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Issues Trustees Face in Natural Resource Damage Assessments, Part II

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Abstract

The first part of this two part series laid out the process that a Natural Resource Trustee will follow to complete a sound Natural Resource Damage Assessment (NRDA) as well as the typical challenges they face from the Responsible Party. The second part will present the typical issues that the trustee will face as the NRDA is tested in a court of law. A major litigation hurdle typically concerns what counts as "sound science" under the fact specific circumstances of a particular case. Many responsible parties will attempt to challenge a trustee's assessment under the *Daubert* standard, which is the test for admissibility of evidence. However, because trustees are selected for their scientific expertise and subject to applicable laws and policies, including guidance on how to conduct a NRDA, trustees are generally the best arbiters of appropriate science, and as such should not be subject to a rigorous *Daubert* analysis.

Keywords

Litigation, Environmental, Regulations, Trustee, Assessment

1. Introduction

As discussed in *Issues Trustees Face in Natural Resource Damage Assessments Part I*, trustees have the heavy burden of considering all applicable law, policy, and science when assessing an ecosystem following a disaster. They are tasked with deciding the best methods of assessment, which aspects of the ecosystem can and should be favored or are most representative of the ecosystem as a whole, and ultimately, deciding on the final restoration plan. As trustees of the public trust, they first and foremost consider restoration of the environment that benefits not only the public at large, but the biota that make up the ecosystem. This Part will address the hurdles the trustee will encounter as the decisions he made during the assessment face a court of law.

Legislators have granted trustees the special job of deciding how much natural resources matter. The district court in *Quarles v. United States*[1] examined the trustee's role in assessing natural resource damages. The court considered the legislative history of OPA and the role of trustees, noting that the Conference Committee Report from the Senate bill passed explains:

> Thus, in addition to providing remedies for removal costs and for economic damages suffered by private parties, the legislation *requires* trustees to act on behalf of the public to assess natural resource damages, prepare and implement a plan for repairing the injury done to the environment, and to seek compensation from the responsible party.[2] The Conference Report also recognized that "there may be instances where two or more trustees share jurisdiction or control over natural resources. In such cases, trustees should exercise joint management control of the shared resources."[3] The Court noted that Superfund Amendments of 1986 contemplated that the Federal or State trustee would assess natural resources under its own jurisdiction and the Federal trustees may perform assessments on behalf of states if they are reimbursed.[4] Federal trusteeships over natural resources arise out of federal responsibilities to manage and protect living and non-living natural resources.[5] A trustee must coordinate with other trustees, responsible agencies, and responsible parties throughout the natural resource damage assessment process.[6] Double recovery of damages is prohibited.[7] Thus, where there are multiple trustees, each trustee may only recover what its percentage of trusteeship over the resource is determined to be.[8] "Moreover, once a state, federal or other public trustee recovers such damages, *res judicata* would prevent a second trustee from recovering the same public loss."[9] Courts have jurisdiction to determine the extent a given trustee can recover natural resource damages and whether or not trusteeship is capable of being allocated among the trustees. A trustee may not recover more than what its stewardship (percentage) is determined to be.[10] Whether a trustee has exercised trusteeship over the natural resources at issue is a question of both law and fact.[11]

Because damage to the public's resources are generally viewed as different from mere economic harms,[12] the law puts a trustee in place to ensure that the

[1] *Quarles v. U.S. ex rel. Bureau of Indian Affairs*, 2005 WL 2789211 (N.D. Okla. Sept. 28, 2005).
[2] H.R. Rep. No. 101-653, at 107-08 (1990), *reprinted in* 1990 U.S.C.C.A.N. 779, 785-786.
[3] *Id.*
[4] *Quarles*, 2005 WL 2789211 at *5.
[5] *Id.*
[6] 15 C.F.R. §990.14.
[7] 33 U.S.C. §2706(d)(3); 15 C.F.R. §990.22.
[8] *See Couer D'Alene Tribe v. Asarco Inc.*, 280 F.Supp.2d 1094 (D. Idaho 2003) (rejecting the all-or-nothing approach to recovery under CERCLA and allowing parties to present evidence to aid court in determining percentages of trusteeship).
[9] *Id.* at 1116.
[10] *Id.*
[11] *Id.* at 1115.
[12] *Ohio v. Department of the Interior*, 880 F.2d 432, 460 (D.C. Cir. 1989).

public is made whole.[13] The role of a trustee for natural resources is vitally important. Trustees protect and restore resources [1]. Indeed, the trustee has a duty of utmost good faith to protect and defend natural resources [1]. Trustees should also try to grow or expand the corpus of the trust when it is prudent to do so.[14]

Despite the heavy fiduciary burden placed on a trustee to protect and grow the corpus of the trust, there is unnecessary uncertainty in the NRDA process. In any given response situation, a trustee will be provided with applicable NRD regulations or he won't. Where there are applicable regulations, he may or may not actually be required to use them. But their use will determine burdens of proof during litigation. For example, the federal regulations as a whole are designated as nonbinding guidance.[15] This flexibility is necessary because injury assessment and remedy determination are neither routine nor recurring. Even if there are no applicable regulations, trustees should generally engage in a transparent decision-making process reasonable under the circumstances.[16] This ensures public confidence in the ultimate result and gives courts the ability to review the trustee's decision-making process to ensure due and sufficient consideration was given to all relevant factors.[17] However, judicial review of trustee action should be limited. Federal and state legislatures generally control agencies' actions, not courts.[18] Given that legislatures created trusteeships, courts should respect the framework and discretion delegated to trustees by the legislature.

2. Calculation of Damages & the Restoration Remedy

There are a number of ways to quantify environmental injuries in order to determine damages. A relatively straightforward way to quantify injured ecosystems is to count the types and numbers of actual resources lost. While NRDAs are difficult when contemplating large scale environmental restoration, it is important to remember that such restoration will entail consideration of very spe-

[13]15 CFR §990. 53(d) ("make the environment and public whole").

[14]*Id.* Unlike the governors and legislators who are expected to deal in the tradeoffs of modern political life, a trustee has the single focus of making the public whole when the public trust is injured.

[15]Natural Resource Damages for Hazardous Substance, 73 Fed. Reg. 57259-01; *accord, e.g.*, 43 C.F.R. § 11.10 ("The assessment procedures set forth in this part [pursuant to the CWA and CERCLA] are not mandatory. However, they must be used by Federal or State natural resource trustees in order to obtain the rebuttable presumption contained in section 107(f)(2)(C) of CERCLA.").

[16]Trustees may be faulted for failing to consider potentially relevant evidence. However, not all "evidence" that an RP expert will vouch for is necessarily relevant in a NRD case. In the first *Scenic Hudson Preservation Conference v. Federal Power Comm'n* case, 354 F.2d 608 (2d Cir. 1965), *cert. denied*, 390 U.S. 921 (1967), the court sent the matter back to the Federal Power Commission because it had only looked at engineering and economic issues, ignoring scenic, historic and aesthetic issues.

[17]*Cf. Calvert Cliffs' Coordinating Comm., Inc. v. U. S. Atomic Energy Comm'n*, 449 F.2d 1109 (D.C. Cir. 1971) (discussing the National Environmental Protection Act ("NEPA")).

[18]*See, e.g., Am. Elec. Power, Inc. v. Connecticut*, 131 S. Ct. 2527, 2539-40 (2011) (concluding that "expert agencies," rather than individual members of the judiciary, are the entities equipped with the resources and tools needed to accomplish the Clean Air Act's regulatory goals, stating, "[i]t is altogether fitting that Congress designated an expert agency, here, EPA, as best suited to serve as primary regulator.... The expert agency is surely better equipped to do the job than individual district judges issuing ad hoc, case-by-case injunctions. Federal judges lack the scientific, economic, and technological resources an agency can utilize in coping with issues of this order.").

cific and often very small sub-ecosystems and the species that inhabit them. Trustees are responsible for considering every aspect of the ecosystem down to benthic layers, not simply the superficial restoration of the whole. A pertinent example of the challenges trustees face in this minute injury assessment is avian injury.

Oil spills typically expose large numbers of birds to oil. The toxicological and physiological effects associated with external oiling, either from direct oil exposure on feather and skin, or from preening behavior and subsequent ingestion of oil, are well known. The Deepwater Horizon disaster (DWH) was certainly no different and illustrates the difficulties trustees face while attempting to assess avian injury. The assessment of avian injuries resulting from DWH oil is not as straightforward as counting oiled birds, and assessing outcomes of that oiling. The assessment process must look at short term impacts as well as longer term impacts, as well as impacts that are not readily visible.

In the short term, it was important to determine how many birds were immediately affected by the spill. Because the Gulf is a vast ecosystem, it was going to be impossible to recover every individual bird that was oiled or killed. Trustees attempted to collect as many birds as they could but ultimately only recovered a small portion. There are several reasons why only a small fraction of the birds that died were actually recovered, including 1) Most birds that die in the nearshore environment do not wash up on shore in locations where they can be recovered by searchers; and 2) Of those carcasses that do reach shore, only a small portion are actually found by searchers because they are difficult to see, particularly in marsh vegetation and because carcasses decompose, can vary widely depending upon the environmental setting (e.g., deposition on sand beaches versus in marshes). As of the date of the DWH Spill, carcass deposition (i.e., where birds that die on the water wash ashore) had not been studied extensively in Louisiana marshes. Therefore, trustees decided to study bird carcass deposition and recovery rates Gulf-wide, finding that between 60% and 90% of carcasses were lost completely or hidden in marsh interior. Such losses hinder the trustee's ability to quantify loss and therefore injury to bird populations. Trustees invariably run into similar issues for other species found throughout a given ecosystem.

A trustee can also quantify injuries by calculating the services lost as a result of the release (based on pre-pollution or baseline conditions).[29] Whatever method trustees use to quantify injuries, they must also consider potential recoveries in the form of primary restoration,[20] compensation for loss of use, and the costs of assessment.[21] The prevailing practice, driven initially by NOAA, is to focus on the costs of primary restoration and compensatory damages, thereby avoiding the need to monetize lost services [1].

OPA and OPA regulations give trustees wide latitude in crafting approaches to injury assessment, damage determinations, and restoration planning. Gener-

[19]43 C.F.R. §11.71(a).
[20]*Id.* §11.81, 11.93.
[21]*Id.* §11.14(h)

ally, trustees must simply adopt approaches that are reliable and valid for the particular environmental injury at issue.[22] The approach or procedure can be supported by field or laboratory studies, models, or a review of the literature.[23]

When an environmental injury results in a 100% service or resource loss–for example, when an intertidal wetland becomes buried under 20 feet of hazardous waste–an acre-for-acre input of wetland for a HEA is a logical starting point, though an upward adjustment might be necessary to account for the lower productivity of constructed wetlands over some time period.[24]

It is more difficult to quantify environmental injuries where an ecosystem is partially destroyed. In such non-destruction circumstances, both trustees and RP's consider percent resource loss or percent service loss, though it is generally acknowledged that quantification may be nothing more than a reasoned choice based on available information.[25] Given the imprecise nature of the process, though, two reasonable experts may reach different conclusions based on their differing interpretations of the same evidence. In these situations, which arise frequently in the NRDA process, the trustee makes the final decision as a matter of law and policy [1].

Trustees are guided by statutory directives to recover all "damages for injury to destruction of, or loss of natural resources, including reasonable costs of assessing such injury, destruction or loss resulting from such a release"[26] in order "to restore, replace, or acquire the equivalent of such resources."[27] CERCLA specifies, however, that trustees' damage recoveries "shall not be limited by the sums which can be used to restore or replace" injured resources.[28] Appropriate restoration remedies may cost more than quantifiable damages. Natural resource damages do not "count" any money spent or work done for the response or site remediation cleanup. Because the stated goal is to restore the site or particular resource to the conditions that would have existed "but for" the release of a hazardous substance (or oil), any costs recovered by natural resource trustees are above and beyond what is required for the cleanup itself.[29] In fact, NRDA-recommended restorations may undo some of the work that was done as part of the original cleanup, where, for example, restoration to pre-pollution conditions would require removal of a cap. This is one of the reasons NRD claims can be so expensive–and controversial.

After the trustee quantifies the injury, it must determine whether, in view of

[22]15 C.F.R. §990.27(a).

[23]*Id.* §990.27(b), 27(c).

[24]In *New Jersey Department of Environmental Protection v. Exxon Mobil Corp.*, Exxon's experts created a notion of "changed baseline" to argue that the invasive species that grow in that contamination are, in effect, a new baseline. *See generally N.J. Dep't of Envtl. Prot. v. ExxonMobil Corp.*, Nos UNN-L-3026-04, UNN-L-4415-04 (N.J. Super. Ct. Law Division), *Trial Tr.* July 10, 2014, 61-83. The notion is a transparent attempt to excuse all NRD damages. Exxon's approach was different from asking for a credit for the invasive species.

[25]Given the site- and release-specific factors, it is highly unlikely that generally accepted scientific studies could exist to determine the correct percent service loss.

[26]42 U.S.C. §9607 (a)(4)(C).

[27]*Id.* §9607 (f)(1); *Ohio v. DOI*, 880 F.2d 432, 444 (D.C. Cir. 1989).

[28]42 U.S.C. §9607 (f)(1).

[29]*Id.*

the injuries, restoration is the appropriate remedy under the circumstances. If so, the trustee proceeds to the next part of the NRDA process: selection of a restoration plan. As a predicate to developing a restoration plan, trustees consider a range of restoration alternatives addressing primary and/or compensatory restoration objectives.[30] Trustees must also consider natural recovery as an alternative.[31]

The purpose of a restoration plan is to determine how best to compensate the public fully for injuries to natural resources [1]. As with other damage assessments, compensation for damages under the OPA regulations is comprised of two components: primary restoration and compensatory restoration. Primary restoration measures are designed to return the injured resources or services to their baseline.[32] Compensatory restoration measures aim to compensate the public for the interim losses of resources and services from the time of the incident until recovery is achieved.[33]

With respect to compensatory restoration, trustees consider measures that will provide services of the same type, quality, and comparable value, to the services lost.[34] Replacing ruined habitat with comparable habitat may achieve this goal. If no such restorative measures are reasonably available, trustees may then consider actions that will provide services of comparable type and quality.[35] When the value of the interim losses and the compensatory restoration alternatives are not comparable, trustees may use "scaling," described further below, to calculate the equivalent amount of replacement services.[36]

RPs are often critical about the approach trustees take when attempting to value and restore natural resources. RPs, as proponents of the narrow anthropocentric view of resources, focus on the actual value of services currently being provided to humans, such as fishing or tourism, and expect trustees to share that focus. Given the difficulty of comprehensively identifying and valuing lost services associated with natural resource damages, this narrow approach suffers from the additional challenges of scientifically identifying and quantifying these services (or developing a model based on the same subset of services), and, in the case of long term injury, doing so over time [1]. In addition, the focus responsible parties put on the monetary value of services is often to the detriment of natural resources and thus the public trust.[37] Under this service-centric approach, if an oil spill destroys a reef, the responsible party might be able to argue

[30]15 C.F.R. §990.53(a).

[31]*Id.* §990.53(b). In the early days of damage assessment, some suggested imposing a hierarchy for restoration alternatives in which alternatives from most to least preferred were as follows: on-site and in-kind; off-site and in-kind; and off-site with substitute natural resources or services with equivalent economic value. NOAA rejected this hierarchical approach and instead chose to require that the trustees use a broader range of selection criteria found in §990.54(a). Thus, primary restoration may include an array of methods. *See* Natural Resource Damage Assessment, 61 Fed. Reg. 440, 483 (Jan. 5 1996).

[32]15 C.F.R. §990.30.

[33]*Id.*

[34]15 C.F.R. §990.53(c).

[35]*Id.*

[36]*Id.*

[37]*Id.* at 365.

that the collapsed rig that caused the spill will, over time, become an artificial reef providing equivalent services at little cost such that no additional restoration of any resources lost is needed.[38] This approach fails in large part because, despite arguments by welfare economists, the environmental laws "favor other values over economic efficiency, namely, restoration of injured resources." [2].

Services provided by natural resources are important to assessing damages, but they are not paramount.[39] Natural resources certainly provide and sustain important human and ecological functions,[40] providing services to humans such as "fishing, hunting, boating, biking, bird watching, flood control, shoreline storm protection, and enjoyment of a healthy and functioning natural environment."[41] Natural resources also provide ecosystems services and other ecological amenities including "habitat for food, shelter, and reproduction; organic carbon and nutrient transfer through the food web; energy transfer through the food web; biodiversity and maintenance of the gene pool; food web and community structure; prevention of the spread of exotic or disruptive species; and natural succession processes."[42]

Resources, however, are part of a broader ecosystem, and often best understood in that context as opposed to limiting them to a short list of identifiable human services subject to some arbitrary quantification. To illustrate the vital role played by natural resources at every level of ecosystems, consider sediments, the loose particles of sand, clay, silt and other substances that settle at the bottom of bodies of water. Contaminated sediments have been demonstrated to be toxic to sediment-dwelling organisms and fish. As such, exposure to contaminated sediments can result in decreased survival, reduced growth, or impaired reproduction in benthic invertebrates and fish. Additionally, certain sediment-associated contaminants (termed bio-accumulative substances) are taken up by benthic organisms through a process called bioaccumulation. When larger animals feed on these contaminated prey, the pollutants are taken into their bodies and are passed along to other animals in the food web in a process call biomagnification. Contaminated sediments can also compromise human health with direct exposure through wading or swimming in affected waters, through the consumption of contaminated fish and shellfish, or indirectly through reductions in the abundance of food or sportfish species and the imposition of fish consumption advisories. As such, contaminated sediments in an ecosystem can affect every layer of the surrounding ecosystem, including sediment-dwelling organisms (*i.e.*, epibenthic and infaunal invertebrate species), aquatic-dependent wildlife species (*i.e.*, fish, amphibians, reptiles, birds, and mammals), and human beings.

[38]An analogous critique of anthropocentric cost-benefit analyses appears in Laurence H. Tribe, *Ways Not To Think About Plastic Trees: New Foundations for Environmental Law*, 83 Yale L.J. 1315 (1974).

[39]Justice Douglas, quoting Justice Holmes, noted that "a river is more than an amenity, it is a treasure." *Udall v. Federal Power Comm'n*, 387 U.S. 428 (1967).

[40]Resource Equivalency Method For Assessing Environmental Damage in the EU, REMEDE (2007), p. 6.

[41]*Id.*

[42]*Id.*

Recognizing that natural resources exist as part of a broader ecosystem, the emerging consensus among trustees is to favor resource or habitat restoration over money damages or a quantification of ecological services lost or impaired [1]. This approach promotes the goal of NRD to restore injured resources by at least repairing the ecosystem as a whole to its predischarge condition, including the values of natural resources that generally cannot be priced through market-based mechanisms or studies of revealed preferences.

Once the trustee identifies appropriate primary and compensatory restoration measures, regulations require that the trustee determine the scale of those measures that will make the environment and public whole.[43] "Scale" refers to the size, or spatial and temporal extent, of restoration measures. "Scaling" is the process by which trustees determine the size or extent of actions required to return resources to baseline conditions on an expedited basis or to compensate the public for interim losses in resources or services.

Environmental regulations express a preference for use of "resource-to-resource" or "service-to-service" approaches to scaling.[44] In accordance with these approaches, trustees determine the scale of restoration actions that will provide natural resources and/or services equal in quantity to those lost. Where these methods are not appropriate, trustees can use "valuation scaling." In valuation scaling, trustees measure the value of injured resources and/or services, and then determine the scale of the restoration action necessary to produce resources and/or services of equivalent value to the public.[45]

The notion of computing value in economic terms is hardly novel. However, many of the costs and losses associated with natural resource damages are not adequately priced by the market, if they are priced at all. To estimate non-market-based costs and values, trustees use special (sometimes controversial) non-market valuation techniques [3] or some alternative, non-economic technique, such as HEA or similarly, a resource equivalency analysis ("REA") [1].

Once the alternatives have been properly scaled, trustees evaluate the alternatives. Trustees conduct such evaluations based on criteria specified in the regulations, though they are free to consider other criteria, as well.[46] The OPA regulations do not require trustees to weigh the statutory evaluation criteria in any particular manner, as long as they consider the following factors:

(1) The cost to carry out the alternative;
(2) The extent to which each alternative is expected to meet the trustees' goals and objectives in returning the injured natural resources and services to baseline and/or compensating for interim losses;
(3) The likelihood of success of each alternative;

[43]15 C.F.R. §990.53(d).
[44]*See id.* For actions that "provide natural resources and/or services of the same type and quality, and of comparable value as those lost, trustees must consider the use of a resource-to-resource or service-to-service scaling approach." *Id.* §990.53(d)(2).
[45]*Id.* §990.53(d).
[46]15 C.F.R. §990.54(a)

(4) The extent to which each alternative will prevent future injury as a result of the incident, and avoid collateral injury as a result of implementing the alternative;
(5) The extent to which each alternative benefits more than one natural resource and/or service; and,
(6) The effect of each alternative on public health and safety.[47]

Once a trustee has reviewed alternatives against the foregoing criteria (at a minimum), it selects a preferred restoration alternative.[48] Then the trustee is able to develop a restoration plan, consisting of either onsite or offsite restoration projects, or a combination of both, at the expense of the RP to fully compensate the public for its lost resources

3. Causation

Despite trustee's best efforts to diligently pursue all of the above in the course of a NRDA, they will almost inevitably be challenged in court. Often it comes down to the proper interpretation of the causation standard written into many environmental law statutes. Our natural environment is sufficiently complex that it can be difficult to trace the precise connections between environmental mishaps and ecological injuries. For this reason, if trustees were required to meet the strict causation standards imposed by traditional tort law, they would have a difficult time recovering natural resource damages:

The causation-of-injury issue must, of course, be viewed against the backdrop of Congress' general concern for liberalizing the standards of the common law. See, e.g., S.Rep. No. 848, supra note 10, at 13-14 ("Traditional tort law presents substantial barriers to recovery... Compensation ultimately provided to injured parties is generally inadequate.")....[49]

Recognizing the incompatibility between environmental injuries and traditional causation standards, environmental statutes make it relatively easy for a trustee to prove causation. A trustee need only show a "nexus" or "connection between the defendant and the damages to the natural resources,"[50] which are broadly defined.[51] State law is similar.[52] A trustee can establish the requisite "nexus" by demonstrating a causal connection between the release and injury.[53] "The use of a 'nexus' test instead of a more difficult causation requirement simplifies a trustee's burden of proof with respect to NRDs." [1] [4]. The nexus test's "resulting from" language[54] does not incorporate the common law requirement

[47] *Id.*
[48] *Id.* §990.54(b).
[49] *Ohio v. DOI*, 880 F.2d 432, 470 (D.C. Cir. 1989).
[50] *Dedham Water v. Cumberland Farms*, 889 F.2d 1146, 1154 (1st Cir. 1989).
[51] 42 U.S.C. §9601(16); *see also* 15 C.F.R. §990.51(c), (d).
[52] *See, e.g., N.J. Dep't of Envtl. Prot. v. Dimant*, 212 N.J. 153, 177 (2012) ("[Under the Spill Act, a] nexus also must be demonstrated to exist between the discharge for which one is responsible—in any way—and the contaminated site for which cleanup, and other related authorized costs are incurred.").
[53] 42 C.F.R. §11.14(dd). Sampling and modeling are techniques used to demonstrate such a connection. *Id.* §11.63.
[54] 42 U.S.C. §9607(a)(4)(C).

that the plaintiff prove proximate causation.[55]

To illustrate how particular states interpret the causation requirement we can look to New Jersey, where the Supreme Court has held that a plaintiff need only establish a "nexus" between the discharge and the contaminated site for which cleanup and other related authorized costs are incurred.[56] The nexus formulation is an effort to remove traditional causation hurdles that would unduly complicate proof.[57] Indeed, in *New Jersey Department of Environmental Protection v. Dimant*, the court rejected a proximate cause standard like that found in CERCLA, because the New Jersey Spill Compensation and Control Act ("Spill Act") provides for joint and several liability for damages "carrying significantly different and potentially more severe consequences," while CERCLA "permits divisibility among responsible parties."[58]

Congress, meanwhile, did not articulate a causation standard when it enacted CERCLA.[59] Instead, Congress delegated to the DOI the task of articulating, by regulation, a causation-of-the-injury standard that would facilitate full recovery of damages. No federal environmental law mandates a strict causation standard, and our scientific understanding of causation in relation to environmental injuries is sufficiently limited that such a standard would be unworkable:

Petitioners argue that the acceptance criteria are contrary to the statutory command that the standard of proof of causation-of-injury under CERCLA be less strict than that required by the common law. We conclude that CERCLA is ambiguous on this point, and that Interior's reading of the Act–as retaining traditional causation analysis for determining whether a hazardous substance release caused a particular injury–is therefore permissible under Chevron Step Two. We also reject petitioner's argument that the acceptance criteria are unreasonable within the meaning of Chevron. As to the non-compensability of the costs of general scientific studies under § 107(a) (c), we conclude that the statute is ambiguous and that Interior's construction of it is a permissible one.[60]

Federal courts have generally followed Congress's lead in interpreting

[55] *O'Neil v. Picillo*, 883 F.2d 176 (1st Cir. 1989); *In re Acushnet River & New Bedford Harbor: Proceedings re: Alleged PCB Pollution*, 722 F. Supp. 893, 897 n.8 (D. Mass. 1989); *Kennecott Utah Copper v. U.S. Dep't of Interior*, 88 F.3d 1191, 1223 (D.C. Cir. 1996); *Ohio v. U.S. Dep't of Interior*, 880 F.2d 432, 472 (D.C. Cir. 1989); *United States v. Coeur d' Alene*, No. CV 96-0122-N-EJL, slip. Op. at 11 (D. Idaho Mar. 30, 2001).

[56] *Dimant*, 212 N.J. at 177.

[57] *New Jersey Turnpike Authority v. PPG Industries*, 197 F. 3d 96, 105 (3rd Cir. 1999) describes CERCLA's causation requirement as a "nexus" requirement, relying on *General Elec. Co. v. AAMCO Transmissions, Inc.*, 962 F. 2d 281, 286 (2d Cir. 1992).

[58] *Id.* 178-79. Noting no causation definition, the Court said the Act required a nexus between the discharge and the relief sought. *Id.* at 179 (finding that the "in any way responsible" language requires some connection). A tort plaintiff need not "prove a series of negatives; he doesn't have to offer evidence which positively exclude[s] every other possible cause of the accident." *BCS Servs. Inc. v. Heartwood 88, LLC*, 637 F.3d 750, 758 (7th Cir. 2011) (quoting *Carlson v. Chisholm-Moore Hoist Corp.,* 281 F.2d 766, 770 (2d Cir. 1960) (Friendly, J.)). "Once a plaintiff presents evidence that he suffered the sort of injury that would be the expected consequence of the defendant's wrongful conduct," the burden shifts to the defendant to rebut this causal inference. *Id.* at 758.

[59] *Ohio v. DOI*, 880 F.2d at 472; *Kennecott Utah Copper Corp. v. U.S. Dep't of Interior*, 88 F.3d 1191, 1224 (1996).

[60] *Ohio v. DOI*, 880 F.2d at 470.

CERCLA's causation requirement in a way that favors the government's effort to recover its costs and NRD:

Once the requisite connection between the defendant and a hazardous waste site has been established (because the defendant fits into one of the four categories of responsible parties), it is enough that response costs resulted from "a" release or threatened release–not necessarily the defendant's release or threatened release….Thus, the government need not trace or "fingerprint" a defendant's wastes in order to recover under CERCLA.[61]

The basic causation standard is whether a release for which the defendant is liable was a contributing factor for the environmental injury.[62] In federal cases, causation need not be absolute; the appropriate standard for causation is whether defendants' releases were a contributing factor to the injury.[63] The issue of multiple causes is essentially one of divisibility. The burden then shifts to the defendants to show whether the injury is divisible, and if so, how much of the injury the defendant is responsible for.[64] Thus, any defendant's demand that plaintiffs show that particular chemicals caused injury to specific organisms is inconsistent with causation under CERCLA. Organisms exist in a complex ecosystem, and there can be multiple facts that contribute to injury or death. Plaintiffs need only show that defendants' release are one of these factors.

These principles are reflected in the Department of Interior's (DOI's) natural resource damage assessment regulations.[65] Under the regulations, causation is established through two elements: "acceptance criteria," which basically ensure the scientific validity of the conclusion that observed injuries can be caused by a particular type of hazardous substance, and "pathway," which establishes that there is a route between the defendant's activities and the resource alleged to be injured.[66] The acceptance criteria require showing, for example, that alleged biological injuries are "commonly documented" responses to the type of hazardous substances released by the defendant, that the biological response can be shown in laboratory and field studies and that there is a statistical difference between the response in areas affected by hazardous substances and control area.[67]

[61] *United States v. Hercules*, 247 F.3d 706, 716 (8th Cir. 2001), *cert. denied sub nom*, *Crompton Co./Cie v. United States*, 534 U.S. 1065 (2001).

[62] *Acushnet River*, 722 F. Supp. At 897; *Acushnet River*, 716 F. Supp. 676, 685-86 (D. Mass. 1989).

[63] *See In re Acushnet River & New Bedford Harbor: Proceedings re Alleged PCB Pollution*, 722 F. Supp. 893, 897 n. 8, 901 (D. Mass. 1989) (*citing O'Neil v. Picillo*, 883 F.2d 176, 179 n. 4 (1st Cir. 1989), *cert. denied sub nom. American Cyanamid Co. v. O'Neil*, 493 U.S. 1071 (1990)); *but see United States v. Montrose Chemical Corp.*, 1991 WL 183147, 33 E.R.C. 1207 (C.D. Cal. March 29, 1991).

[64] *Id.*

[65] 43 C.F.R. Part 11.

[66] *See* 43 C.F.R. §§ 11.62, 11.63; *Ohio v. United States Department of the Interior*, 880 F.2d 432, 468-70 (D.c. Cir. 1989).

[67] *See Ohio*, 880 F.2d at 468-69. It is important to note that the acceptance criteria impose intentionally stringent standards for scientific evidence, and may be difficult to meet even where natural resources have clearly been injured. Accordingly, trustees may assert injury claims where they are unable to meet the acceptance criteria, but such claims will not be accorded the rebuttable presumption of validity otherwise accorded the elements of a damage assessment conducted under the regulations. *Ohio, supra*, 880 F.2d at 472. Nevertheless, even in non-rebuttable presumption cases, the regulations are relevant in terms of the theory of causation that they embody. That theory is entitled to deference under *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.,* 467 U.S. 837 (1984). *See Ohio*, 880 F.2d at 470.

The second prong, the pathway, refers to the route or medium through which hazardous substances are transported from the source of their release to the injured resource.[68] As part of the NRDA process, a trustee must identify the pathway, or connection, between the injury and the responsible party's release.[69] It is important to note that pathway is not an end in and of itself; it is the element of an injury determination that establishes a nexus between the release and an injury.[70]

Typically, the law does not require a precise reconstruction of the pollutant's pathway. In a chronic pollution case arising from a decades of refinery operation, for example, historical evidence of disposal into intertidal marshes, confirmed by historic records of discharges and contemporary chemistry that refinery wastes are in fact present, should satisfy a pathway analysis. Indeed, such evidence, if uncontroverted, may be sufficient to succeed in a motion for partial summary judgment on liability.[71]

In a major off-shore oil spill, a pathway can be inferred from the off-shore release and the subsequent presence of oil from that release in the marsh. Aerial surveillance data may also be helpful such a case. Evidence of a sub-surface release of oil and its movement to shore–as evidenced by that oil appearing on the shoreline and corroborative aerial photos—are more than sufficient to connect the release to the onshore impact. A minute-by-minute reconstruction of the exact movements of all releases at all times is costly, if not scientifically impossible, and certainly not required by law.

The DOI regulations do not require the elements that defendants typically argue are essential to prove causation in this case. The regulations do not require the trustees prove a quantum of causation in order to establish injury at a particular site. The acceptance criteria require a showing, that "a biological response is often the result of exposure to oil or hazardous substances."[72] This is based on the scientific literature, i.e., "the biological response must be a commonly documented response resulting from exposure to oil or hazardous substances."[73] This serves to exclude biological responses that are "caused predominantly by other environmental factors, such as disturbance, nutrition, trauma, or weather."[74] It is in this sense that the regulations require the biological response to be "predominately caused" by oil or hazardous substances.[75] But the studies used to show that particular biological responses are generally caused by particular types of hazardous substances need not be chemical or species-specific.[76]

[68]43 C.F.R. §11.14.

[69]Stratus Consulting, Report of Injury Assessment and Injury Determination: Coeur d'Alene Basin Natural Resource Damage Assessment (2000), *available at* http://restorationpartnership.org/pdf/a-Front_Material.pdf.

[70]43 C.F.R. §11.61.

[71]*N.J. Dep't of Envtl. Prot. v. Exxon Mobil Corp.*, 393 N.J. Super. 388 (App. Div. 2007).

[72]43 C.F.R. § 11.62(f)(2).

[73]*Id.*

[74]*Id.*

[75]51 Fed. Reg. 27710 (Aug. 1, 1986).

[76]*See Ohio*, 880 F. 2d at 472. Thus, demand for site specific studies of particular chemicals is inconsistent with the regulations.

Injury at a particular site is often established by showing a statistically significant difference between the condition of resources in the assessment area and a control area.[77] The regulations do not impose any requirement of a quantum of difference. Any statistically significant difference is sufficient. The only other site-specific link required between a release and the injury is a pathway between the defendant's discharges or release and the resource.

To be compensable under CERCLA or the CWA, the injury must result from a discharge of oil or release of a hazardous substance, or from a product of reactions resulting from the discharge of oil or release of a hazardous substance. This result is established by the demonstration of a link between the discharge or release and the injured resource, called the pathway determination as provided in § 11.63.[78]

Furthermore, DOI rejected the notion that trustees must link injuries to specific releases or spills and made it clear that damage assessments could be made based on cumulative releases.[79]

Thus, the DOI regulations are entirely consistent with *Acushnet*'s approach to causation. Injury is triggered when there is any statistically significant difference in conditions between control and assessment areas. There is no requirement of "substantial" or "proximate" cause.

Furthermore, even in the case of torts, defendant's causation theories are erroneous. The courts have analogized causation in environmental cases to the principles of "differential diagnosis," or "differential etiology," in tort cases.[80] Differential diagnosis is "a standard scientific technique of identifying the cause of a medical problem by eliminating the likely causes until the most probable one is isolated."[81] The Sixth Circuit has approved its use in tort cases and held that it satisfies *Daubert* standards.[82]

[77]The use of control areas serves to separate out, to the extent possible, other possible causes of the injury. 43 C.F.R. § 11.62(f)(3); *Ohio*, 880 F.2d at 470.

[78]51 Fed. Reg. 27683 (Aug. 1, 19886)(emphasis added).

[79]*See* 51 Fed. Reg. 27706 (Aug. 1, 1986).

[80]*Clausen v. M/V New Carissa*, 339 F.3d 1049, 1056-57 (9th Cir. 2003).

[81]*Clausen*, 339 F.3d at 1057.

[82]*See Hardyman v. Norfolk & W. Ry. Co.*, 243 F.3d 255, 260-61 (6th Cir. 2001). The cases typically cited by defendant in support of its theory of specific causation represent one method of established causation in a toxic tort case. Contrary to defendant's assertions, it is not the only method, as the differential diagnosis cases make clear. *See Hardyman*, 243 F.3d at 262. Defendant cites *Cavallo v. Star Enterprises*, 892 F. Supp. 756 (E.D. Va. 2996), aff'd in part and rev'd in part, 100 F.3d 1150 (4th Cir. 1996), cert. denied., 522 U.S. 1044 (1998). In *Cavallo*, the court explicitly distinguished the case before it, involving novel claims for injuries to individuals from uncertain exposure to low concentrations of fuel constituents, from cases such as the one here, where more direct exposure and more dramatic effects would obviate the need for toxicological evidence. *Cavallo*, 892 F. Supp. At 773-74; *cf. Westberry v. Gislaved Gummi AB*, 178 F.3d 257, 263-64 (4th Cir. 1999) (rejecting need for precise estimates of exposure to toxicity thresholds). In *Roche v. Lincoln Properties Co.*, 278 F. Supp. 2d 744 (E.D. Va. 2003), a toxic tort based on mold, there was a complete failure by the plaintiffs to show that they were allergic to the molds alleged to be causing their illnesses, and a complete failure to rule out their other many allergies. *See* 278 F. Supp. at 751-53. The court found that the plaintiffs' expert was not in fact using differential diagnosis. *Id.* at 764. While *Mancuso v. Consolidated Edison Co.*, 967 F. Supp. 1437 (S.D.N.Y. 1997), cites the Second Circuit's decision in *McCullock v. H.B. Fuller Co.*, 61 F.3d 1038 (2nd Cir. 1995), endorsing differential diagnosis, it does not appear to have used that framework in its decision.

Differential diagnosis involves identification of the potential causes of a phenomenon based on evaluating which ones are generally capable of causing the phenomenon.[83] The expert then proceeds systematically to eliminate alternatives based on an examination of the evidence.[84] The expert must provide reasons for rejecting alternatives using scientific methods.[85] Rejection of a hypothesis must be founded on more than "subjective beliefs or unsupported speculation."[86]

Thus, differential diagnosis "is not a method which lends itself to establishing a 'direct link' between an activity and an injury."[87] Rather, it proceeds by eliminating alternatives. It is important to keep in mind that the expert need not eliminate all possible causes.[88] The inability to eliminate all potential causes goes to the weight of the opinion, not its admissibility.[89] Only where the defendant "points to a plausible alternative case and the expert offers no explanation for why he or she has concluded that was not the sole cause, is that expert's methodology is unreliable."[90]

The reasoning behind rejecting an alternative need not be numerical or based on mathematical models.[91] The test is whether the expert's reasoning is based on objective facts and is consistent with the practice in the field.[92] In particular, proof of causation through differential diagnosis does not require a showing of exposure over a specific toxicity threshold or a dose-response relationship.[93] As the Sixth Circuit noted, "it makes little sense to impose such a requirement in cases where the requisite studies have not been done to establish such a relationship in sufficiently similar situations."[94] To impose the requirement is simply to deny recovery in the absence of suitable studies.[95] Nor does there need to be a conclusive demonstration in the scientific literature of a cause and effect relationship between a particular chemical and a particular condition if the evidence is otherwise persuasive that the chemical is in fact the cause of the condition.[96] Finally, it is not necessary to determine the precise mechanism of injury, if the causal agent is sufficiently identified.[97]

[83] *Clausen*, 339 F.3d at 1057-58; *Hardyman*, 243 F.3d at 260.
[84] *Clausen,* 339 F.3d at 1058; *Hardyman*, 243 F.3d at 260-61.
[85] *Clausen*, 339 F.3d at 1058.
[86] *Id.*
[87] *Hardyman*, 243 F.3d at 262.
[88] *Nemire v. Mitsubishi Motors Corp.*, 381 F.3d 540, 553 (6th Cir. 2004); *Jahn v. Equine Services, PSC*, 233 F.3d 382, 390 (6th Cir. 2000).
[89] *Jahn*, 233 F.3d at 390.
[90] *Heller v. Shaw Industries, Inc.,* 167 F.3d 146, 156 (3rd Cir. 1999) (emphasis in original) (*quoting In re Paoli R.r. Yard PCB Litigation*, 35 F.3d 717, 759, n.27 (3rd Cir. 1994).
[91] *See Jahn v. Equine Services, PSC,* 233 F.3d at 391-92; *Heller v. Shaw Industries, Inc.*, 167 F.3d at 158.
[92] *Jahn*, 233 F. at 391-92.
[93] *Hardyman*, 243 F.3d at 262, 265-66; *Westberry v. Gislaved Gummi AB*, 178 F.3d 257, 264 (4th Cir. 1999). Defendant's often demand for exposure data reflecting "actual" conditions, or species-specific toxicity. The use of modeled exposure data is standard, and is likewise sufficient.
[94] *Hardyman*, 243 F.3d at 265.
[95] *Id.* at 265; *see also Westberry*, 178 F.3d at 264.
[96] *Clausen,* 339 F.3d at 1059; *Heller*, 167 F.3d at 157; *Kennedy v. Collagen Corp.*, 161 F.3d 1226, 1228-30 (9th Cir. 1998).
[97] *See Jahn*, 233 F.3d at 391-92.

In *Clausen*, the court applied the principles of differential diagnosis to proof of causation in a case brought by oyster growers seeking damages to shellfish beds from an oil spill.[98] The defendants mounted a challenge under *Daubert* to the plaintiff's expert on causation; they argued that he should not have attributed injury to toxic effects of oil because he could not establish a toxicity threshold and because the scientific literature had not verified the precise mechanism of injury hypothesized by the expert.[99]

The court rejected these arguments. It endorsed the use of differential diagnosis as an accepted and valid scientific methodology under *Daubert.*[100] It held that the plaintiffs need not establish a minimum toxicity threshold or provide precise estimates of exposure to establish causation.[101] The court reasoned that while there was no scientific literature established toxicity through contact with oil in shellfish, there was considerable evidence of toxicity in other animals.[102] The court noted that the lack of literature was not surprising, since oil spills were relatively rare and there were few opportunities for scholarly research.[103] Accordingly, the court held that differential diagnosis did not require corroboration in the literature, so long as the analysis was based on objective evidence.[104] The court considered examination of the shellfish, in combination with evidence of contact with oil and literature showing oil toxicity with other animals, as sufficient to show that oil was a possible case of the shellfish mortality.[105]

In *Clausen*, the defendants offered an alternative explanation for the shellfish mortality. They argued that low salinity could explain the injuries.[106] But examination of rainfall records, chemical data, and the nature of the injury led the plaintiffs' expert to reject low salinity as the cause. This left oil toxicity as the most likely explanation. The court endorsed this conclusion, since it was based on consideration of objective evidence.

What, if anything, a trustee must prove beyond a nexus between a release and injury is a controversial question. Common sense suggests that an oil-covered marsh suffers a natural resource injury. However, polluters have argued that exposure assessments–*e.g.*, observations or measurements of chemical changes in soil, sediment water or other resources–are not enough [5]. This argument incorrectly equates ecological injury with toxic injury. A natural resource can suffer an "adverse change or impact" in ways other than toxicological impacts, for example, physical changes such as being smothered by oil. In those circumstances, it should not be necessary for a trustee to adduce additional evidence of the oil's precise chemistry and bioavailability. Such information adds little to the injury analysis and suggests an artificially narrow definition of "injury." Narrow

[98]339 F.3d at 1057.
[99]*Id.*
[100]*Clausen*, 339 F.3d at 1057-59.
[101]*Id.* at 1059-60.
[102]*Id.* at 1060-61.
[103]*Id.* at 1061.
[104]*Id.* at 1060-61.
[105]*Id.* at 1061.
[106]339 F.3d at 1061.

interpretations such as this, as well as of the causation standard and as will be seen, the rebuttable presumption, generally frustrate the purpose of the environmental statutes and undermine the explicit authority of the natural resource trustee.

4. Rebuttable Presumption

Congress fortified environmental statutes with rebuttable presumptions in order to make trustees' decisions less vulnerable to scrutiny or attack. Given the judgments and inferences essential to the trustee's task, such fortification is of great importance. The rebuttable presumption also benefits the trustee in cases of record review under the Administrative Procedure Act (APA). It is presumed that the trustee's decisions based on the record are appropriate.[107] Whether the presumption is applicable is a question of law for the court. It need not interfere with the finder of fact's (*e.g.*, a jury's) determination of damages.

CERLCA provides that a damage assessment conducted in accordance with the DOI regulations have the force and effect of a rebuttable presumption in any administrative or judicial proceeding under CERCLA.[108] If the trustee's assessment is challenged in court, the jury is instructed that the trustee is presumed to have reached appropriate conclusions, and the jury must accept that fact unless the responsible party produces enough evidence to convince them otherwise. Rebuttable presumptions are also available to trustees in administrative or judicial proceedings under CWA[109] and OPA.[110] Although trustee compliance with the DOI assessment regulations is voluntary, a trustee who does not conduct an assessment consistent with regulatory guidance for assessment will not enjoy the benefit of a rebuttable presumption.

By analogy, trustees must show that response costs[111] incurred to be reimbursable must be "not inconsistent" with the NCP[112] as opposed to "consistent"

[107]Judicial review under the Administrative Procedure Act ("APA"), 5 U.S.C. §706(1)-(2), provides that "a person suffering legal wrong because of agency action or adversely affected or aggrieved by agency actions within the meaning of a relevant statute, is entitled to judicial review thereof." 5 U.S.C §702. The APA requires Courts to set aside decisions that are "arbitrary, capricious, [or] an abuse of discretion." 5 U.S.C. §706(2) (A), (E). Agencies must provide an adequate rationale for their actions. Richard J. Pierce, Jr., Administrative Law 84-85 (2008). They must also address outside criticisms and incorporating expert evidence and support. *See Motor Vehicle Mfrs. Ass'n v. State Farm Ins.*, 463 U.S. 29 (1983). Among other holdings, the Court in *State Farm* required agencies to "justify [their decisions] in neutral, expertise-laden terms to the fullest extent possible." Elena Kagan, *Presidential Administration*, 114 Harv. L. Rev. 2245, 2381 (2001). Often referred to as the "hard look" doctrine, these requirements theoretically allow courts to improve agency policy. Originally formulated by the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit in the 1960s and 1970s, and embraced by the Supreme Court in *State Farm*. For further discussion of the formulation of the "hard look" doctrine, see Scott A. Keller, *Depoliticizing Judicial Review of Agency Rulemaking*, 84 Wash. L. Rev. 419, 427-52 (2009). For an influential case from the District of Columbia Circuit, see *Ethyl Corp. v. EPA,* 541 F.2d 1, 35 (D.C. Cir. 1976).

[108]42 U.S.C. §9607 (f)(2)(C).

[109]The government has taken a narrow view in litigation that it is a "burden shifting exercise" allowing defendant to present "alternative evidence on damages" *General Electric v. U.S. Dep't of Commerce*, 128 F.3d 767, 772 (D.C. Cir. 1997) (citing 61 Fed. Reg. 443 (Jan. 5, 1996)).

[110]33 U.S.C. §2706(e)(2).

[111]42 U.S.C. §9601(25).

[112]42 U.S.C. §9607(a)(4)(A) ("not inconsistent with").

with the NCP.[113] In effect, the trustee gets a "presumption of consistency."[114]

How the rebuttable presumption is applied in practice remains to be seen. A rebuttable presumption's evidentiary effect is to shift the burden of producing evidence. The most famous example, drawn from criminal law, is the presumption of innocence, which requires the prosecutor both to come forward with proof or evidence of guilt and to bear the burden of persuasion. The defendant has no burden of proof and may simply rest at the conclusion of the prosecution's case.

As an initial matter, there are two aspects of the "burden of proof" in civil litigation: the burden of production and burden of persuasion, which are both normally placed upon the plaintiff. The burden of production requires the plaintiff to present evidence to establish a *prima facie* case. Producing evidence sufficient to satisfy the burden of production allows the plaintiff to survive a directed verdict/judgment as a matter of law.

Once the plaintiff has produced evidence to establish its *prima facie* case, the plaintiff must then meet its burden of persuasion. The burden of persuasion is met when the plaintiff has produced sufficient evidence (preponderance of the evidence, clear and convincing evidence, etc.) to prove each element of its claim and convince the finder of fact to rule in the plaintiff's favor. If the plaintiff fails to meet its burden of persuasion, the court must rule in favor of the defendant.

There are a number of possible effects of the rebuttable presumption. First, it is possible that the rebuttable presumption will shift only the burden of production, but not the burden of persuasion. Under this scenario, if the defendant does not present any evidence, or presents evidence that does not rebut the presumption, the judge must accept the presumed fact as true. One approach (called the "bursting bubble" theory) states that if the defendant presents any rebuttal evidence, the presumption disappears completely, in which case the plaintiff must then establish its prima facie case as if the presumption had never existed. The presumption has little further effect on the litigation once the defendant presents any rebuttal evidence.

A less extreme, and more likely, approach that courts have taken to determine the effect of a rebuttable presumption is to use the comments to Federal Rule of Evidence 301 as guidance. These comments state that upon presentation of rebuttal evidence, the presumption does not disappear, but the finder of fact may still infer that the presumed fact is correct [6] [7].[115] In such a case, the presumption continues to have evidentiary weight, but it does not require the finder of fact to find that the presumed facts are true. It does however reduce the power of the trial court to take a case away from a jury.

Another possibility is that the rebuttable presumption shifts both the burden of production and the burden of persuasion. Under this scenario, the defendant

[113]42 U.S.C. §9607(a)(4)(B) ("consistent with").

[114]*Fireman's Fund Ins. Co. v. City of Lodi, Ca.*, 302 F. 3d 928, 953 (9th Cir. 2003).

[115]Support for this positions includes Fed. R. Ev. 301; case law on presumptions in other areas of the law (*e.g.,* employment discrimination, see *St. Mary's Honor Center v. Hicks*, 509 U.S. 502 91993).

would have the burden of presenting evidence sufficient to disprove the presumed facts. If the defendant presents no rebuttal evidence at all, the plaintiff is entitled to a directed verdict. If the defendant presents rebuttal evidence, but that evidence is not sufficient to disprove the presumed fact, the court must find in favor of the plaintiff on that issue. The defendant can only succeed if it presents sufficient evidence to disprove the presumed fact under whatever standard applies (possibly a preponderance, but we will need to research this to be sure) [8].[116]

NOAA's interpretation of the rebuttable presumption (which is not authoritative, since it is an agency interpretation of a presumption created by Congress and *Chevron* deference arguably does not apply [8][117]) supports shifting both the burden of production and the burden of persuasion, which would require the responsible party to present sufficient evidence to disprove the findings in the trustees' assessment. An article by Yen Hoang presents strong policy arguments to support shifting both burdens to the defendant in an OPA NRDA case: interpreting the rebuttable presumption to shift the burden of production and the burden of persuasion would further Congress' intent in creating the OPA rebuttable presumption by giving trustees a powerful litigation advantage, discouraging unnecessary litigation, and incentivizing the use of NOAA's regulatory assessment procedures [8]. The presumption serves the same policy goals of shifting from "causation" to a mere "nexus" [9].

At least one CERCLA case has held that the rebuttable presumption applies to every determination made by the trustees, not just to the final allocation of damages.[118] In other words, a defendant can present rebuttal evidence to attack not only the trustee's final damages allocation, but also any individual pieces of the assessment that support the allocation of damages (*e.g.*, findings from particular studies).

CERCLA provides: "Any determination or assessment of damages to natural resources for the purposes of this Act made under subsection (d) of this section... in accordance with the regulations promulgated under section 9561(c) of this title shall have the force and effect of a rebuttable presumption...."[119] The regulation similarly provides: "Any determination or assessment of damages to natural resources made... in accordance with this part shall have the force and effect of a rebuttable presumption...."[120] Other than this requirement that the trustee must conduct its assessment in accordance with the regulations, the statues and regulations provide no specific details on what steps a trustee must take to invoke the rebuttable presumption.

The regulations with which the trustees must comply to obtain a rebuttable

[116]Support for this position includes NOAA NRDA rule, 61 Fed. Reg. 440.

[117]*See also Chevron U.S.A., Inc. v. Natural Resource Defense Council, Inc.*, 467 U.S. 837 (1984) (holding that courts should defer to any reasonable interpretation by an agency of ambiguities in a statute that empowers it to act with the force of law).

[118]*United States v. Asarco Inc.*, No. CV 96-0122-N-EJL, CV 91-342-N-EJL, 1998 WL 1799392 (D. Id. March 31, 1998).

[119]42 U.S.C. §9607(f)(2)(C).

[120]15 C.F.R. §990.13.

presumption are found in 15 C.F.R. Part 990. These regulations are not mandatory–a trustee may perform an assessment using methods other than those provided in these regulations–but a rebuttable presumption applies only to those assessments conducted in accordance with these regulations.[121] The regulations provide guidance for preassessment, restoration planning, and restoration implantation phases. Although it is not clear from the statues or regulations, it seems likely that a trustee must demonstrate compliance with the regulations applicable to all three phases to successfully invoke the rebuttable presumption. This includes, among many other things, demonstrating the trustee's damage assessment is "reliable and valid for the particular incident"[122] and complying with the rules regarding cooperation and coordination with the responsible party.[123]

5. *Daubert*

Congress decided that a rebuttable presumption applies to trustee decisions based on the methodology set forth in applicable regulations. If this is true, Congress has, in effect, made the NRDA trustee a gatekeeper of sound NRDA science. This raises the question of whether courts must (or may) impose an additional set of *Duabert*[124] requirements on the work of the NRDA trustee. The answer is probably not. *Daubert* specifically notes that "in the case of particular scientific technique, the court ordinarily should consider...the existence or maintenance of standards controlling the technique's operation."[125] In NRDA, the standards are set by Congress. Second guessing a NRDA based on defense experts who follow lawyers' instructions and ignore applicable requirements makes no sense and would only serve to raise the cost of NRDAs, while inviting time-consuming trials to attempt to second guess trustees.

6. Record Review

In addition to the rebuttable presumption, there is a potential argument that a trustee's final assessment is a final agency action subject to review under the Administrative Procedure Act ("APA"), which would require a court to apply a more deferential record review/arbitrary and capricious standard to any findings in the assessment. Some courts have dismissed this argument in the CERCLA context,[126] but NOAA states in its final NRDA rule that it believed the APA standard should apply. It is not clear at this time whether the OPA NRDA process is different from the CERCLA NRDA process in such a way that would

[121] *Cf. Utah v. Kennecott Corp.*, 801 F. Supp. 553, 567-68 (D. Utah 1992)("In this [CERCLA] case the State chose not to follow the existing federal regulations in making its determinations. It was not required to do so, but failure to do so eliminates the presumption of validity and correctness which otherwise the State would enjoy.").

[122] 15 C.F.R. § 990.27(a)(3); *General Elec. Co. v. United States*, 128 F.3d 767, 772 (D.C. Cir. 1997).

[123] 15 C.F.R. § 990.14(c).

[124] *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).

[125] *Id.* at 594.

[126] *United States v. Asarco Inc.*, No. CV 96-0122-N-EJL, CV 91-342-N-EJL, 1998 WL 1799392 (D. Idaho March 31, 1998).

support the application of the APA standard of review as there are no provisions addressing the issue. If so, the APA standard would present a difficult burden for the defendant to establish, regardless of whether it is coupled with or applied separately from the rebuttable presumption.

In an NRDA record review, a trustee creates an administrative record that documents the evidence that the trustee considered and relied on in reaching its NRDA conclusions. In deciding whether to apply a rebuttable presumption, the trial court looks at the administrative record to determine whether the trustee's decision complies with applicable law and is not otherwise arbitrary or capricious. There is a strong presumption of reasonableness that must be accorded to the trustee's exercise of statutorily designated responsibility [1].

Any other approach to trustee decision-making would frustrate the rebuttable presumption. For example, if trustee decisions were subject to a traditional battle of experts, no benefit would inure from the rebuttable presumption. Courts are not simply free to substitute their judgment as to the wisdom of a particular trustee action that is statutorily authorized, and not otherwise defective because it is arbitrary or unreasonable.

Several courts have rejected the notion of record review because of alleged conflicts with the right to a jury trial.[127] There is no conflict, however, between a judicial finding that a trustee has a rebuttable presumption–*i.e.*, the RP has failed to show that the decision was arbitrary and capricious or not otherwise in accordance with law[128]–and a jury's determination that a particular restoration plan is reasonable and appropriate under the circumstances.

CERLA does not contain a record review provision for decisions associated with trustee NRDAs. Nonetheless, trustees have created administrative records for selection of restoration plans and have attempted to argue that record review for restoration plan decisions is supported by general administrative law principles.

7. Conclusion

The NRDA process provides valuable information and data for trustees engaged in assessing and restoring natural resources. NRDAs are flexible tools that enable trustees to both follow applicable legal and policy requirements and to exercise discretion and judgment as needed under the particular circumstances being addressed. However, it is important for courts to avoid imposing unnecessary and unrealistic burdens on the work of the trustee that legislatures did not authorize.

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