, <http://www.chicagohs.org/research/resources/online-resources/online> (last visited May 6, 2011).

¹⁷ LIBRARY OF CONGRESS ONLINE CATALOG, <http://catalog.loc.gov/webvoy.htm> (last visited May 6, 2011).

¹⁸ W.H. DESVOUSGES, *NATURAL RESOURCE DAMAGE ASSESSMENTS: KEY ECONOMIC ISSUES IN DEFENDING A*

DAMAGES CLAIM 8 (Law Seminars Int'l June 18, 2007).

¹⁹ NW. DIGITAL ARCHIVES, <http://nwda.orbiscascade.org/about.shtml> (last visited May 6, 2011); ROCKY MOUNTAIN ONLINE ARCHIVE, <http://rmoa.unm.edu/> (last visited May 6, 2011); TEX. ARCHIVAL RES. ONLINE, <http://www.lib.utexas.edu/taro/> (last visited May 6, 2011); ONLINE ARCHIVE OF CALIFORNIA, <http://www.oac.cdlib.org/>, (last visited May 6, 2011); ARIZ. ARCHIVES ONLINE, <http://www.azarchivesonline.org/xtf/search> (last visited May 6, 2011).

²⁰ NW. DIGITAL ARCHIVES, *supra* note 19.

²¹ Although beyond the scope of this brief article, it is worth noting that personal interviews (and surveys) may also be useful for determining baseline conditions. Interviews might include hikers, boaters, fishers, bird-watchers, outdoor guides, former facility workers, or others who may have witnessed the use and changes in resource services. The collection of documents and other information may be of great assistance with such interviews.

²² A further complicating factor may be the existence of federally permitted releases (e.g., local or NPDES permits) and previously approved committed uses of resources, which should be considered in a baseline analysis.

²³ 712 F. Supp. 1019, 1030 (D. Mass. 1989). The court went on to note that “[i]t may be prove difficult to distinguish whether some injury is caused by PCBs or by other pollutants.” *Id.*

²⁴ Gottlieb, Dunford & Betz, *supra* note 9, at 261–62.

²⁵ Divisibility of harm arguments have long been available to PRPs. In view of the Supreme Court’s landmark decision in *Burlington Northern & Santa Fe Railway Co. v. United States*, 129 S. Ct. 1870 (2009), such potential arguments should now be the subject of redoubled efforts and considered when gathering information related to baseline conditions.



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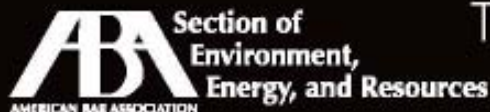
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