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The Reauthorization of CERCLA NRDs: A Proposal for a Reformulated and Rational Federal Program

Patrick H. Zaepfel

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THE REAUTHORIZATION OF CERCLA NRDs:
A PROPOSAL FOR A REFORMULATED AND
RATIONAL FEDERAL PROGRAM

PATRICK H. ZAEPEL†

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With a bold Republican majority in both houses, the 104th Congress examined the reauthorization of many of the federal environmental statutes, including the Comprehensive Environmental Resource, Compensation and Liability Act (CERCLA),1 popularly known as “Superfund.” While the 104th Congress had very little success in its environmental mission, these issues are being revisited by the 105th Congress. Because of the extreme costs associated with CERCLA clean-ups and the disincentive the Act creates to the transfer of property, CERCLA reform is a linchpin of the Republican agenda on revising the federal environmental effort. One of the more hotly contested CERCLA reform issues is the alteration of the scheme that allows designated trustees to sue to recover Natural Resource Damages (NRDs) resulting from the loss of or injury to the natural resources within their trusteeships.

CERCLA NRDs are a statutory expansion of common law principles and have many inherent problems, including the uncertain science of valuation of natural resources, the extent of the trustee-ships and vague statutory provisions. This Article seeks to provide a thorough understanding of CERCLA NRDs, thereby enabling the Congressional debate to be judged in its proper context. If CERCLA NRDs are altered, trustees will be forced to reteach themselves the rules of an already difficult game. If CERCLA NRDs are eliminated (which seems unlikely at this date), other avenues of recovery may become attractive to certain trustees. Given both the uncertain results associated with the untried NRD experiment and the large number of entities involved in this process, Congress should proceed cautiously with its efforts.

This Article examines the proposed reform of the CERCLA NRD provisions and suggests that appropriate remedies can be found by fine-tuning the existing program and reformulating it in an independent NRD statutory structure. The Article first provides a brief description of the role of environmental regulation in society and the statutory scheme behind CERCLA.2 It then describes the fundamental principles of CERCLA NRDs and examines the


2. For a discussion of the background of CERCLA, see infra notes 16-63 and accompanying text.
various parties that may have standing as CERCLA NRD trustees. Next, this Article discusses the economic theory behind the valuation of an injury to a natural resource and the process the trustees may follow to apply this economic theory to a particular injury. It then details the regulatory history of the CERCLA NRD program, the judicial decisions that have confused its application, and the real world practices of NRD trustees. Finally, it looks at the various congressional and executive proposals to reform the NRD program, and suggests a more reasonable reform alternative.

II. Market Failures and the Role of Environmental Law

In many senses, the purpose of environmental law goes beyond the rhetoric of protecting human health and the environment, and serves to provide actors with a level playing field on which to operate. Providing economic participants with certainty, without guaranteeing a fundamental tenet of enforcement, should be an important consideration in the formulation of general policy goals of environmental enforcement. Pollution, despite its negative connotation, is a natural by-product of life, especially human life. Environmental law cannot avoid this fact, and it cannot absolutely protect against pollution without halting economic progress and, some argue, even maintenance of the human species. Environmental law instead needs to advocate for pollution reduction, internalization of costs, and individual accountability in the quest for the most economically efficient market equilibrium. By remembering the need for certainty, environmental regulators can avoid many of the bitter attacks that they have endured over the past several years.

The advent of environmental law as a regulatory system marks the beginning of a transformation of capitalism. Unregulated capitalism does not provide a mechanism to account for the costs imposed upon society by pollution resulting from production and maintenance. Producers of goods and services will not, of their own accord, incorporate those costs shifted to the environment into the market price of their wares, primarily because they do not bear the costs, society does. The “Tragedy of the Commons” is that each rational herdsman will want to graze an additional steer on the commons to maximize his revenues, leaving the commons over-

3. For a discussion of CERCLA NRD Claims, see infra notes 64-95 and accompanying text.
4. For a discussion of the Ohio v. Department of Interior and Colorado v. Department of Interior cases, see infra notes 271-313 and accompanying text.
5. For a discussion of congressional proposals for NRDs, see infra notes 438-64 and accompanying text.
grazed and dilapidated. This desire arises from the fact that rational herdsman will, by placing another steer on the commons, receive the full benefit of that placement, but only pay a fraction of the true cost of that placement. The remainder of the cost is borne by society. In the context of the modern capitalistic welfare state, government may end up paying for the rehabilitation of the commons. If no such government apparatus exists, then the cost is realized as a loss of the commons for all, even those that grazed their herd carefully and conservatively upon the commons. Through regulation, society can seek to correct this market failure by taxation or coercion, making each rational actor internalize the costs placed upon society by his production. Because, in theory, regulation will make each rational actor face the true costs of his action, the market will be able to function as it should, with individual benefit maximization and a profit motive facilitating a proper market equilibrium.

The practical application of this theory brings with it many fundamental policy questions. First, what is the appropriate method to internalize the societal cost previously unrealized? Should internalization be accomplished through permits, command-and-control


8. See id.

9. The field of “Ecological Economics,” which analyzes the cost-benefit of sustainable development and allocation of natural resources, has sprung to life in recent years. See Robert Constanza et al., The Ecological Economics of Sustainability: Making Local and Short-Term Goals Consistent with Global and Long-Term Goals (1990) (presenting abstracts of current works in ecological economics by various authors).


11. An important innovation has been the creation of marketable permits, which allow the market to establish the value of the right to pollute. See Richard B. Stewart, Economics, Environment, and the Limits of Legal Control, 9 Harv. Envtl. L. Rev. 1, 11-16 (1985) (discussing economic-based incentive system of transferable pollution permits). In addition, obtaining a permit imposes three sorts of costs upon the applicant: (1) costs of obtaining the permit, including application fees, and the consultants' and attorneys' fees for design, testing and advocacy; (2) costs of staying within the limits set by the permit; and (3) costs of disclosure, both to the public and the regulatory agency, that are contained within the permit conditions.
regulations, taxes, penalties or imprisonment? Second, what is the appropriate magnitude of the costs that should be internalized? Third, how should society reallocate costs that have already been thrust upon it by past pollution? Should society spread these costs among the whole, or should it seek to redistribute these costs to some defined sub-group of society? If the latter, how should society define this sub-group?

CERCLA, through its remedial, cost recovery and NRD provisions, seeks to provide answers to the questions regarding past pollution. The United States is pockmarked with countless acres of contaminated soil and groundwater. Congress enacted CERCLA not only to clean-up contaminated sites, but also to allocate the costs of remediation and natural resource injury to the corporations that benefitted from the pollution. These environmental costs then become a normal cost of doing business, a consequence to be borne by the corporation and its consumers as the market allows. With full internalization of environmental costs, a purchaser can choose among goods and services based upon the true cost, or at least a "truer" cost, of the good or service. This theoretically results in a more accurate market equilibrium. Thus, regulation serves to correct the market failure.

III. THE CERCLA PROCESS

In 1980, officials at the Environmental Protection Agency (EPA) used public concerns aroused by dramatic discoveries of contamination at Love Canal in New York to move Congress to enact

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12. The timing of the method of choice is an important consideration with respect to this question (i.e., proactive versus retroactive placement).


15. The counter-argument to this theory is that society as a whole benefitted from the pollution as well as the corporations and individual owners. Because the goods and services produced were not priced at their "full cost," society benefited from the creation of additional jobs and cheaper goods and services. Statement of Sen. Smith, Senate Committee on Environment and Public Works, Subcommittee on Superfund, Waste Control and Risk Assessment, May 11, 1995. The allocation of the benefit between society and the polluter, however, is unknown.
CERCLA. CERCLA, commonly known as "Superfund," provides for the clean-up of sites polluted by hazardous substances. As a remedial statute, CERCLA was enacted to supplement the meager remediation provision found in sections 7002 and 7003 of the Resource Conservation and Recovery Act (RCRA), which failed to provide a comprehensive system for the clean-up of old and abandoned sites. In addition, the strict and severe costs that CERCLA imposed provided added incentives for businesses to complete due diligence checks before the purchase of property and to assure that their wastes were disposed of with appropriate care.

Through the primary enforcement authority of EPA, CERCLA seeks to protect the public health and the environment by providing several mechanisms for the clean-up of contaminated sites. CERCLA section 104 authorizes the President to act to address conditions when there is either: (1) a release or a substantial threat of release of any "hazardous substance" into the environment; or (2) "a release or a substantial threat of release . . . of any pollutant or contaminant which may present an imminent and substantial danger to the public health or welfare."
EPA acts to effectuate environmental clean-up either by issuing a Unilateral Administrative Order (UAO) to some or all of the Potentially Responsible Parties (PRPs) requiring them to correct the conditions, or by proceeding with the remediation itself and subsequently drawing money from the Superfund to pay for it.

A CERCLA clean-up action consists of either a removal or a remedial action, although the CERCLA response at a particular site may use a combination or series of these two types of actions. Removal actions, which allow EPA to react relatively quickly to a release or threat of release, are limited by the statute to two million dollars in costs and twelve months in duration. Remedial actions


24. See id., 42 U.S.C. § 9604. The Superfund was originally established with $1.6 billion in its coffers. Currently, the amount is around $8.5 billion. The Fund receives monies from the Corporate Environmental Tax, levied primarily on chemical manufacturers, as well as more general Congressional appropriations.

25. See id. § 101(23), 42 U.S.C. § 9601(23). Section 101(23) provides, in pertinent part, as follows:

[t]he terms 'remove' or 'removal' means (sic) the cleanup or removal of released hazardous substances from the environment, such as actions as may be necessary taken in the event of the threat of release of hazardous substances into the environment, such actions as may be necessary to monitor, assess, and evaluate the release of hazardous substances, the disposal of removed material, or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damages to the public health or welfare or to the environment, which may otherwise result from a release or threat of release . . . .

Id.

26. See id. § 101(24), 42 U.S.C. § 9601(24). Section 101(24) provides, in pertinent part, as follows:

[t]he terms 'remedy' or 'remedial action' means (sic) those actions consistent with permanent remedy taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment . . . .

Id.

28. See id. § 104(c)(1), 42 U.S.C. § 9604(c)(1). Section 104(c)(1) provides:

[u]nless (A) the President finds that (i) continued response actions are immediately required to prevent, limit, or mitigate an emergency, (ii) there is an immediate risk to public health or welfare to the environment, and (iii) such assistance will not otherwise be provided on a timely basis, or (B) the President has determined the appropriate remedial actions pursuant to paragraph (2) of this subsection and the State or States in
are the more administratively and usually technically intensive of the two types of actions and consist of any action that exceeds these limitations. 29

To proceed through the CERCLA remedial cycle, a contaminated site must suffer through a parade of analyses and reports, including the Preliminary Assessment (PA), the Site Investigation (SI), the Remedial Investigation (RI), the Feasibility Study (FS), the Record of Decision (ROD), the Remedial Design (RD), and the Remedial Action Plan (RAP). 30 Usually, the progress of a remedial site through this parade depends on factors such as the danger associated with the site, the competence and workload of the program and legal personnel assigned to the site, the political climate, and, most importantly, the EPA region's need for a "bean" to justify its budget. As the parade progresses, the reports and analyses become more technical and complex, and consequently take more time to assemble.

During the PA, EPA completes an estimate of a site's relative contamination to determine if the site warrants further study. If EPA determines that further analysis is warranted, it will complete an SI. 31 The SI is a more detailed investigation into the nature of the site, during which the site is scored according to the Hazard Ranking System (HRS), a mathematical model. 32 The HRS not only determines if a site should be included on the National Priorities List (NPL), 33 but also assigns priority to a site based upon its

which the source of the release is located have complied with the requirements of paragraph (3) of this subsection, or (C) continued response action is otherwise appropriate and consistent with the remedial action to be taken obligations from the Fund, other than those authorized by subsection (b) of this section, shall not continue after $2,000,000 has been obligated for response actions or 12 months has elapsed from the date of initial response to a release or threatened release of hazardous substances.

Id. 29. See id.
31. See 43 C.F.R. § 11.24. (describing process to screen information on site relating to discharge or release).
33. See id. A site is placed on the NPL if it scores above a 28.5 on the HRS. See MAZMANIAN AND MORELL, supra note 18, at 31. While the HRS depends upon objective criteria such as the hydrogeology of the site and the amount of people affected by the contamination, subjectivity is inherent to several of the factors. This may allow political influence to sway the listing determination. See THOMAS
If a site is placed on the NPL, EPA may proceed with the RI itself or order some or all of the PRPs to perform it, whether through a UAO or an Administrative Order on Consent (AOC). The RI is a meticulous and time-consuming analysis of the geology, hydrogeology, hydrology and contamination of the site and the surrounding area. The FS sets out the various options for the remediation of the site contamination analyzed in the RI.

After finalizing the FS, EPA releases a Proposed Remedial Action Plan (PRAP) announcing to the public the remedial method EPA proposes for the site and requesting public comment. Before and during this public comment period, the state and EPA may enter into fairly sophisticated negotiations concerning the remedy at the site. This occurs as a function of the National Contingency Plan (NCP), the regulation promulgated by EPA to govern the CERCLA process; however, the amount of input EPA accepts from the state depends on the working relationship between the program and technical personnel at the two agencies and the need for the state to concur with the remedy. This concurrence is required if the remedial action is to be paid by EPA from the Superfund.

After the public comment expires, EPA issues the ROD for the remedial action as well as its response to the comments received. The ROD documents the options that EPA examined as well as the factors that support its decision, with the goal of achieving, as closely as possible, four broad statutory requirements: (1) cost effectiveness; (2) the preference for permanent and significant reduc-
tion in the volume, toxicity or mobility of the hazardous substance, pollutant or contaminant;\textsuperscript{42} (3) the protection of human health and the environment;\textsuperscript{43} and (4) the federal and state applicable or relevant and appropriate requirements (ARARs).\textsuperscript{44} By using ARARs as the basis for clean-up standards, CERCLA avoids enunciating its own express clean-up numbers and methodologies and allows for variability among the states.\textsuperscript{45} Under all circumstances, a CERCLA lawyer must remember that the ROD is the administrative keystone to the remedy at the site and to the obligations that EPA will seek to secure for the performance of the remedy.

The RD consists of the engineering plan for the Remedial Action, and the RAP outlines how the RD will be implemented during the Remedial Action. Clean-ups are conducted according to guidelines set out in the NCP.\textsuperscript{46}

To replenish the Superfund, CERCLA section 107 creates a cause of action for cost recovery from PRPs.\textsuperscript{47} A PRP is liable for response costs, natural resource damages, and costs of specified health assessments if the following four elements are met:

\begin{itemize}
\item \textsuperscript{42} See id. § 121(b), 42 U.S.C. § 9621(b).
\item \textsuperscript{43} See id. § 121(d)(1), 42 U.S.C. § 9621(d)(1).
\item \textsuperscript{44} See id. § 121(d)(2)(A), 42 U.S.C. § 9621(d)(2)(A).
\item \textsuperscript{45} For example, state municipal waste regulations promulgated under a state version of the Solid Waste Management Act would be "applicable" to a NPL site that operated as a municipal landfill during the time of the regulations. To be binding, a state standard must be more stringent than the federal. See CERCLA § 121(d)(2)(A)(ii), 42 U.S.C. § 9621(d)(2)(A)(ii). The primary battle between the states and EPA concerns state ARARs. EPA may officially waive a state's ARAR for a clean-up in certain circumstances. See id. § 121(d)(4), 42 U.S.C. § 9621(d)(4). Other standards or procedures may be used by EPA, in its sole discretion, in planning the clean-up, and are known as TBCs (to be considered).
\item \textsuperscript{46} As a practical matter, the same consulting and engineering companies generally perform the various stages of Superfund clean-ups, regardless of whether EPA or the PRPs officially have responsibility for the Remedial Action.
\item \textsuperscript{47} See CERCLA § 107, 42 U.S.C. § 9607. Courts are split over whether PRPs can use section 107 to recover costs they have incurred responding to a release or threatened release. The majority of the circuits have held that PRPs are limited to a contribution action under CERCLA section 113(f). See CERCLA § 113(f), 42 U.S.C. § 9613(f); see also United States v. Colorado & Eastern R.R. Co., 50 F.3d 1530, 1536 (10th Cir. 1995) (holding that PRP's claim against second PRP was contribution claim controlled by § 113(f)); United Techs. Corp. v. Browning-Ferris Indus., 33 F.3d 96, 103 (1st Cir. 1994) (holding that suit brought by responsible parties against other allegedly responsible parties was action for contribution rather than action for cost recovery), cert. denied, 115 S. Ct. 1176 (1995); Akzo Coatings Inc. v. Aigner Corp., 30 F.3d 761, 765 (7th Cir. 1994) (holding that PRP's action under CERCLA to recover clean-up costs was action for contribution rather than for cost recovery). As time progresses, this issue will become more complex, as courts begin to examine the facts to determine if a section 107 claim is warranted. See, e.g., Bethlehem Iron Works, Inc. v. Lewis Indus., Inc., 891 F. Supp. 221, 226 (E.D. Pa. 1995) (holding that CERCLA impliedly authorized PRP to bring private response recovery action against another PRP).
\end{itemize}
(1) the site is a CERCLA "facility,"48 which includes any contained enclosure and "any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located . . .,"49

(2) a release or threatened release of a hazardous substance is occurring;50

(3) the release or threatened release has caused the incurrence of response costs;51

(4) the party falls within one of the four categories of liable persons:

(a) current owners and operators of the facility;52

(b) owners or operators of the site who owned or operated it at the time of the disposal of the hazardous substance;53

(c) persons who arranged for the disposal or treatment (or for the transport for the disposal or treatment) of hazardous substances;54

(d) persons who transport any hazardous substance to a facility of their choice for disposal or treatment.55


49. Id. § 101(9), 42 U.S.C. § 9601(9). A "facility" includes areas where hazardous substances have passively migrated in the groundwater even if beyond the property boundaries of its source.

50. Id. § 107(a)(4), 42 U.S.C. § 9607(a)(4). "Release" is defined as "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant)," excluding releases solely within the workplace, emissions from engine exhausts, nuclear releases regulated by the Nuclear Regulatory Commission, and the normal application of fertilizer. Id. § 101(22), 42 U.S.C. § 9601(22). For the definition of "hazardous substances," see supra note 21.

51. CERCLA § 107(a)(4)(B), 42 U.S.C. § 9607(a)(4)(B). The plain language of the statute implies that response costs must have been incurred before an NRD claim will lie. See id. § 107(f), 42 U.S.C. § 9607(f). However, the district court in New York v. General Elec. Co., 592 F. Supp. 291, 298 (N.D.N.Y. 1984), held that the government trustee need not have expended money on clean-up before commencing an NRD claim. See id.


If a PRP falls into one of these classes, it is essentially strictly liable, and jointly and severally responsible for the entire costs of clean-up.\textsuperscript{56} CERCLA provides only a few general defenses for liability,\textsuperscript{57} including when the release occurred as the result of an act of war,\textsuperscript{58} an act of God,\textsuperscript{59} or certain third party actions.\textsuperscript{60} The enumerated defenses are exclusive,\textsuperscript{61} and no equitable defenses are recognized for liability under section 107 of CERCLA.\textsuperscript{62} While this liability strategy brings many complaints from the affected industries, Congress designed the system to expedite remediation of property contamination, unhampered by the constraints of traditional negligence law and causation questions.\textsuperscript{63}

\textbf{IV. The Basics of CERCLA NRD Claims}

Generally, a CERCLA NRD claim includes recovery for residual injury to natural resources after completion of remediation, as well as a compensatory value for the loss of that resource during remediation and recovery.\textsuperscript{64} Conceptually, an NRD claim is not pu-

\textsuperscript{56} Beginning in the early 1990s, courts began to chip away at CERCLA joint and several liability, which was first judicially enunciated in \textit{United States v. Chem-Dyne Corp.}, 572 F. Supp. 802, 805-10 (S.D. Ohio 1983). The \textit{Alcan I} and \textit{Alcan II} decisions hold that while a PRP is joint and severally liable, it may present evidence demonstrating that the liability is divisible and that an allocation based on the evidence is proper. \textit{See United States v. Alcan Aluminum Corp. (Alcan I),} 755 F. Supp. 531, 535 (N.D.N.Y. 1991), and \textit{United States v. Alcan Aluminum Corp. (Alcan II),} 964 F.2d 252, 268-69 (3d Cir. 1992).

\textsuperscript{57} \textit{See CERCLA} § 107(b), 42 U.S.C. § 9607(b).

\textsuperscript{58} \textit{See id.} § 107(b) (1), 42 U.S.C. § 9607(b) (1); \textit{see, e.g., United States v. Shell Oil Co.}, No. CIV. A. 91-0589-RJK, 1992 WL 144296, at *2-3 (C.D. Cal. Jan. 16, 1992) (addressing affirmative defense of act of war under section 107 of CERCLA).


\textsuperscript{60} \textit{See CERCLA} § 107(b) (3), 42 U.S.C. § 9607(b) (3). Under this defense, the defendant must show that the release or threat of release was caused solely by an act or omission of a third party. \textit{See id.}

\textsuperscript{61} \textit{See, e.g., General Elec. Co. v. Litton Indus. Automation Sys., Inc.}, 920 F.2d 1415, 1418 (8th Cir. 1990) (holding that CERCLA is strict liability statute with only limited number of statutorily-defined defenses available); \textit{United States v. Smuggler-Durant Mining Corp.}, 823 F. Supp. 873, 876 (D. Colo. 1993) (holding available defenses strictly and exclusively defined by CERCLA § 107(b)).

\textsuperscript{62} \textit{See, e.g., United States v. Wedzeb Enters., Inc.}, 809 F. Supp. 646, 658 (S.D. Ind. 1992). The court stated that "if there are any legal defenses to CERCLA liability, including equitable defenses, they are found in [section 107(b)] . . . . [The equitable defense of] laches is not listed in [section 107(b)] . . . . It is not a defense to CERCLA liability and will not keep the United States from bringing its claims." \textit{Id.} However, a PRP's relative share of the overall liability is determined by equitable considerations.

\textsuperscript{63} \textit{See Mazmanian & Morell, supra} note 18, at 29-30.

\textsuperscript{64} \textit{See Habicht, supra} note 20, at 5-6.
nitive; instead it is a claim that serves to complement cost recovery by converting the injury that cannot or will not be remediated, into a dollar value, or other restoration action, in order to compensate the public for its loss. In this respect, CERCLA is based on a “background” or “pristine” condition, even if that basis is only approached by means of economic theory.65

CERCLA NRD trustees may assert a claim to recover damages for injury to natural resources within the scope of their trusteeship. A CERCLA NRD claim arises from scattered sections of the statute. Section 107(a)(4)(C) imposes liability upon responsible persons for “injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction or loss resulting from such a release.”66 The statute defines “natural resources” as:

... land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States..., any State or local government, any foreign government, any Indian tribe, or, if such resources are subject to a trust restriction on alienation, any member of an Indian tribe.67

CERCLA section 301(c) directs the President to publish two sets of regulations, the Type A and Type B rules, to aid trustees in the task of determining the amount of the NRD claim.68 The trustees are not required to follow these regulations in the assessment of their NRD claim.69 However, if trustees assess their claim in accordance with the regulations, CERCLA section 107(f)(2)(C) grants the assessment a rebuttable presumption, presumably of correctness.70 The President, through the Department of Interior (DOI) and the Fish and Wildlife Service (USFWS), has slowly promulgated these rules in a piecemeal fashion, subject to several challenges by indus-

67. Id. § 101(16), 42 U.S.C. § 9601(16). The definition of natural resources provides the only statutory indication of the scope of these trusteeships. For a discussion of the precise scope of the various trusteeships, see infra notes 156-67 and accompanying text.
68. See id. § 301(c), 42 U.S.C. § 9651(c). For a further discussion of the Type A and Type B rules see infra notes 232-40 and accompanying text.
69. See CERCLA § 301(c), 42 U.S.C. § 9651(c).
try, state and environmental entities. Specifically, the watershed case involving CERCLA NRDs, Ohio v. Department of Interior, arose out of a challenge to the Type B rule.

Monies recovered for NRD claims must be used "to restore, replace, or acquire the equivalent of" the injured resource. CERCLA section 104(b)(2) directs the President to promptly notify the appropriate state and federal trustees of potential NRDs for releases being investigated under this section, and to seek to coordinate assessments, investigations and planning with the trustees. Theoretically, trustees may seek compensation for CERCLA NRDs from the Superfund. However, NRDs' claims against the Superfund are severely limited by CERCLA; in fact, such claims are prohibited by the Internal Revenue Code.

A. Statutory Defenses

CERCLA's general defenses apply to NRD claims as well as cost recovery actions and UAOs. In addition, section 107(f)(1) provides a shield for liability for CERCLA NRDs when the injury is specifically identified as an irreversible and irretrievable commitment.

71. The history of these rules cannot be easily summarized.
72. 880 F.2d 432 (D.C. Cir. 1989). For a discussion of Ohio v. Department of Interior, see infra notes 276-308 and accompanying text.
73. CERCLA § 107(f)(1), 42 U.S.C. § 9607(f)(1), reads, in pertinent part, as follows:
   [s]ums recovered by the United States Government as trustee under [42 U.S.C. § 9607(f)(1)] shall be retained by the trustee, without further appropriation, for use only to restore, replace, or acquire the equivalent of such natural resources. Sums recovered by a State as trustee under [42 U.S.C. § 9607(f)(1)] shall be available for use only to restore, replace, or acquire the equivalent of such natural resources by the State . . . .
    Id.
74. See id. § 104(b)(2), 42 U.S.C. § 9604(b)(2).
75. Realistically, the SARA Amendments placed the Superfund beyond the reach of NRD trustees. Section 111(b)(2)(A) requires that administrative and judicial claims against PRPs be exhausted before NRD claims against the Superfund can be brought. See CERCLA § 111(b)(2)(A), 42 U.S.C. § 9611(b)(2)(A). Section 111(e)(2) limits the payment of such claims to 15% of the monies paid out of the Superfund in a fiscal year, and allows for the President to reduce that percentage to zero if the balance of the Fund is needed for response actions. See id. § 111(e)(2), 42 U.S.C. § 9611(e)(2). Except to avoid an "irreversible loss of natural resources or to prevent or reduce any continuing danger to natural resources or similar need for emergency action," section 111(i) requires that the relevant trustees approve a plan for the use of the money before any payment out of the Fund is made for NRD activities. See id. § 111(i), 42 U.S.C. § 9611(i).
77. For a discussion of CERCLA's general defenses, see supra notes 57-62 and accompanying text.
of natural resources in an Environmental Impact Statement or a comparable analysis, and when the injury is authorized by permit, and the release is in compliance with the permit. 78

B. Causation 79

CERCLA limits the broad application of NRDs. While cost recovery actions may be predicated on a threatened release, 80 an NRD claim must be based on the occurrence of an actual release, analogous to an element of causation-in-fact. 81 In addition, while cost recovery plaintiffs do not have to prove proximate cause, 82 the NRD provision limits recovery to those injuries “resulting from” a release. 83 This causation requirement has been interpreted differently by different courts, ranging from a showing that the release was the “sole or substantially contributing cause” 84 of the injury to a lesser standard of “contributing cause.” 85 In Ohio v. Department of Interior, the Court of Appeals for the District of Columbia upheld a portion of the NRD regulations 86 that require the trustee to establish a causal “pathway” between the natural resource and the particular hazardous substance. 87 The court noted that CERCLA does not clearly address whether this causal link requirement is less stringent than that required by the common law. 88

When a Superfund site is found in a pervasively contaminated location and the hazardous substances at the site are relatively common, this causation requirement could prove fatal to the trustee’s claim. The causation requirement also makes the question of allo-

79. For a discussion of causation issues as they relate to natural resource damages, see Glenn Willett Clark, Causation-In-Fact in Natural Resource Damages and in Assessment of Response Costs, 5 ENVTL CLAIMS J. 7 (1992).
82. See United States v. Kramer, 757 F. Supp. 397, 419 (D.N.J. 1991) (stating “[d]efenses based on lack of actual or proximate cause are insufficient under CERCLA and therefore must be stricken.”).
86. For a discussion of these NRD regulations, see infra notes 237-64 and accompanying text.
88. See id. at 470-72.
cation of damages among multiple PRPs particularly difficult, especially because equitable factors are not typically reviewed outside the context of a contribution action between PRPs pursuant to CERCLA section 113.89 Section 113(f)(1), which directs courts to examine equitable factors in contribution actions, speaks only to response costs.90 Because Congress placed this provision in CERCLA as part of the 1986 Superfund Amendments and Reauthorization Act (SARA) effort, it is not beyond reason to venture that Congress simply overlooked the application of such factors to NRDs.

C. Right to a Jury Trial

Because of the large cost and complexity, trustees will seek to avoid bringing NRD cases before juries. A majority of the courts that have addressed this issue, however, have found that a jury trial is constitutionally mandated for CERCLA NRDs.91 For example, in New York v. Lashins Arcade Co.,92 the District Court for the Southern District of New York held that Congress "impliedly preserved a right to a jury trial" for CERCLA NRD claims.93 Because the relief to be granted included not only equitable relief, but also legal damages, the district court additionally held that even if Congress had not preserved the right, the Seventh Amendment of the U.S. Constitution provided the defendant with the right to a trial by a jury.94 Thus, the court decided that both equitable cost recovery claims and NRD claims are to be tried before the jury.95

V. TRUSTEE DESIGNATION

CERCLA utilizes a common law term of art, "trustee," to designate those government entities authorized to recover NRDs pursu-
ant to its provisions. Trustees are able to sue for NRDs resulting from injuries to natural resources within their trusteeship. CERCLA does not specify the dividing line between federal, state and tribal trusteeships. In the early years of the NRD program, state and federal trustees avoided the issue of the delineation of their particular trusteeships by filing jointly. However, as state and other trustees learn the intricacies of assessment and valuation, they are more likely to assert claims without federal trustees.

A. Federal Trustees

CERCLA section 107(f)(2)(A) directs the President to designate federal trustees to pursue NRD claims. The President has, by Executive Order, designated the Secretaries of the Interior, Commerce, Defense, Agriculture, and Energy as the federal trustees for the resources under their departments' respective jurisdictions. The NCP further delineates the roles of the several departments serving as federal trustees.

DOI, through the U.S. Fish and Wildlife Service (USFWS), manages resources including migratory birds, anadromous fish, certain species listed pursuant to the Endangered Species Act (ESA).


97. The scope of a trusteeship is in itself a complicated legal issue. Because this analysis would overshadow the examination of the parties that can lay claim to being trustees, it has been relegated to its own chapter. For a discussion of the scope of a trusteeship, see infra notes 156-204 and accompanying text.

98. See Habicht, supra note 20, at 6 n.27.

99. See ARCO Seeks to Preclude CV Study from Evidence in $713-Million NRD Claim, SUPERFUND REPORT, July 24, 1996, at 21. For example, the state of Montana is currently seeking $713 million in NRDs for injuries to the Clark Fork River. See id.

100. See CERCLA § 107(f)(2)(A), 42 U.S.C. § 9607(f)(2)(A). This section provides that the President shall, in the NCP, designate the federal officials who shall serve as trustees for NRDs under both CERCLA and the Clean Water Act (CWA), 33 U.S.C. § 1321. These officials shall "assess damages for injury to, destruction of, or loss of natural resources" within their trusteeship. See CERCLA § 107(f)(2)(A), 42 U.S.C. § 9607(f)(2)(A). For state trusteeship, the Governor of the state "shall designate State officials who may act on behalf of the public as trustees for natural resources" for CERCLA and CWA NRDs. See id. § 107(f)(2)(B), 42 U.S.C. § 9607(f)(2)(B).

101. See Exec. Order 12,580, 52 Fed. Reg. 2923, reprinted as amended in 3 U.S.C. § 9615 (1994). The Executive Order provides that "the following shall be among those designated in the NCP as Federal trustees for natural resources: (1) Secretary of Defense; (2) Secretary of the Interior; (3) Secretary of Agriculture; (4) Secretary of Commerce; (5) Secretary of Energy." Id.


and their critical habitats, National Wildlife Refuges and National Fish Hatcheries. DOI also serves as trustee for those lands held and managed by the National Park Service. The Department of Commerce, through the National Oceanic and Atmospheric Agency (NOAA)\(^{104}\) serves as the trustee for marine resources, including coastal environments and habitats, habitats of anadromous and catadromous fishes, certain species listed under ESA and their critical habitats, tidal wetlands, and commercial and recreational marine fishery resources. DOI and NOAA have traditionally served as the vanguard of NRD analysis and advocacy.

The Department of Agriculture serves as trustee for the National Forests under the U.S. Forest Service. The Departments of Defense and Energy, which own large tracts of land, serve as trustees for the natural resources injured on their property. While these Departments frequently serve as “plaintiff” trustees, they are more likely to be defendants, arguing against NRD claims asserted by federal, state, and tribal trustees.

In August 1996, President Clinton signed Executive Order 13016, which amends Executive Order 12580, and authorizes federal trustees to issue administrative orders under Section 106 of CERCLA for the restoration of injured natural resources.\(^{105}\) An eruption of criticism followed this action, primarily due to the confusion that will result as the NRD program and the more traditional Superfund remedial program collide.\(^{106}\) The White House, through the Council of Environmental Quality (CEQ), is currently drafting a Memorandum of Understanding (MOU) to define the roles of the various trustee agencies.\(^{107}\) Until the MOU is signed

\(^{104}\) See Oil Pollution Act of 1990, 33 U.S.C. §§ 2701-61 (1994). The Oil Pollution Act also assigns NOAA additional NRD duties under its statutory structure. NOAA has been particularly active in its trusteeship roles, establishing a Damage Assessment and Restoration Center, which intermingles attorneys, economists and scientists. See Marten & McFarland, supra note 91, at 670. NOAA has convened the blue ribbon panel on Contingent Valuation Methodology. See id.


and the roles of the federal trustees are clarified, uncertainty will hamper NRD efforts.

B. Tribal Trustees

As part of SARA, Congress included Indian tribes as trustees for CERCLA NRDs, adding 500 potential CERCLA NRD trustees to the melee. CERCLA section 107(f)(1) provides that NRD liability shall include: "any Indian Tribe for natural resources belonging to, managed by, controlled by, or appertaining to such tribe, or held in trust for the benefit of such tribe, or belonging to a member of such tribe if such resources are subject to a trust restriction on alienation." CERCLA defines "Indian Tribe" as any organized group or community of Indians recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians. The NCP designates tribal chairmen, the heads of governing bodies, or a person designated by tribal officials as trustees for the tribal governments. When the United States serves as a representative of a tribal trustee, DOI serves as trustee.

Indian tribes, because of their geographic placement and historic patterns of pollution, have a greater opportunity than most trustees for an active presence to protect Tribal resources, and to serve as creative and vocal CERCLA NRD trustees. The trustee-ships of many tribes extend beyond the physical boundaries of their tribal reservations due to entitlements to use nonreservation natural resources protected by treaty. Interestingly, CERCLA grants


111. See 40 C.F.R. § 300.610 (1996). Upon designation of an appropriate trustee, tribal officials shall notify the President of the designation. See id.
112. See id. § 300.600(b)(2).
113. See Major Tribal Group Calls for Expanded Tribal Role in NRD Provisions, SUPERFUND REPORT, July 12, 1995, at 21 [hereinafter Major Tribal Group].
114. See id. In their role as trustees, the tribes have used not only litigation but also special legislation to seek NRDs. See Idaho Tribe Seeks Funds from Congress for Natural Resource Damages, SUPERFUND REPORT, July 27, 1994, at 22 (discussing Coeur d'Alene Reservation and Bunker Hill Mining & Metallurgical CERCLA Site in Kellogg, Idaho).
115. See Du Bey & Grijalva, supra note 108, at 175.
tribal trustees a potentially longer NRD statute of limitations than it does other trustees.\textsuperscript{116}

C. State Trustees

CERCLA section 107(f)(2)(B) directs the Governor of each state to designate state officials to act as trustees for CERCLA NRDs.\textsuperscript{117} The statute fails to specify how this designation can be completed, not addressing whether a designation should be executed by statute, executive order, or even by informal means.\textsuperscript{118} Because of this ambiguity, an attorney defending an NRD claim asserted by a state trustee should examine the purported designation to determine if other state agencies or municipalities have an argument for standing, or at least demand that the settlement language is broad enough to bind any other possible "state" NRD trustees.

In Pennsylvania, for example, the gubernatorial designation takes place in the Commonwealth's CERCLA analog, the Hazardous Sites Cleanup Act (HSCA).\textsuperscript{119} This statute, however, fails to clearly enunciate the terms of the designation. Rather, HSCA provides that the Pennsylvania Department of Environmental Resources (DER)\textsuperscript{120} has the power and duty to act as trustee for the Commonwealth's natural resources, and may assess and collect damages to natural resources under its trusteeship.\textsuperscript{121} However, the statute also provides that: "[t]he department, a Commonwealth agency, or a municipality which undertakes to abate a public nuisance under this act or take a response action may recover those

\textsuperscript{116} See CERCLA § 126(d), 42 U.S.C. § 9626(d) (1994). This section provides that no action by an Indian tribe shall be barred until the later of the applicable statute of limitations and two years after the United States gives notice that it will not commence an action for the tribe or the United States fails to do so within the applicable statute of limitation. See id. As of late 1991, the federal government had neither indicated such an intent nor brought an NRD claim for a tribe. See Du Bey & Grijalva, \textit{supra} note 108, at 178.


\textsuperscript{118} The Governor of Massachusetts, for example, designated the state's Secretary of Environmental Affairs as its CERCLA NRD trustee by sending a letter to the President. See Letter from Governor Michael S. Dukakis to the President (May 17, 1989), \textit{cited in} Town of Bedford v. Raytheon Co., 755 F. Supp. 469, 473 (D. Mass. 1991).


\textsuperscript{120} The Pennsylvania Department of Environmental Resources has recently been renamed the "Department of Environmental Protection."

response costs and natural resource damages." 122 In addition, HSCA seemingly only allows the imposition of civil penalties when DER seeks cost recovery or pursues an NRD claim. 123

This statutory conflict leaves open to interpretation the issue of whether local governments and other Pennsylvania state agencies have independent standing to sue for NRDs, and, if they do, whether these claims are authorized under both CERCLA and HSCA, or merely under HSCA. 124 Because the Pennsylvania Fish and Boat Commission and the Pennsylvania Game Commission have civil penalty provisions in their organic statutes for injury done to natural resources, 125 the issue is even more muddled. Because of the size and schizophrenia inherent to government, one trustee agency could conceivably file suit without the knowledge of another trustee agency, either accidentally or intentionally. Such possibilities require a PRP's attorney to pay close attention to the details of any NRD claim and to the structural niche of the plaintiff trustee.

D. Municipal Trustees

Aside from the possibility of gubernatorial designation of a local government as trustee, CERCLA fails to clearly state whether municipalities may be NRD trustees in their own right. If all of the circuits find that municipalities can be CERCLA NRD trustees independent of a gubernatorial designation, the universe of potential CERCLA NRD plaintiffs would swell to include 3,000 counties, 19,000 municipalities, 16,000 townships, and 28,000 special districts nationwide. 126 While these entities may have a right to a pre-existing common law action for some sort of NRDs independent of

122. Id. § 6020.507(a).
123. See id. § 6020.507(e).
124. The Court in The Borough of Dublin v. Sun Chemical Corp., Pa. Ct. Cmmn. Pls., Bucks Cnty. No. 88-4736-21-2, Oct. 28, 1992, addressed this question in an unpublished opinion and found that the DER's NRD trusteeship under HSCA is not exclusive. In so holding, the court allowed a claim for HSCA NRDs by the plaintiff borough to move forward (opinion on file with author).
125. See 34 PA. CONS. STAT. ANN. § 2161 (West 1996) (Pennsylvania Game Commission statute providing that Commonwealth may recover damages in civil action against any person who causes injury to any streams or stream beds by polluting or littering); 30 PA. CONS. STAT. ANN. § 2506 (West 1996) (Pennsylvania Fish and Boat Commission statute providing that Commonwealth may recover compensatory and punitive damages in civil action against any person who damages wildlife habitat).
CERCLA, a CERCLA claim is a more powerful tool due to the statute's strict, joint and several liability scheme.

Prior to SARA, in three decisions, the district courts held that CERCLA grants local governments standing as CERCLA NRD trustees. Essentially, the decisions found that a municipality has trustee standing based upon two lines of legal analysis. The first holding reasoned that because the statutory definition of "state" used the connector "includes" instead of the term "means" used in the other statutory definitions, Congress intended for the list of governmental entities to be illustrative rather than exclusive.


128. The Boonton decision served as the foundation for the New York I and New York II decisions. In addition to the theories provided in the above text, the Boonton court noted that it would be anomalous to provide states a NRD cause of action but refuse such an action to local governments when resources owned by local governments are expressly included in the statutory definition of natural resources. See Boonton, 621 F. Supp. at 666.

With regard to the "authorized representative" theory, the Boonton court held that the state authorized the town to act as NRD trustees because the town owned the contaminated property and the state environmental protection agency had directed the town to remediate the site. See id. at 667. The court avoided choice of law questions. See id.

In New York I and New York II, two individual judges ruled separately on the local government standing issue. In New York I, the court followed Boonton's definition of "state" argument to deny a motion to dismiss which asserted that the city was not a CERCLA NRD trustee. See New York I, 633 F. Supp. at 619. With regard to the "authorized representative" argument, the court noted that this was a factual question that it could not decide without more evidence. See id.

In New York II, the court reaffirmed its earlier holding on a motion for summary judgment. See New York II, 697 F. Supp. at 684. The court denied the argument that CERCLA's plain meaning demanded judicial restraint based upon the use of the word "includes" in the definition of natural resources. See id. To equate the term "means" and "includes," the court opined, would render both meaningless. See id. The court also noted that CERLA does not relegate municipalities to private party status, and that affording them the ability to sue for NRDs was consistent with the statutory structure and purpose. See id. at 685. Furthermore, the court asserted that to deny the municipality standing was particularly inappropriate in the case at bar, because the state environmental protection agency had placed its stamp of approval on the settlement by being ready to release its own CERCLA claims. See id. at 686.

129. See CERCLA § 101(27), 42 U.S.C. § 9601(27) (1994). The statute provides in pertinent part: "[t]he terms "United States" and "State" include the several states of the United States, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the United States Virgin Islands, the Commonwealth of the Northern Marianas, and any other territory or possession over which the United States has jurisdiction." Id. (emphasis added).
The second holding relied upon section 107(f) (1), which provides that: "[t]he President, or the authorized representative of any State, shall act on behalf of the public as trustee of such natural resources to recover for such damages." Because CERCLA did not define "authorized representative," the courts looked to the facts of the cases to decide if the governor, through his executive agencies, had authorized the municipality to act as a CERCLA NRD trustee.

As part of SARA, Congress added section 107(f) (2) (B) to CERCLA to provide a mechanism for the designation of state trustees. The House version of the SARA bill contained language clarifying the definition of "state," but the Senate version did not. The Joint Explanatory Statement of the Committee of Conference explained: "[t]he conference substitute does not include the House amendment to the definition of 'State' leaving it to the court's interpretation of this provision."

Maraziti asserts that this statement endorses the Boonton and the New York I and New York II holdings that municipalities are authorized to sue as CERCLA NRD trustees. Maraziti also cites floor statements by Senator Frank Lautenberg, of New Jersey, a member of the conference committee, as support for the codification of the Boonton decision. However, an equally plausible reading of these two statements is that Congress decided to let each individual jurisdiction fashion its own interpretation, without the intent of being bound by the two preceding decisions.

130. Id. § 107(f) (1), 42 U.S.C. § 9607(f) (1) (emphasis added).
131. The term was not defined before SARA, and Congress did not define it when it enacted SARA.
132. See CERCLA § 107(f) (2) (B), 42 U.S.C. § 9607(f) (2) (B) provides that the "Governor of each state shall designate State officials who may act on behalf of the public" as NRD trustees under CERCLA and the Clean Water Act, 33 U.S.C. § 1321, and assess damages for injury to resources within their trusteeship. Id. (emphasis added). Maraziti asserts that the use of the mandatory "shall" and the permissive "may" means that the trusteeship may be re-delegated by the trustee designated by the governor. See Maraziti, supra note 122, at 10039.
133. See Maraziti, supra note 126, at 10039 (citations omitted).
134. Maraziti, supra note 126, at 10039.
135. See id. at 10038.
136. See id. Senator Lautenberg noted that the final version of the bill would "uphold the Boonton decision allowing municipalities to sue for cost recovery under the same Superfund provisions available to States, and to serve as trustees for natural resource damages." Id. "This provision permits communities to move ahead with cleanup plans of their own." 135 CONG. REC. S14912 (daily ed. Oct. 3, 1986) (statement of Sen. Lautenberg). This statement, notably, does not restrict all courts to the Boonton analysis. See Maraziti, supra note 126, at 10039. For a discussion of the Boonton court's analysis of CERCLA, see supra note 128 and accompanying text.
Post-SARA, at least five courts have held against the theory of municipal trusteeship independent of gubernatorial designation.137 The fact that the statute allows differing viewpoints in itself indicates that clarification would be appropriate.

Several commentators have argued that allowing municipalities to have standing as CERCLA trustees is appropriate and desirable.138 This argument, however, is unpersuasive. CERCLA in general, and the NRD provisions in particular, impose extraordinarily large amounts of liability upon parties. While providing disincentives for polluting activities is undoubtedly in the public interest, the regulated industries both demand and deserve certainty as to the identity of NRD trustees and should not be faced with the burden of facing additional plaintiffs at every site. In addition, states and municipalities are fundamentally different in terms of their sovereign status. In a federalist system, a state has standing as a sovereign that a municipality cannot replicate, and CERCLA recognizes this difference. Further, as sovereigns with a broad base of regulatory responsibilities, states are far more likely to appreciate ecological values that transcend the limited political and geographic boundaries of municipalities. With these facts in mind, it is obvious, from a public policy perspective, that municipalities should not have standing as NRD trustees.

137. In *Town of Bedford v. Raytheon Co.*, 755 F. Supp. 469 (D. Mass. 1991), the Bedford court noted that municipalities and local governments derive their power entirely from the independent sovereignty of the state. See id. at 471 n.3. The court then noted that the statutory definition of “person” explicitly includes a “municipality” and other “political subdivisions of a State.” See id. at 471. The court then held that municipality trusteeship hinders CERCLA’s objectives because of potentially inconsistent application. Following *City of Philadelphia v. Stepan Chemical Co.*, 713 F. Supp. 1484 (E.D. Pa. 1989), the court refused to examine the definitions of “state” in other statutes and CERCLA’s legislative history for guidance. See *Bedford*, 755 F. Supp. at 470-71. In *Werlein v. United States*, 746 F. Supp. 887 (D. Minn. 1990), the Werlein court noted that the plain language of the statute controls. See id. at 910. The court then distinguished the Boonton analysis on the basis that in those cases the municipalities actually owned or controlled the natural resources at issue. See id. at 909. In the case before the Werlein court, state law entrusted the state, not the municipality-plaintiff, with the care of natural resource (a groundwater aquifer). See id. at 910.

E. Private Causes of Action

CERCLA section 107(f) does not create a private right to action for NRDs.\(^{139}\) In *Artesian Water Co. v. New Castle County*,\(^{140}\) the Court of Appeals for the Third Circuit affirmed a district court grant of a summary judgment for a claim of monetary damages due to the loss of potential withdrawals of artesian wells by a private water utility.\(^{141}\) The utility was previously denied recovery of response costs in excess of monitoring and evaluation costs, and attempted to recover NRDs for the amount of water that it lost as the result of the remedial action.\(^{142}\) The court noted that CERCLA prohibited the recovery of economic losses, and that the utility’s recovery of such losses would amount to an usurpation of the state’s CERCLA NRD claim.\(^{143}\) Given the particular language of the NRD provisions and the statute’s prohibition on double recovery and for damages, pre-enactment, injuries, the court declined to read CERCLA to allow for private NRD claims.\(^{144}\)

F. Citizens’ Suits

In environmental law, citizens’ suits consist of two types.\(^{145}\) The first type consists of suits by citizens, acting as “private attorneys general,” against other citizens for alleged violations of statutory obligations. These suits seek compensation, not for a private injury, but for a public harm.\(^{146}\) The second type consists of suits by citizens against the government for a failure to complete a mandatory duty imposed by statute.\(^{147}\)

CERCLA section 310(a) creates both types of citizens’ suits, subject to the limitations on pre-enforcement review found in section 113(h).\(^{148}\) Section 310(a)(1) provides for a “private attorneys

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140. 851 F.2d 643 (3d Cir. 1988).
141. See id.
142. See id. at 644.
143. See id. at 650.
144. See id. at 649-50.
146. See id. at 870.
147. See id. For a discussion of these different kinds of citizens suits, see Jeffery Miller, *Citizens Suits: Private Enforcement of Federal Pollution Control Law* 3 (1987).
148. CERCLA § 113(h), 42 U.S.C. § 9613(h) removes jurisdiction, except for cases of complete diversity (which are very rare) and cases involving state ARARs, for the review of response action decisions, unless one of the following has occurred: (1) a cost recovery suit has been filed; (2) the United States has brought an action to enforce a section 106 order, 42 U.S.C. § 9606(a); (3) a PRP has brought
general" citizens' suit which allows private parties to challenge "any
violation of any standard, regulation, condition, requirement, or or-
der" issued under CERCLA, but the remedy available is limited
to injunctive relief. Because NRDs without government action,
do not qualify as a standard, regulation, condition, requirement, or
order issued under CERCLA section 301(a)(1) does not grant citi-
zens' groups the ability to seek NRDs.
Section 310(a)(2) creates a citizens' suit to compel the per-
formance of nondiscretionary duties by the President and other
federal officials. The language of section 107(f)(2)(A), which
contains the federal designation provisions, states that the federal
officials designated by the President shall assess damages for injury
to natural resources within their trusteeship. Therefore, a citi-
zens' group may be able to utilize section 310(a)(2) to compel the

an action for reimbursement from the Fund under 42 U.S.C. § 9606(b); (4) a citi-
zens suit has been brought challenging a remedial or removal action, subject to
the limitation that a removal action may not be challenged if a remedial action is
to be undertaken at the site; or (5) the United States has moved to compel a
remedial action under 42 U.S.C. § 9606. See CERCLA § 113(h), 42 U.S.C.
§ 9613(h) (1994).

The legislative history indicates that Congress intended for CERCLA section
113(h)(4), 42 U.S.C. § 9613(h)(4) to allow citizens groups to seek review of a site's
remediation as its different phases are completed, but the courts are split over
whether it allows that review to occur after the ROD has been signed or after the
remedial action under the ROD has been completed. See, e.g., Neighborhood
cussing legislative history of CERCLA § 113 and citizens' suit review).

149. CERCLA § 310(a)(1), 42 U.S.C. § 9659(a)(1) (stating "any person may
commence a civil action on his own behalf (1) against any other person . . . who is
alleged to be in violation of any standard, regulation, condition, requirement or
order" of CERCLA).

150. See id. § 310(c), 42 U.S.C. § 9659(c). Section 310 cannot be used to seek
(D.R.I. 1989). However, the recovery of attorneys' fees is allowed under this
provision.

151. See CERCLA § 310(a)(2), 42 U.S.C. § 9659(a)(2) (stating "any person may
commence a civil action on his own behalf . . . (2) against the President or any
other official of the United States . . . where there is an alleged failure . . . to
perform any act or duty" under CERCLA).

152. Id. Section 107(f)(2)(A), 42 U.S.C. § 9607(f)(2)(A), states in pertinent part:

[the President shall designate in the [NCP] the Federal officials who
shall act on behalf of the public as trustees for natural resources under
Such officials shall assess damages for injury to, destruction of, or loss to
natural resources . . .

Id. (emphasis added).

153. See id.
trustees to assess the NRDs at a site. However, section 107(f)(2)(A) does not direct trustees to file a claim for NRDs; therefore, a section 310(a)(2) citizens’ suit may be of limited usefulness. In addition, the limitations on preenforcement review would fully apply as CERCLA section 113(h)(4) does not grant a court jurisdiction unless the citizens’ group alleges a violation of a CERCLA requirement. This limitation forces citizens’ groups to wait until some other basis for jurisdiction exists, such as a cost recovery action.

Breen argues that federal statutes should be amended to allow citizens suits for NRDs. He asserts that structural and political imperfections, budget constraints, and the urgent need to force polluters to internalize the pollution costs support the need for such amendments. Breen claims, accordingly, that any benefits resulting from such amendments will outweigh the burdens of the enactment.

Breen’s position ignores the reality that many parties that would be targets of NRD citizens’ suits would merely be the remaining deep pockets. Further, these parties would likely only be tangentially responsible for the natural resource injury, as arrangers or as successors to age-old and defunct corporations. Given this reality, the government trustees, rather than citizens’ groups, are the appropriate entities to determine the propriety of pursuing a CERCLA NRD claim. Not every CERCLA site or release justifies the use of a NRD claim, and the decision to pursue a certain PRP for NRDs is best left to the prosecutorial discretion of a public servant.

VI. THE SCOPE OF THE TRUSTEESHIP

CERCLA defines “natural resources” very broadly, as the following:

154. See Breeding & Cress, supra note 137, at 32-33 (discussing “whether maintaining actions for injury to natural resources is a mandatory duty or is a discretionary decision of the trustee”).

155. See CERCLA § 113(h)(4); 42 U.S.C. § 9613(h)(4). This section states: [a]n action under section 9659 of this title (relating to citizens suits) alleging that the removal or remedial actions taken under section 9604 of this title or secured under 9606 of this title was in violation of any requirement of this chapter. Such an action may not be brought with regard to a removal where a remedial action is to be under taken at the site.

Id.

156. Breen, Citizen Suits, supra note 108, at 873-80 (arguing that citizen suits are the “logical next step to the expansion of the natural resource damages doctrine”).

157. See id.
This definition allows recovery of NRDs for injury to virtually any media within the government domain. Breen categorizes CERCLA "natural resources" into four classes based upon this statutory definition:\textsuperscript{159} (1) "[r]esources owned by a government, or over which the government otherwise has exclusive possession";\textsuperscript{160} (2) resources encompassed by the Public Trust Doctrine,\textsuperscript{161} an age-old judicial theory that holds certain resources in trust for the benefit of the public; (3) "[r]esources that are regulated directly by a government" in order to protect the environment;\textsuperscript{162} (4) "[r]esources that are not directly regulated by a government for purposes of environmental protection," but could be regulated within the bounds of the Constitution.\textsuperscript{163}

As one progresses down the scale from group (1) to (4), the nexus between the governmental control and the natural resource lessens, demanding a broader reading of "natural resources" to include the resource in a NRD claim.\textsuperscript{164} In 1984, Breen noted that the extent of the nexus required between the government’s inter-

\begin{itemize}
\item 158. CERCLA § 101(16), 42 U.S.C. § 9601(16). For a further discussion of CERCLA’s definition of “natural resources,” see supra note 67 and accompanying text.
\item 160. Id. This is a broad category because the federal government alone owns, in fee, 32.5% of the nation’s land. See id. at 10306; see also Cynthia Carlson, Federal Property and the Preemption of State Public Trust Doctrines, 20 ENVTL. L. REP. 10003, 10006 (Jan. 1990) (focusing on federal preemption of state public trust doctrine in regulation of private activities on federally owned coastal and riparian lands).
\item 161. See Breen, Natural Resource Damage Provisions, supra note 159, at 10305. To distinguish between the Public Trust Doctrine and the trustee role created by CERCLA, I will capitalize “Trust” and “Trustee” when referring to the former, and will use lower case letters when referring to the latter.
\item 162. Id. Examples given are endangered species, coastal zones, public water supplies and air. See id. at 10307. With regard to air, problems of proof of damage and valuation immediately come to mind.
\item 163. Id. at 10305.
\item 164. See id. at 10305-06 (discussing extent of government control in each of four categories).
\end{itemize}
ests and the natural resource "will probably have to await judicial interpretation, further legislative elaboration, or at least regulatory definition." 165

In 1986, DOI attempted to provide some regulatory definition when it published a final rule providing general procedures to be used in the assessment of NRDs. 166 The rule followed the statutory definition of natural resources, but categorized the affected media into the following: surface water resources; ground water resources; air resources; geologic resources; and biologic resources. 167 Industry, states and environmental groups challenged the rule, leading to the landmark decision of Ohio v. Department of Interior. 168 The Ohio court indirectly approved of three of Breen's classes of NRD resources: those owned by a government, those held in the Public Trust and those substantially regulated or maintained by governmental entity. 169

A. The Public Trust Doctrine

Like much of environmental law, CERCLA NRDs derive from common law theories, including the Public Trust Doctrine and the related Parens Patriae Doctrine, 170 as well as general notions of tort,

165. Id. at 10306.
166. See 51 Fed. Reg. 27674 (1986). CERCLA section 301 directs the President to promulgate two rules, Type A and Type B, to help trustees assess NRDs. See CERCLA § 301(c), 42 U.S.C. § 9651(c) (1994).
168. 880 F.2d 432 (D.C. Cir. 1989). The Court of Appeals for the District of Columbia held that congressional intent was not to limit the amount that government trustees could recover for harmed natural resources to lessen the cost of restoration or replacement. See id. at 441-59. Rather, the circuit court found that DOI had to clarify its interpretation of the applicability of CERCLA NRD provisions to privately owned land that is managed or controlled by federal, state or local government. See id. at 459-61. Finally, the court stated that exclusively focusing on market value to measure lost value of natural resources was not a reasonable interpretation of CERCLA. See id. at 463-65.
169. See id. at 434.
170. The Parens Patriae Doctrine is similar to the Public Trust Doctrine, except that it is procedural rather than substantive. See KEVIN M. WARD & JOHN W. DUFFIELD, NATURAL RESOURCE DAMAGES: LAW AND ECONOMICS 17, 21 (1992). Parens Patriae, meaning "parent of the country," confers standing upon state governments to sue for the redress of injuries suffered by its citizens. See id. For instance, a state in its capacity as a "quasi-sovereign" can sue a company located outside of its borders to enjoin some action that harms its citizens within the state. See Howard Kenison et al., State Actions for Natural Resource Damages: The Enforcement of the Public Trust, 17 ENVTL. L. REP. 10434, 10436 (Nov. 1987).

In order to sustain a Parens Patriae suit, a state must demonstrate a separate interest from those of private parties and that a substantial portion of its citizenry has been adversely affected by the actions. While most Parens Patriae suits are injunctive, the state can also seek damages to compensate injuries to its quasi-sovereign interests. See WARD & DUFFIELD, supra, at 22. In Puerto Rico v. S.S. Zoe
nuisance and trespass law. These theories often intertwine in the manner only common law allows, with courts adapting caselaw precedent and theories to fit the facts before it. The common law is now shifting between paradigms, from one of an absolute right of property ownership to one of regulation over the use and abuse of property.171 CERCLA's use of the Public Trust Doctrine as a basis for trusteeship for NRDs further confuses the matter, making examination of this doctrine necessary.

The Public Trust Doctrine can be traced back to the age of the Roman Emperor Justinian,172 and it stands for the proposition that some resources are simply too important to the public welfare to be owned by any one person.173 The doctrine applies only to certain uses of specific topographical areas and resources. In the United States, state courts have seen the most frequent use of the Public Trust Doctrine, and numerous variations exist in the laws of the various states.174 Generally, the protected uses include activities such as fishing, navigation and commerce, and the resources typically include sea beds, the waters over them, the foreshore175 and navigable freshwaters.176

Colocotromi, 456 F. Supp. 1327 (D.P.R. 1978), aff'd on other grounds, 628 F.2d 652 (1st Cir. 1980), cert. denied, 450 U.S. 912 (1981), the District Court for Puerto Rico found that Puerto Rico had standing to sue for recovery for injuries to its natural resources due to an oil spill, based on both the Public Trust Doctrine and the Parens Patriae Doctrine. See id. at 1336. The prospect of double recovery is a significant hurdle for Parens Patriae suits, especially if private citizens are also seeking compensation. See WARD & DUFFIELD, supra, at 22-23.

171. See Richard J. Lazarus, Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine, 71 IOWA L.R. 631, 633 (1986) (stating “modern trends in natural resources law have eroded traditional concepts of private property rights in natural resources and substituted new notions of sovereign power over those resources”). Recent legislative action suggests that the popular concept of property rights may be returning to one of absolute ownership, albeit not without dissension.

172. See Terry Fox, Natural Resource Damages: The New Frontier of Environmental Litigation, 34 S. TEX. L. REV. 521, 521 (1993). “By the law of nature these things are common to mankind - the air, running water, the sea and consequently the shores of the sea.” Id. (quoting Institutes of Justinian 2.1.1 [529 A.D.]).


175. See Cynthia Carlson, Making CERCLA Natural Resource Damage Regulations Work: The Use of the Public Trust Doctrine and Other State Remedies, 18 ENVTL. L. REP. 10299, 10302 & n.30 (Aug. 1988) (citation omitted). The foreshore consists of the land between the high and low tide marks. See id.

176. See id.
In the past thirty or so years, the Public Trust Doctrine has expanded rapidly due to state statutes, state constitutions and activist judicial interpretations. In some states, the doctrine now incorporates resources such as non-navigable waters, state park land, and air, and uses such as recreation and drinking water supply. If the doctrine includes the protection of fishes, wildlife and recreational values, one could argue that it includes water quality and instream use of surface water. In addition, courts have found that the Trust imposes an active duty to conserve the Trust corpus, not just a passive duty to protect it.

While the United States' application of the Public Trust Doctrine is primarily a creature of state law, the federal courts (using federal common law) have not hesitated to use the Public Trust Doctrine. In Illinois Central Railroad Co. v. Illinois, the United States Supreme Court held that the Illinois state legislature could not convey lands underlying Lake Michigan to a private party because the land was held subject to an inalienable Public Trust. The transfer of title that the legislature was trying to revoke would only be acceptable if it promoted the public good and could be accomplished without substantial impairment to the public interest.

177. See Joseph Sax, The Public Trust Doctrine in Natural Resources Law: Effective Judicial Intervention, 68 Mich. L. Rev. 471, 474 (1970). In 1970, Professor Joseph Sax published an influential article that may have fostered this trend. Professor Sax argues that to be a satisfactory tool for resource management problems, the Public Trust Doctrine must do three things. First, it should "contain some concept of a legal right in the general public." Second, the doctrine should "be enforceable against the government." Third, the doctrine should "be capable of an interpretation consistent with contemporary concerns with environmental quality." Id.; see also Fred Shapiro, The Most-Cited Law Review Articles, 73 Cal. L. Rev. 1540, 1551 (1985) (citing Sax's article as 31st most cited law review article of all time).

178. See Carlson, supra note 175, at 10302 (citations omitted); Ward & Duffield, supra note 170, at 15-16.

179. See Ward & Duffield, supra note 170, at 16 (citations omitted).

180. See Carlson, supra note 176, at 10302 (citations omitted).

181. See Kenison, et al., supra note 170, at 10440 (stating that public trust has been extended to national parks).


183. 146 U.S. 387 (1892).

184. See id. at 452.

185. See id. The legislature was trying to promote Chicago's economy when it originally transferred the submerged land. Ironically, the legislature did transfer title to aid what it perceived to be the public interest. However, it failed to pre-
The use of the trustee nominee in the CERCLA NRD provisions can confuse those who do not work extensively with CERCLA NRDs. CERCLA adopts both state and federal common law as a basis for trusteeship in NRD claims. The definition of "natural resources" includes resources "held in trust" by a governmental entity. The same language was contained in Senate Bill 1480, the CERCLA predecessor that the Senate passed. The accompanying committee report noted that the purpose of the bill was to "preserve the public trust in the Nation's natural resources." This, however, does not mean that the Public Trust Doctrine subsumes Breen's other three classes of natural resources. Those classes stand as a basis of NRD trusteeship independent of the common law and the Public Trust Doctrine.

The Public Trust Doctrine works in connection with CERCLA. Therefore, a state CERCLA NRD trustee hoping to rely on the doctrine to include a specific resource within its trusteeship must find supporting authority addressing a public concern for whatever resource the PRP has injured. Previous state court precedent that the public had an interest in the soils of the state for purposes of agriculture, or a state constitution provision mentioning soils, may be enough authority to convince a court that soils are within a state's Public Trust Doctrine Trusteeship allowing a state government to assert a CERCLA NRD claim. Theoretically, a state could pursue both a CERCLA NRD claim and an independent claim serve its right to protect the public resource for public uses. Otherwise, the transfer may have been upheld. See Ward & Duffield, supra note 170, at 13.


188. Breen, Natural Resource Damage Provisions, supra note 159, at 10308 (citations omitted).

189. For a discussion of Breen's categories of natural resources, see supra notes 159-65 and accompanying text.

under the Public Trust Doctrine, although the latter may not provide a strong vehicle for the recovery of money damages.

B. Privately Owned Natural Resources

Resources protected by the Public Trust Doctrine are only one of Breen's four classes of natural resources. Breen's fourth class, natural resources not directly regulated by government but which could be regulated within the confines of the United States Constitution, is based upon the word "appertain" in the statutory definition of "natural resources." Commentators Woodward and Hope assert that, because CERCLA section 107(f) allows NRD claims for any natural resource within a state's borders, CERCLA NRD claims could be read expansively to include damages for injury to privately-owned natural resources. Breen, however, argues that such a broad reading of "appertain" would make the "nexus descriptors" of the other three classes of natural resources redundant.

In its first attempt at a final rule for the Type B regulations, DOI merely repeated the statutory language regarding the definition of natural resources. However, in the preamble to that rule, DOI states that there is "no doubt that [natural] resources owned by parties other than Federal, State, local or foreign governments (i.e. privately-owned resources) are not included . . . damages to privately-owned resources are not to be included in natural resource damage assessments." In other words, DOI's preamble to...
the rule added a limitation not contained in the rule, namely, that trustees should not assess NRDs for injuries to resources owned by private parties rather than government trustees.

The Ohio court, reviewing the Type B rule, remanded the issue of whether NRDs could be assessed for injuries to privately-owned natural resources to DOI for clarification, citing the statutory definition of natural resources.\textsuperscript{199} The court noted that, at oral "argument, DOI backed away from a literal interpretation of the preamble's language, and claimed that assessment under the rule would not hinge on public ownership of the natural resource.\textsuperscript{200} The court further stated that a "substantial degree of government regulation, management or other form of control over the property would be sufficient" to bring a privately-owned natural resource within the range of a CERCLA NRD claim.\textsuperscript{201} Specifically, the circuit court cited the example that a state law requiring owners of tideland property to permit public access was a substantial enough regulation of a resource to bring it within the ambit of the "natural resources" definition.\textsuperscript{202}

Responding to the Ohio court's remand, DOI claims in its preamble to the revised Type B rule that it "never intended to suggest that the applicability of the [NRD] regulations hinges solely on ownership of a resource by a government entity."\textsuperscript{203} In this revised rule, DOI does not define precisely what privately-owned natural resources are within the "natural resources" definition; instead, it notes that the language of the statute controls and that governmental ownership, management, trust, or control is necessary to bring a natural resource within that definition.\textsuperscript{204} Because this analysis necessarily depends on varying federal, state, local and tribal law, DOI leaves this matter to a case-by-case determination.\textsuperscript{205} DOI does, however, add a requirement in the revised rule that trustees explain the bases of their assertions of trusteeship in both the Notice of Intent to Perform an Assessment and the Assessment Plan, two formal documents required by the rule.\textsuperscript{206}

\textsuperscript{199} See Ohio v. Department of Interior, 880 F.2d 432, 481 (D.C. Cir. 1989).
\textsuperscript{200} See id. at 461.
\textsuperscript{201} Id.
\textsuperscript{202} See id. (citing Phillips Petroleum Co. v. Mississippi, 484 U.S. 469 (1988)).
\textsuperscript{204} See id. at 14268.
\textsuperscript{205} See id. DOI also notes that a government's assertion of trusteeship does not receive a rebuttable presumption of validity, and that the assertion of trusteeship will vary as to detail to accommodate the circumstances of the case. See id.
\textsuperscript{206} See id. at 12463-64.
VII. Economic Valuation of NRDs

The quantification of the injury to natural resources is the most controversial element of the CERCLA NRD scheme, primarily because of the softness of the economic and environmental sciences that drive it. Natural resources, sometimes termed "natural assets," provide society with a range of different services, some of which approximate market-driven commodities that can be expressed in monetary terms and some which are completely alien to the market and valuation. 207 Section 107(a) (4) (C) of CERCLA directs NRDs to include compensation for injury to, destruction of, or loss of 208 natural resources, as well as for the cost of assessment of the damage. 209 Section 107(f)(1) limits the use of the funds recovered under the NRD provisions to the restoration, enhancement or replacement of the injured natural resource. 210 Section 107(f)(1) also states that: "[t]he measure of damages in any [NRD] action . . . shall not be limited by the sums which can be used to restore or replace [the injured] resource." 211 The measurement of these damages depends on a range of economic theories and techniques, some more reliable than others.

Conceptually, NRDs can be measured by either computing the restoration cost or the economic valuation of the injured resource, or a combination of the two. 212 Economists use both concepts to place some value on an injury to a natural resource. 213 None of the economic methods utilizing these concepts offer a universal application, but all add another perspective to the assessment. The four leading methods 214 are: (1) restoration and replacement costs; (b) market valuation; (c) behavioral use valuation; and (d) contingent

207. See Raymond J. Kopp & V. Kerry Smith, Understanding Damages to Natural Assets, in Valuing Natural Assets: The Economics of Natural Resource Damage Assessment 7 (Raymond J. Kopp & V. Kerry Smith eds., 1993)

208. See CERCLA §§ 101-405, 42 U.S.C. §§ 9601-75 (1994). The loss of the natural resource includes the interim loss of natural resources while the clean-up is in progress. This became evident only after Congress enacted SARA. See Breen, Citizen Suits, supra note 108, at 866-67.

209. See CERCLA § 107(a) (4) (C), 42 U.S.C. § 9607(a) (4) (C). For a discussion of this provision, see supra note 66 and accompanying text.


211. Id.

212. See Breen, Natural Resource Damage Provisions, supra note 159, at 10307.

213. See id.

214. See generally Valuing Natural Assets: The Economics of Natural Resource Damage Assessment (Raymond J. Kopp & V. Kerry Smith eds., 1993) (arguing that given increasing number of abandoned waste sites, concerns over clean-up process and residual liabilities for natural resource damages will be as important in future as they are now); Frank B. Cross, Natural Resource Damage Valuation, 42 Vand. L. Rev. 269, 321-39 (1989) (arguing that new valuation procedures
valuation. To analyze the utility of each of these methods, one should first understand the components of the "value" of an injury to a natural resource in terms of economic theory.

Theoretically, full compensation for an injury to, destruction of, or loss of a natural resource includes the value of the lost "use" and the lost "non-use" of the natural resource. Use values include consumptive ones, such as fishing and hunting, as well as non-consumptive ones, such as bird-watching and tourism. Non-use values include theoretical values such as the value that society derives from the mere "existence" of the natural resource, absent any exploitation of the resource, and the value that is intrinsic to the resource independent of man. "Existence value," for example, "is the dollar amount an individual is willing to pay [to ensure the survival of the resource in a given state, despite the fact that] he . . . does not plan to use the resource now or in the future." While use values can theoretically be derived from an examination of the market or using traditional common law tools, non-use values usually cannot. In addition, most of the resources for which NRDs are sought are unique or public goods that are not regularly traded on the open market, making the determination of use values even more difficult.

Restoration or replacement costs serve as an estimate of the costs of either restoring the injured resource itself (usually at the same loca-

should be adopted that better reflect full range of natural resource value and thereby better protect environment).

215. See A. Myrick Freeman III, Nonuse Values in Natural Resource Damage Assessment, in Valuing Natural Assets: The Economics of Natural Resource Damage Assessment 264, 265 (Raymond J. Kopp & V. Kerry Smith eds., 1993) (stating that ignoring significant non-use values can lead to misallocation of resources).

216. See Cross, supra note 214, at 281.

217. See id. at 282.

218. Ohio v. Department of Interior, 880 F.2d 432, 476, n.73, (citing 51 Fed. Reg. 27692, 27721); see also Idaho State Dep't of Health v. Southern Refrigerated Transp. Inc., 1991 U.S. Dist. LEXIS 1869 (D. Id. Jan. 24, 1991). Cross asserts that existence value consists of three distinct components: (1) "option value," which is the dollar amount an individual, not presently using the resource, is willing to pay to reserve the option to use the resource in a certain state at some point in the future; (2) "vicarious value," which is the value a person places upon a natural resource despite the fact that he never intends to use it; and (3) "intertemporal value," which is the value a person places upon the preservation of a natural resource in order to ensure that future generations may have the opportunity to use it. See Cross, supra note 214, at 285-86. While this terminology may vary among commentators, the underlying theory is consistent.

219. See Cross, supra note 214, at 269, 282, 289. Cross argues that use value is a more certain means of determining damages because it measures actual behavior, rather than attitudes. See id. at 289.

Problems with this method include uncertainty as to the baseline state of the resource, the unique value of ancient ecosystems, ecological complexity (which often makes restoration impractical), and the great costs associated with restoration. Market valuation techniques, best suited for determining use values, rely on prices and values set by market transactions. Economists can look at the reduction in the value of real estate, lost park entrance fees, or the price of fish lost due to the injury to make these types of determinations. Because of their role in real world transactions, market valuation techniques have the most appeal to NRD defendants. However, any use of market values necessarily ignores the intrinsic value of the resource and often overlooks its ecological significance.

Behavioral use valuation supplements other valuation techniques to refine the determination of the value of public goods. For example, if the injured resource is in a public park, economists may calculate the value of the entrance fees lost because of the injury and add that amount to the estimated costs that the lost visitors would have undertaken to visit the park. This technique is known as “travel cost valuation.” Although such techniques are based on verifiable human behavior, they fail to consider the ecological and inherent value of the injured resource and the value of travel time, and fail to compensate for imperfect information. Even with these problems, travel cost value is the best available means to estimate overall use values.

Contingent valuation (CV) is the most controversial method of NRD assessment. This method utilizes survey sciences to poll the populace as to their perceptions as to the value of the injured resource and tabulates a societal value by adding the responses together. For example, if a release injures wildlife such as a seal population, survey professionals will draft a survey and poll members of the affected populace to determine the value of the injury to individual members of the populace. It then uses these individ-

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221. See Cross, supra note 214, at 298-300.
222. See id.
223. See id.
224. See id.
225. See id. at 308-04. Cross notes that market valuation has an obvious appeal because it is both economically efficient and reliable. Id.
226. See id. at 310.
227. See id. at 311-12.
228. See id. at 313.
229. See id.
230. See id. at 319-20.
ual responses to estimate the value of the resource lost because of the injury to the entire populace.\textsuperscript{231} Many problems exist with CV, including the lack of any reality anchor for respondents, the degree of subjectivity inherent in the polling process, and imperfect information of the respondents.\textsuperscript{232} Despite these difficulties, CV remains the only known method to measure non-use existence values.\textsuperscript{233}

Because of these problems and the relative youth of CV methodology, introducing CV studies into evidence may prove to be difficult. To get such studies into evidence, a party must show not only that the damage valuation is not speculative, but also that the expert testimony presented satisfies the evidentiary test regarding the introduction of expert testimony, whether as enunciated in \textit{Daubert v. Merrill Dow Pharmaceuticals}\textsuperscript{234} or as found in the older \textit{Frye v. United States}.\textsuperscript{235} For example, in \textit{Idaho v. Southern Refrigerated Transport Inc.},\textsuperscript{236} the court held that a particular CV study was too speculative to be introduced to establish the existence value of steelhead killed by a spill of an agricultural fungicide.\textsuperscript{237} The study at issue, however, had not been commissioned or designed to determine the existence of the fish lost due to the spill, but to answer a more generic inquiry as to the public value in the hypothetical doubling of the fish population in a nearby watercourse.\textsuperscript{238} Because of this flaw, \textit{Idaho} is not particularly helpful in exploring the practical effect of a CV study.

The only other litigation that has addressed this aspect of NRDs, to the author's knowledge, is \textit{In re: Dublin Borough Groundwater Litigation}.\textsuperscript{239} In this case, interestingly, the plaintiff borough, as a NRD trustee under the state CERCLA analog, submitted preliminary objections requesting that CV evidence regarding contaminated groundwater within its trusteeship be excluded under the

\begin{itemize}
  \item\textsuperscript{231} See id.
  \item\textsuperscript{232} See id.
  \item\textsuperscript{233} See id. at 320. None of these techniques are able to measure intrinsic value, which is not surprising, given that intrinsic value is nearly a theological concern.
  \item\textsuperscript{234} 113 S. Ct. 2786 (1993).
  \item\textsuperscript{235} 293 F. 1013 (D.C. Cir. 1923).
  \item\textsuperscript{237} Id., at *55.
  \item\textsuperscript{238} Id.
  \item\textsuperscript{239} Penn Ct Comm Pls, Bucks County, No. 89-0006-21-2. This case caption consolidated two related cases, one a class action, \textit{Mannella v Sequa Corp.}, Penn Ct Comm Pls, Bucks County, No. 89-1069-21-2, and the other brought by the Borough of Dublin, \textit{Borough of Dublin v. Sun Chemical Corp.} Penn Ct Comm Pls, Bucks County, No. 88-4736-21-2.
\end{itemize}
Frye test, which prevails in Pennsylvania. Presumably, the trustee made this motion in order to exclude studies that revealed or would reveal that the public placed a low value on this resource. After the submission of briefs and without turning to the substance of the issue, the Court denied the preliminary objection from the bench, noting that a determination on the issue was premature without the presentation of a particular study. The evidentiary hurdles facing the use of CV may prove to be insignificant in the present legislative climate, but they should not be ignored.

VIII. The Assessment Process

Section 301(c) of CERCLA directs the President to publish regulations to provide a standard for the assessment of natural resource damages. Section 301(c)(2) mandates the promulgation of two sets of regulations, the Type A and Type B rules. The Type A rule creates standard simplified procedures for small releases which require minimal field investigation, and usually consists of a computer-driven, mathematical model. The Type B rule covers "large and unusually damaging releases" and contains site-specific procedures for detailed assessments in individual cases. Because of its limited scope, the Type A rule causes far less controversy than the Type B rule, but both rules have a complex history of promulgation and challenge. Before examining the rules themselves, it helps to have a general understanding of the assessment process as it will apply to most CERCLA sites.

CERCLA's legislative history indicates that the assessment of NRDs should begin at the RI/FS stage of the remedial process, and that planning for rehabilitation of the injured resources should be made part of the remedial action. The Type B assessment process, as it survives after Ohio, consists of a five part administrative

240. Id., Nov. 12, 1993 (on file with author).
242. See CERCLA § 301(c)(2), 42 U.S.C. § 9651(c)(2).
245. For a discussion of the history of the Type A and Type B rules, see infra notes 274-84 and accompanying text.
process to assess the value of the injury to the resource. The Type A rule, although it consists of several computer models, incorporates a simplified version of the process mandated by the Type B rule.

This process mimics the remedial action process in that it begins with a broad evaluation and continues to focus its inquiry until a final judgement can be made. The final judgement in an NRD Assessment, however, is a monetary amount and a Restoration Plan, rather than a response cost estimate and a Record of Decision. The following are the five phases of the Type B assessment:

A. Preassessment Screen

The first stage in the DOI scheme is the Preassessment Screen conducted by the trustee(s) to determine if the hazardous substance release justifies a complete assessment. This screen is completed with a minimal amount of field work, and should only take several days to complete. Upon completion of the screen, the trustee makes a determination whether assessment work should continue. The determination is based upon the preliminary findings that: the release is covered by CERCLA (i.e. was the substance released a CERCLA "hazardous substance?"); the release could have injured the natural resource being investigated; the trustee believes that the resource and the injury are significant enough to warrant further investigation; and the trustee has reason to believe the potential benefits of performing further assessment outweigh the potential costs.

B. Assessment Plan

If the trustee determines that further assessment work should be completed, the next step is the preparation of an Assessment

247. For a further discussion of the Type B rule, see infra notes 285-317 and accompanying text.
248. See United States v. Colorado, 880 F.2d 482, 484 (D.C. Cir. 1989). See also 43 C.F.R. §§ 11.40-11.41 (1996). These sections set forth the purpose, completion and costs of Type A assessments. It also details the procedures employed to determine injury, the nature of the injury and damages in coastal and marine environments caused by discharge or release.
249. See Fact Sheet, U.S. Dep't of Interior, 1992 (on file with author).
251. See id. § 11.23 (1996).
252. See id. §§ 11.30-11.35 (1996). These sections set forth the content and development of the assessment plan, the factors that determine the use of either a Type A or Type B assessment, the procedures for confirmation of exposure and a preliminary estimate of damages.
Plan (Plan). The Plan includes documentation of all decisions made regarding the methodologies to be applied in the assessment.\textsuperscript{253} The Plan should also ensure that the assessment costs are \textit{reasonable} and that the assessment is conducted in a cost-effective manner. During the Plan, the trustee must conduct a "confirmation of exposure," which serves as a screen to ensure that a nexus exists between the resource and the hazardous substance as a result of the release.\textsuperscript{254} If this confirmation cannot be made, no further assessment actions are taken.\textsuperscript{255}

C. Injury Determination \textsuperscript{256}

This stage is the third screen of the assessment, and requires the trustee to establish a link between the release of a hazardous substance and the actual injury to the natural resource.\textsuperscript{257} As part of this demonstration, the trustee must show the pathway from the source to the natural resource.\textsuperscript{258} The regulations provide guidance on the proper fate and transport models and precise-pathway analysis that may be helpful to this effort.\textsuperscript{259} For the most efficient synergistic effect, EPA should coordinate the studies conducted as part of the RI/FS with this stage of the assessment.\textsuperscript{260}

D. Damages Assessment \textsuperscript{261}

The first thing that the trustee must establish in order to quantify the NRD is a baseline level of services provided by the resource prior to the injury.\textsuperscript{262} This baseline is then compared to the level of services that the resource will provide upon the completion of the

\begin{itemize}
\item \textsuperscript{253} See id. at 11.31 (discussing what Assessment Plans include).
\item \textsuperscript{254} See id. § 11.34.
\item \textsuperscript{255} See id. § 11.34(a)(2) (stating that "Type B assessment methodologies shall be included in the assessment plan only upon meeting the requirements of this section").
\item \textsuperscript{256} See id. §§ 11.61-11.64.
\item \textsuperscript{257} See id. § 11.61. This section states that "[t]he authorized official shall . . . determine: whether the injury to one or more of the natural resources has occurred; and that the injury resulted from the discharge or release of a hazardous substance based upon the exposure pathway and the nature of the injury.").
\item \textsuperscript{258} See id. § 11.63.
\item \textsuperscript{259} See id. § 11.64(c).
\item \textsuperscript{260} This stage also incorporates a review of the Assessment Plan to refine the methodologies and alternatives set forth therein.
\item \textsuperscript{261} See 43 C.F.R. §§ 11.70-11.73, 43 C.F.R. §§ 11.80-11.84. This phase actually consists of two separate phases, the Quantification phase, 43 C.F.R. §§ 11.70-11.73, and the Damage Determination phase, 43 C.F.R. §§ 11.80-11.84.
\item \textsuperscript{262} See 43 C.F.R. § 11.70(b) (describing purpose of the Quantification Phase as "to quantify the effects of the discharge or release on the injured natural resources for use in determining the appropriate amount of compensation.").
\end{itemize}
remediation. The trustee then uses the most suitable economic methodologies to translate the reduction in the baseline level of the services provided by the natural resource due to the injury into a monetary amount of damages, following the guidelines of the Assessment Plan. This includes an examination of: (a) the costs of restoration, replacement or acquisition of the equivalent of the injured resource; and/or (b) the lost value of the injured resource (including both use and non-use values) from the time of injury until the restoration is complete.

At the end of any assessment process, whether it be Type A or Type B assessment, the trustee documents its conclusions in a Report of Assessment. This report incorporates all plans and submissions it receives from interested parties in response to those plans and is filed with the appropriate court or administrative body (if legal action is anticipated or ongoing).

E. Post-Assessment

After the assessment is complete, the trustee establishes an account into which it will deposit all monies awarded by a court or received in settlement of its claims. The trustee then develops a final plan for the restoration, replacement or acquisition of equivalent resources. This plan necessarily depends on the amount of money received. The trustee completes this phase by presenting the PRPs with a demand for payment.

Several commentators assert that the original section 301 rules actually impeded the widespread use of NRDs. In particular, they criticize the original rules for undervaluing the injury done to natural resources and creating a hopelessly complicated process for recovery. They also assert that the four year delay in the initial promulgation of the Type B rule contributed to the hesitancy of inexperienced trustees. This inexperience is compounded by a

263. See id. § 11.70(c).
264. See id. § 11.71(c) (discussing contents of quantification).
265. See id. § 11.92(c).
266. See id. § 11.18.
267. See id. §§ 11.90-11.93 (identifying the report demand, restoration account and restoration plan of the post-assessment phase).
268. See id.
270. See id. at 10553.
lack of legal precedent as well as the inadequacy of economic theory, but may be remedied by publication of the final revised rules.

IX. THE RULES, Ohio, Colorado AND Kennecott

A. A Cacophony of Rulemakings

DOI was, "to put it charitably, relaxed" in its promulgation of the NRD regulations. Lawsuits initiated by several concerned parties eventually forced DOI to promulgate the regulations as part of an unpublished settlement. Ultimately, on August 1, 1986, DOI published a final rule concerning the general assessment process for both the Type A and Type B rules and the substantive Type B rule. DOI published the final Type A rule on March 20, 1987. As part of SARA, Congress amended CERCLA to give DOI six months to conform the rules in the amendments to the NRD provisions of CERCLA. In February 1988, DOI finalized alterations to conform the rules with SARA.

Soon thereafter, industry, state and environmental groups challenged the Type A and Type B rules in the Court of Appeals for the District of Columbia. These challenges resulted in Colorado v. Department of Interior, regarding the Type A rule, and Ohio v. Department of Interior, regarding the Type B rule. In Colorado, the court denied petitioners argument that the Type A rule was impermissibly narrow, but remanded the rule to DOI for revisions to comply with the Ohio decision. In Ohio, the court carefully ex-
amined the substance of the Type B rule, upholding the bulk of the rule but remANDING several key issues to DOI.284

1. The Ohio Decision

The Ohio decision has served as the watershed CERCLA NRD case, and confronted fourteen separate issues arising out of the procedural and Type B rule.285

a. The “lesser of” Rule

The Type B rule required NRDs to be measured by the lesser of either: (a) restoration or replacement costs; or (b) the diminution of use values.286 The Ohio court held that the lesser of rule was contrary to CERCLA, which states in section 107(f)(1) that the NRDs “shall not be limited by” the amounts needed to restore the resources.287 The court interpreted this as an implicit legislative intent that NRDs should not be less than the restoration costs.288 The court emphasized that the practical consequence of the lesser of rule would be that lost use values would control the assessment even if they were significantly lower than restoration costs.289

b. The “Committed Use” Requirement

The Type B rule required that, in performing assessments, trustees limit their examination of use values to “committed uses,” which were defined as current public uses and those to which a documented commitment had been established before the release occurred.290 For example, a trustee could not assess damages based upon lost future agricultural services of lands currently protected as game lands. The court upheld this portion of the rule, but nar-


285. The more important issues are summarized below, while the minor issues have been relegated to footnotes. For a further discussion of public ownership of the injured natural resource see supra notes 164-76 and accompanying text.

286. See Ohio, 880 F.2d at 441-44.
287. See id. at 442.
288. See id. at 459.
289. See id.
290. See id. at 462. The rule applies to releases of CERCLA hazardous substances as well as oil, but only until NOAA promulgates rules required by the Oil Pollution Act, 33 U.S.C. §§ 2701-61. See Thomas M. Lenard, Evaluating Natural Resource Damages Claims for Settlement of Litigation, 5 Tox. L. Rptr. 652, 652 n.3 (Oct. 23, 1991).
rowly construed it, noting that the assessment cannot be limited to committed uses when examining non-use values.\textsuperscript{291}

c. The Hierarchy of Assessment Methods

The Type B rule established a rigid hierarchy of methodologies to be used in the assessment process.\textsuperscript{292} This hierarchy preferred market-based techniques of valuation to nonmarket methods, such as contingent valuation. If the trustee found that the market for the resource was not reasonably competitive, it could turn to certain uniform appraisal standards.\textsuperscript{293} Only if the trustee found that neither the market nor the appraisal standards were appropriate could it turn to other methodologies, such as CV.\textsuperscript{294}

The court overturned the hierarchy because it failed to adhere to the legislative intent.\textsuperscript{295} The court directed DOI to consider a rule that would allow trustees to compute use value by summing up the values derived from a variety of methodologies, as long as the combination of methodologies do not value the service being measured more than once. In addition, the court corrected DOI's assertion that option and existence values were to be used only when use values could not be determined.\textsuperscript{296}

d. The Delegation of the Assessment Process to PRPs

The Type B rule authorized the delegation of NRD assessments to PRPs, drawing protests from state and environmental challengers. The court held that the delegation was reasonable and within CERCLA's ambit.\textsuperscript{297}

\begin{itemize}
  \item \textsuperscript{291} See Ohio, 880 F.2d at 462.
  \item \textsuperscript{292} See id.
  \item \textsuperscript{293} See id.
  \item \textsuperscript{294} See id.
  \item \textsuperscript{295} See Ohio, 880 F.2d at 463. The court stated: "[n]either the statute nor its legislative history evinces any congressional intent to limit use values to market prices. On the contrary, Congress intended the damages assessment to capture fully all aspects of loss." Id. Citing to the Senate Report, the court stated that "assessment procedures should provide trustees [with] 'a choice of acceptable damage assessment methodologies to be employed [and should] select the most accurate and credible damage assessment methodologies available.'" Id.
  \item \textsuperscript{296} See id. at 464. First, the court noted that the provision that DOI pointed to its interpretation, 42 U.S.C. § 9651(c)(2), while only speaking of use values, was modified by a "but not limited to" clause. See id. Second, the court noted that option and existence values, although non-consumptive uses, derive from human utility and therefore are to be included as a component of use value, not as a substitute for it. See id.
  \item \textsuperscript{297} See id. at 466. The petitioners asserted that 42 U.S.C. §§ 9607(f)(2)(A)-(B) and 9607(f)(2)(C) state that the trustee shall assess damages and that only assessments conducted by trustees receive the benefit of the rebuttable presumption.
\end{itemize}
e. Limitation on Recovery of Assessment Costs

The Type B rule limited the recovery of assessment costs by defining the term "reasonable costs" to include only those costs where "the anticipated cost of the assessment is expected to be less than the anticipated damage amount." The court held this to be a reasonable interpretation of the term based upon legislative history which demonstrated a congressional intent that assessments be cost-effective.

f. The Acceptance Criteria

The rule established a set of "acceptance criteria" to provide guidance on whether a release actually caused an injury to a particular biological resource (such as a school of fish). The court denied several challenges to the criteria and held that the criteria were a reasonable interpretation of CERCLA.

See id. The court was unpersuaded by this argument, noting that the legislative history indicated that Congress had anticipated such delegations. See id. The court held that even if the legislative history was ambiguous, the delegation to PRPs was reasonable and not inconsistent with the statutory purpose. See id. The court also denied three other minor aspects of the delegation challenged by the petitioners. See id. at 467-68.

298. 43 C.F.R. § 11.14(ee) (defining reasonable cost).
299. See Ohio, 880 F.2d at 468. The court also denied that such an interpretation is inflexible because a trustee that had performed an inexpensive assessment in anticipation of a small amount of damage could always expand the scope of the assessment. Id.
300. See id. See 43 C.F.R. §§ 11.62(f)(2), 11.62(f)(3) (1996). Section 11.62(f)(2) states in pertinent part that "[t]he method for determining injury to a biological resource, as defined in paragraph (f)(1)(i) of this section, shall be chosen based upon the capability of the method to demonstrate a measurable biological response." 43 C.F.R. § 11.62(f)(2). Section 11.62(f)(3) provides that "[u]nless otherwise provided for in this section, the injury determination must be based upon the establishment of a statistically significant difference in the biological response between the samples from populations in the assessment area and in the control area." Id. § 11.62(f)(3).

In Ohio, the petitioners claimed that the criteria placed a burden on trustees that exceeded the common law, contrary to the Congressional intent to liberalize the standard of causation. See Ohio, 880 F.2d at 469. They also argued that, if adequate scientific studies concerning the biological resource at issue had not been published, trustees would have to undertake such studies themselves without reimbursement from the PRPs, because the studies would likely exceed "reasonable costs." See id.

301. See Ohio, 880 F.2d at 472-73. The court noted that, in some circumstances, the criteria will actually make the trustee's job easier, because a list of eighteen biological responses to releases that are deemed per se to meet the criteria. See id. The court also pointed out that a failure to meet the criteria does not invalidate a claim, but merely removes the rebuttable presumption. See id. at 472-73.

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g. Punitive Damages

State and environmental petitioners challenged DOI's failure to draft provisions for the recovery of punitive damages. The court examined the legislative intent and found that Congress did not intend for punitive damages to be generally available under CERCLA. The court, therefore, ruled against the petitioners' argument.

h. Contingent Valuation

The final issue before the court was the Type B rule's use of CV to determine the value of an injury to a natural resource when no market-based or appraisal method was appropriate. The rule defined the CV process as including "all techniques that set up hypothetical markets to elicit an individual's economic valuation of a natural resource." The court noted that at least three formats are generally available in CV: (1) direct questioning about the polled individual's willingness to pay; (2) a bidding scenario to determine at what level the individual would retreat from paying for the natural resource; or (3) a "take it or leave it" format that confronts the individual with a choice of payment. If market-based and appraisal methodologies were insufficient to determine lost use values, the Type B rule allowed the use of CV techniques to determine them, in addition to option and existence values.

Industry petitioners argued that CV was inconsistent with common law damage assessment procedures, that CV fails to meet the statutory requirement for a "best available procedure," and that the application of the rebuttable presumption to CV was arbitrary and capricious and violative of due process. The court disagreed that common law strictures on the use of "speculative" damages applied to CERCLA, but examined the argument that CV did not meet the "best available procedure" criteria. The court noted that DOI had reviewed numerous technical papers and submissions before accepting the CV methodology, and had denied the usage of one CV technique (the "willingness to accept" method) because of its

302. See id. at 474.
303. See id.
304. Ohio, 880 F.2d at 475.
305. Id.
306. This contingency was struck down in the hierarchy of methods analysis. For a discussion of the analysis, see supra notes 292-96 and accompanying text.
307. See Ohio, 880 F.2d at 476.
308. See id. at 477.
bias and difficulty in application. The court upheld the use of CV, and remarked that the industry argument attacked not CV but CERCLA itself.

Industry also argued that CV inherently overstates the true value of an injured natural resource because it is based on hypothetical situations, not reality. The court held that the answer to this problem is relying upon more artful questioning, not invalidation of the use of the methodology. Because industry failed to prove that CV as a method produces egregarious results, the court refused to hold that CV failed to meet the “best available procedure” requirement.

The industry petitioners' argument that the rebuttable presumption’s application to CV was arbitrary and capricious rested upon DOI’s alleged failure to respond fully to the comments industry had submitted in response to the rule’s Notice of Proposed Rule-Making. In addition, they asserted that DOI’s explanation of CV application to the measurement of option and existence values was insufficient. They further complained that the method was untested and hypothetical, and that the rule did not provide guidance on when or how CV was to be utilized. The court denied all of these charges, noting DOI had thoroughly investigated CV, and “analyzed and dealt with” the comments received. The court’s analysis left trustees with considerable flexibility to assess NRDs on a case-by-case basis.

309. See id. at 476.
310. See id. at 477.
311. See id.
312. See Ohio, 880 F.2d at 477.
313. See id. Industry petitioners also challenged the use of CV after an oil spill or release of a hazardous substance. See id. The court denied this argument due to the practical impossibility of ascertaining the value of every resource based on the speculation that a release will occur. Id. at 478.
314. See id. at 479.
315. See id.
316. See id. at 478-79.
317. See Ohio, 880 F.2d at 480. Industry also asserted several constitutional challenges to the rule’s application of the rebuttable presumption to assessments based upon CV. See id. With regard to the substantive constitutional claims, the court noted that, because legislation adjusting economic life is presumed to be regular, industry had to show that the application of the rebuttable presumption to CV assessments was arbitrary or irrational. See id. The court summarily denied that they had met this burden. See id. With regard to the procedural constitutional claims, industry claimed that the role of the “authorized official” in the NRD assessment process amounted to that of an interested party with the discretionary power to exclude PRPs from the process, and therefore the power to violate their procedural due process rights. The court denied this assertion by distinguishing the facts of the case at bar from the case cited by industry. See id. at 481.
B. The Revised Rules

After *Colorado* and *Ohio*, DOI promulgated a series of revised rules to meet guidelines set out by the D.C. Circuit. The revised Type A rule is being promulgated in phases, with different modeling procedures for different regional ecosystems.\(^{318}\) The revised Type B regulation splits the former rule into two parts, one dealing with contingent valuation (revised CV rule),\(^{319}\) and one dealing with all of the other issues remanded to DOI by *Ohio* (revised Type B rule).\(^{320}\) The revised CV rule will incorporate a rule to be promulgated by NOAA concerning CV.\(^{321}\) In 1994, the revised Type B rule has been published as a final rule,\(^{322}\) but was challenged by a number of petitioners in the Court of Appeals for the District of Columbia.

C. The Current Challenges: The *Kennecott Copper* Decision

On July 16, 1996, the D.C. Circuit issued its opinion on the challenge to the revised Type B rule.\(^{323}\) The challenge to the revised Type B rule consisted of several suits that were consolidated by the D.C. Circuit. Kennecott Utah Copper Corporation brought the first suit to challenge the Clinton Administration's withdrawal from publication in the *Federal Register* of a revised Type B rule that had been officially approved for publication by the Bush Administration.\(^{324}\) Publication in the *Federal Register* is necessary for the promulgation of a rule, and Kennecott argued that withdrawal from publication of an officially approved rule violated procedural provisions of the Administrative Procedures Act, the Freedom of Inform-

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The court also ruled on minor issues. First, the *Ten Percent Discount Rate*: challengers objected to DOI's application of a discount rate to calculate the present value of a future NRD as well as DOI's choice of ten percent as that discount rate. *See* 43 C.F.R. § 11.84(e). The court upheld both of these decisions. *Ohio*, 880 F.2d at 465. Audit Requirements: petitioners challenged the rule's accounting procedures for funds recovered under a CERCLA NRD claim as beyond DOI's authority. The court rebuffed this assertion by finding the accounting procedures bore a rational relationship to the purpose of the enabling legislation. *See id.* at 474.

323. *See* Kennecott Utah Copper Corp. v. Dep't the Interior (Kennecott), 88 F.3d 1191 (D.C. Cir. 1996).
324. *See id.* at 1201.
Kennecott filed its suit in the District Court of the District of Columbia to convince the District Court of Utah to enter a consent decree agreed to by the company and the State of Utah in a separate NRD case. After the district court denied its claims, the company appealed to the D.C. Circuit Court of Appeals. The Court of Appeals consolidated Kennecott with a more general industry challenge to the revised Type B rule.

As an initial matter, the Court of Appeals denied the petitioners’ arguments concerning the impropriety of withdrawing the Bush Administration’s rule. The court then considered twelve substantive issues. While the statute of limitations issue will be addressed in detail later in this article, the other eleven issues included:

1. The Time Bar. Industry petitioners attempted to “reopen” a number of issues for which the time limit for challenge had already passed. The court denied their arguments, except as to one particular provision.

325. See id.
326. See id. at 1217-24. For example, the withdrawn rule clarified what damage assessments are “reasonable” and provides guidelines on when it is appropriate to seek damages for non-use values. See id. at 1224. The revised Type B rule allegedly softens the “reasonableness” language, and completely avoids the issue of non-use valuation. See id. Clinton Administration officials have asserted that industry favors the withdrawn rule because it placed limits on the use of CV. See id.
328. See Kennecott, 88 F.3d at 1199.
329. See id.
330. See Kennecott, 88 F.3d at 1202. The Court of Appeals held that it did not possess the authority to order DOI to publish the Bush Administration rule under the Freedom of Information Act, that the Office of the Federal Register reasonably interpreted the Federal Register Act to allow agencies to withdraw documents filed with it during the brief processing period, and that the decision to withdraw the Bush Administration rule did not provide the court with the authority to review the action under the CERCLA. See id. at 1202-06. The court also denied the industry petitioners’ argument that the revised Type B rule amended or repealed the Bush Administration rule in a manner contrary to the APA on both factual and legal grounds. See id. at 1207-09.
331. See id. at 1209-29. The Court of Appeal’s table of contents lists thirteen substantive issues. See id. at 1198-99. However, one of the issues, regarding the acquisition of public lands as a restoration alternative, fits more appropriately within the discussion regarding the “reopening” of a regulation to challenge.
332. For a discussion of the statute of limitations, see infra notes 360-88 and accompanying text.
333. See id. at 1213. The excepted provision was 43 C.F.R. § 11.15(a), a part of the 1994 regulations that authorizes trustees to recover damages for the value of
(2) Protocols. The alleged failure of DOI to create standards that were sufficiently demanding to qualify as "protocols" under section 301(c)(2) of CERCLA. Despite the industry petitioners' arguments that the term, "protocol" required the narrow limitation of the trustees' discretion, the court held that the three challenged provisions were sufficiently procedurally confining and standardized.

(3) Cost-effectiveness. DOI required that trustees evaluate cost-effectiveness when examining the various options for the replacement or restoration of an injured natural resource, but failed to require that trustees chose the cost-effective alternative. The court denied the industry petitioners' argument that this constituted an inappropriate response to the Ohio decision.

(4) The Grossly Disproportionate Standard. Industry petitioners asserted that Ohio required DOI to incorporate a requirement that the assessed damages not be "grossly disproportionate" in comparison to the use value of the injured resource. The court denied this reading of Ohio.

(5) Remedial Consistency. The industry petitioners argued that the revised Type B rule should require trustees to choose a restoration alternative that is consistent with the remedy chosen by EPA or other authorized entity. The court agreed with the industry petitioners that this new provision implicitly reopened the issue to challenge. However, the court found that "the 1994 Regulations sensibly promote coordination, rather than requiring consistency, between restoration remedies and response actions."

(6) Services Provided. In the 1986 regulations, DOI used the concept of "services" provided by a natural resource to measure the appropriate level of restoration. The revised Type B rule seemingly created a new dichotomy between the services provided and the injured natural resource. Because the court found that this dichotomy was inconsistent with the preamble to the rule, it invalidated this portion of the rule.

(7) Cultural and Archaeological Resources. The preamble of the revised Type B rule seemed to authorize trustees to assess damages based upon the value of the lost use of cultural and archaeological resources. The
court concluded that although it could review the preamble, the issue was not yet ripe because the harm allegedly caused by the statements was too speculative.  

(8) **Indirect Costs.** The industry petitioners argued that under the causation requirement of CERCLA's NRD provisions "indirect costs" could not be included in damage assessments, as provided by the revised Type B rule.  

The court found that DOI's interpretation of the statute was reasonable and that the rule provided sufficient procedural safeguards to satisfy the causal requirement.  

(9) **The Preliminary Estimate of Damages.** CERCLA allows for the recovery of the reasonable costs of assessing NRDs. In the revised Type B rule, DOI used a "preliminary estimate of damages" as a mechanism to determine the scope of the assessment to be carried out. This procedural tool allows the trustee to compare the estimated cost of the assessment to the estimated damages, and to assure that the assessment costs are reasonable. The Industry Petitioners asserted that DOI failed to adequately explain the decision to use this mechanism, but the court held that it was a reasonable method and deferred to the DOI's explanation.  

(10) **Interim Services.** The revised Type B rule provides regulations for the recovery of NRDs under both CERCLA and the Clean Water Act (CWA). Industry petitioners challenged DOI's inclusion of services lost during the course of restoration as recoverable damages under the rule, arguing that CWA did not authorize these damages under its definition of "costs of removal" and that DOI should not be allowed to use CERCLA to override the clear language of CWA. After finding that the challenge was not time-barred, the court concluded that DOI's interpretation that these interim values were compensable, was consistent with CERCLA and not incompatible with the CWA, and was therefore reasonable.  

(11) **Priority of Remedies.** The State of Montana argued that CERCLA's language indicated that trustees had to prefer restoration, rehabilitation and replacement of the injured natural resource over the acquisition of equivalent resources. The revised Type B rule did not set forth a preference along these lines. The court, examining DOI's implicit decision that the statute did not require this preference in light of the circumstances, found that it was reasonable.  

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347. See [Kennecott](88 F.3d at 1223).  
348. See id. at 1223-24.  
349. See id. at 1224.  
350. See CERCLA § 107(a)(4)(C); 42 U.S.C. § 9607(a)(4)(C). Section 107 of CERCLA holds certain parties who own, possess or transport hazardous substances liable for "damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction or loss resulting from . . . release [of such substances]." Id.  
351. See [Kennecott](88 F.3d at 1225).  
352. See id.  
353. See id. at 1226. The court also found that the challenge based DOI's failure to break out the components of the assessment for evaluating their reasonableness was time-barred. See id.  
354. See id.  
355. See id. at 1228. Specifically, the court stated that DOI's "interpretation fits easily within the broad provisions" of CERCLA and it is not incompatible with the Clean Water Act.  
356. See id. at 1229.  
357. See id.
of the *Chevron* doctrine,\(^{358}\) held that the statute and the legislative history did not provide explicit direction on this point and that DOI's interpretation was reasonable. In so holding, the court noted that CERCLA's purposes can still be served without establishing such a preference, especially considering that NRDs serve to complement the other remedial actions completed under the statute.\(^{359}\)

X. (Additional) Areas of Confusion and Uncertainty

A. The Statute of Limitations

The original deadline for the statute of limitations for CERCLA NRDs passed in December 1983, and only four federal NRD suits were brought.\(^{360}\) *The Washington Post* reported a "spasm of fingerpointing" among federal agency officials seeking to avoid blame for the lack of administrative commitment.\(^{361}\) As part of SARA, Congress amended the statute of limitations. As amended, section 113(g)(1) sets the general statute of limitations, which applies at non-NPL sites, for CERCLA NRDs at three years after the later of the following: (A) the date of the discovery of the loss and its connection with the release in question (discovery prong); and (B) the date on which DOI promulgates the assessment regulations required by section 301(c) (regulatory prong).\(^{362}\)

Section 113(g)(1) carves out a huge exception to this general rule for NPL sites, federal facilities identified pursuant to section 120 of CERCLA, and any vessel or facility at which "a remedial action under this chapter is otherwise scheduled . . ."\(^{363}\) For these facilities, section 113(g) sets the statute of limitations at three years after the completion of the remedial action, excluding operation and maintenance activities. Section 113(g)(1) also prohibits the fil-

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358. See id. See *Chevron*, U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 897, 842-43 (1984). The *Chevron* doctrine states that a statute should be construed to effectuate the expressed intent of the legislature where possible, but absent a legislative expression of intent, deference should be given to the interpretation of an agency charged with its execution. See id.

359. See *Kennecott*, 88 F.3d at 1231.

360. See *Breen, Citizen Suits*, supra note 108, at 862.


362. CERCLA § 113(g)(1), 42 U.S.C. § 9613(g)(1).

363. Id. This provision states in pertinent part:

> With respect to any facility listed on the National Priorities List (NPL), any Federal facility identified under section 9620 of this title (relating to Federal facilities), or any vessel or facility at which a remedial action under this chapter scheduled, an action for damages under this chapter is otherwise must be commenced within 3 years after completion of the remedial action (excluding operation and maintenance activities) in lieu of the dates referred to in subparagraph (A) or (B). . . .

Id.
ing of NRD claims prior to sixty days after the federal or state trustee notifies the President and the PRP of an intent to file suit,\textsuperscript{364} and before the selection of a remedial action if the President is "diligently proceeding" with an RI/FS.\textsuperscript{365}

Because DOI promulgated the section 301(c) regulations haphazardly, courts have interpreted the non-NPL statute of limitations differently. In \textit{United States v. Montrose Chem. Corp. of Cal.} (Montrose Chem.),\textsuperscript{366} the district court found that the plaintiff trustees had failed to file within the confines of the non-NPL statute of limitations. The trustees brought a suit to recover CERCLA NRDs for injuries to the Southern California Bight (an area of land submerged under the Pacific Ocean).\textsuperscript{367} These injuries resulted from contamination from two separate sources, DDT discharges from a manufacturing plant in Montrose and PCB discharges from a plant owned by Westinghouse.\textsuperscript{368}

With regard to the regulatory prong of the non-NPL rule,\textsuperscript{369} the district court, framing the issue as a "purely legal one," inquired whether Congress intended the limitations period to run from the time the Type B regulations were promulgated or from the time when both the Type A and the Type B regulations were promulgated.\textsuperscript{370} The court found that the legislative history indicated that the promulgation of the Type B rule was intended to trigger the running of the period.\textsuperscript{371} However, the court also stated that the statutory language provided that the limitations period should run from the promulgation of the rule "applicable" to the particular

\begin{itemize}
\item \textsuperscript{364} This notice of intent to file suit originates in CERCLA § 113(l), 42 U.S.C. § 9613(l).
\item \textsuperscript{365} See CERCLA § 113(g)(1) 42 U.S.C. § 9613(g)(1). Section 113(g)(1) provides that:
\begin{quote}
In no event may an action for damages under this chapter with respect to such a vessel or facility be commenced (i) prior to 60 days after the Federal or State natural resource trustee provides to the President and to the potentially responsible party a notice of intent to file suit, or (ii) before selection of the remedial action if the President is diligently proceeding with a remedial investigation and feasibility study under section 9604(b) of this title or section 9620 of this title (relating to Federal facilities).
\end{quote}
\item \textsuperscript{366} See \textit{id.} at 1396 (C.D. Cal. 1995).
\item \textsuperscript{367} See \textit{id.} at 1397.
\item \textsuperscript{368} See \textit{id.}.
\item \textsuperscript{369} See CERCLA § 113(g)(1)(A), 42 U.S.C. § 9613(g)(1)(A).
\item \textsuperscript{370} See Montrose Chem., 883 F. Supp. at 1339.
\item \textsuperscript{371} See \textit{id.} at 1402.
\end{itemize}
The opinion fails to reveal the court's preference between these two holdings.

With regard to the discovery prong of the non-NPL rule, the district court found that the plaintiff trustees had the requisite knowledge of the injury prior to the promulgation of the Type B regulations based upon numerous reports of the damage and its sources. The court followed precedent that widespread knowledge of information among lower echelon governmental employees is imputed to the higher levels, the "trustee," when employees with the knowledge have a duty to transmit the information to their superiors. The court also denied the plaintiffs' argument that DOI's interpretation of the date of discovery, based on the signing of the NRD Preassessment Screen Determination, was supported by CERCLA or its legislative history.

On appeal, the Ninth Circuit Court of Appeals rejected the district court's rationale with regard to the regulatory prong. Looking at section 113(g)(1)(B) of CERCLA, the Court of Appeals held that the clear intent of the provision is that the statute of limitations began to run upon the promulgation of both the Type A and Type B rules. In so holding, the court specifically rejected the arguments that the language of the section was ambiguous, that DOI could manipulate the statute of limitations by continuing to promulgate the rules in increments, and that the subsequent invalidation of the rules in Ohio and Colorado has any bearing on the issue.

The court also denied that the legislative history indicated that Congress intended the promulgation of the Type B rules alone to set the date of the running of the statute of limitations. The court further rejected the defendants' arguments that the fact that the Type A rules did not apply to the case at bar had any relevance to the statute of limitations, that the DOI's continued failure to promulgate all of the Type A rules made the Trustees' arguments absurd, and that Congress intended to establish the running of the

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372. See id. at 1399.
373. See CERCLA § 113(g)(1)(B), 42 U.S.C. § 9613(g)(1)(B).
375. See id. at 1405.
376. See id. at 1406.
378. See id. at *12-13.
379. See id. at *15-17.
380. See id. at *17-22.

http://digitalcommons.law.villanova.edu/elj/vol8/iss2/3
statute of limitations by setting a deadline for the promulgation of the rules.381

In its analysis, the Ninth Circuit in California v. Montrose looked to the guidance of the opinion of the Court of Appeals for the D.C. Circuit in Kennecott Utah Copper Corp. v. Department of Interior.382 The revised Type B rule attempted to set the date for the regulatory prong as the later of the dates on which the final rules for the Type A and Type B regulations are published pursuant to Colorado and Ohio.383 In Kennecott, industry petitioners argued that DOI did not have the authority under CERCLA to define the term "promulgated."384 Further, they argued that DOI could not alter the clear intent of CERCLA (under step one of Chevron), and that DOI's interpretation of the date was unreasonable (under step two of Chevron) because it enabled the agency to indefinitely postpone the running of the statute of limitations by stalling the rules identified.385

After noting that whether the agency has the power to interpret the term "promulgated" is a close call, the court declined to decide the issue, relying on the failure of the interpretation under Chevron.386 With regard to the first step of the Chevron analysis, the court decided that the congressional intent was not sufficiently clear to provide it with any guidance.387 Proceeding to the second step of the Chevron analysis, the court held that DOI's attempt to define "promulgated" as an uncertain date in the future, possibly several years away, was simply too far of a stretch to be reasonable.388 For this reason, the court rejected DOI's attempt to base the statute of limitations on the revisions of the regulations pursuant to Ohio and Colorado.

B. The Fifty Million Dollar Cap

Section 107(c)(1)(D) of CERCLA limits NRD liability to fifty million dollars per release or incident involving a release from a

381. See id. at *25-27.
383. See 43 C.F.R. § 11.91(e).
384. See Kennecott, 88 F.3d at 1210-11.
385. See id.
386. See id. at 1213.
387. See id. at 1211.
388. See id. at 1212-13. The court held that "the date under which the regulations were promulgated was, at the latest, the date on which the Type A regulations were published in the Federal Register." Id.
facility. In Montrose, the district court interpreted section 107(c)(1)(D) to mean that the liability of a group of defendants alleged to be liable as owners and operators of a particular facility was limited to fifty million dollars, as a group.

On appeal, the Ninth Circuit noted that, while the district court had not explained its reasoning in its written opinion, it had stated two grounds for this holding in court: (1) all of the releases from the facility in question constituted one “incident involving release;” and (2) the site constituted one “facility” and therefore the statute limited liability to fifty million dollars from all releases from the facility.

The court examined the context of the phrase “incident involving release” and the legislative history of CERCLA and held that the term means “an occurrence or series of occurrences of relatively short duration involving a single release or a series of releases all resulting from or connected to the event or occurrence.” Therefore, a series of releases over a long period of time do not necessarily fall within the confines of one “incident involving release” and the fifty million dollar cap may or may not apply.

The court then turned to the district court’s second rationale. Beginning with the statutory language of section 107(c), the court noted that CERCLA set forth several categories of sources of a release and set different caps on the liability arising from releases from those source categories. From this point, the court summarily jumped to the holding that one’s liability for each release is capped at a different amount depending on the source category and that the district court’s interpretation would render the clause linking the liable party to each specific release meaningless.

389. See CERCLA § 107(c)(1), 42 U.S.C. § 9607(c)(1). Section 107(c)(1) reads:

[T]he liability under [42 U.S.C. § 9607] of an owner or operator or other responsible person for each release of a hazardous substance or incident involving release of a hazardous substance shall not exceed —... (D) for... any facility other than those specified in subparagraph (C) of this paragraph, the total of all costs of response plus $50,000,000 for any damages under this subchapter.

Id. This liability cap is removed if the release resulted from an act of willful misconduct or willful negligence, a violation of applicable safety standards or regulations, or the PRP fails to reasonably cooperate with the response action. See id. § 107(c)(2), 42 U.S.C. § 9607(c)(2).


392. Id. at *35.

393. See id.

394. See id. at *35-36.

395. See id. at *36-37.
Therefore, the court rejected the district court's limitation on the fifty million dollar cap.

While not erring on the side of excess language, this holding is sound. First, the definition of "release" or the term "incident involving release" could be interpreted to mean that a continuing release is comprised of multiple individual releases, multiplying the fifty million dollar cap. Second, the statutory language indicates that the cap is based upon the liability of each defendant, not each facility. Other than Montrose, at the time of this writing, there is no caselaw on the NRD cap provision. However, trustees and PRPs are likely to continue to argue the meaning of the NRD cap provision.

C. Pre-Enactment Damages

Recognizing that injury to natural resources might result in unduly large claims, Congress provided in section 107(f) that there can be no recovery for NRDs "where such damages and the release of hazardous substances from which such damages resulted occurred wholly before" the enactment of CERCLA. Because injuries to natural resources tend to be continuing, courts have had difficulties interpreting the meaning of the seemingly simple provision.

In In re Acushnet River & New Bedford Harbor Proceedings (Acushnet I), the court held that NRDs "occur" when an entity loses use or enjoyment of the natural resource or incurs costs due to the injury. It recognized that where NRDs are divisible, plaintiffs cannot recover for that portion occurring prior to enactment of CERCLA. When the NRDs are not divisible and releases that caused the damages continued after enactment of CERCLA, the court found that the trustees could recover the NRDs in their entirety. Moreover, the court held that the defendant bears the

396. See CERCLA § 101(22), 42 U.S.C. 9601(22). A release is defined as: "... any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant)," with certain exclusions. Id.

397. Id. § 107(f), 42 U.S.C. § 107(f). See also, Artesian Water Co. v. Gov't of New Castle County, 851 F.2d 643, 650 (3d Cir. 1988) (suggesting non-retroactivity of natural resource claim indicates Congress intended to limit such claims as to time and eligibility for recovery).


399. See id. at 684. Damages caused by diminution in property value do not have to be actualized. Id.

400. See id. at 685.

401. See id. at 686. (citations omitted).
burden of proving that the damages are divisible and the portion of the damages that occurred prior to enactment. For instance, aesthetic damage and “latent” or undiscovered injuries (which are incapable of assessment because they are not known) are examples of indivisible damages.

D. Prohibition On Double Recovery

In 1986, Congress added language to section 107(f) (1) of CERCLA prohibiting double recovery for NRDs. This provision limits a trustee from seeking CERCLA NRDs for an injury to a natural resource within its trust when another trustee has already won or settled a CERCLA NRD claim based upon that same injury. To avoid this defense, the second trustee must base its claim either on a different natural resource injury or on a different release than the first trustee. However, because the terms “release” and “natural resource” are subject to differing interpretations, even this strategy is risky.

E. The Rebuttable Presumption

While not required to follow their direction, a trustee that performs an assessment under the DOI regulations is given the effect of a rebuttable presumption of damage when reviewed by a court or administrative body. The rebuttable presumption creates several problems. First, section 107(f) (2) (C) of CERCLA, which creates the presumption, speaks only in terms of federal and state trust-
Commentators disagree whether, if a municipality could bring suit for NRDs without gubernatorial designation, it would be entitled to the rebuttable presumption. However, the presumption appears to apply to municipalities if they operate under gubernatorial delegation or if the reviewing court follows the Boonton analysis of the definition of "state." Some commentators also assert that tribal trustees would receive the presumption if they completed an assessment under the DOI rules. However, section 126(a) of CERCLA lists the applicable provisions where Indian tribes are to be treated as a "state," and it fails to cite section 107(f)(2)(c).

Commentators also disagree over the effect of following the regulations. Menefee asserts that the rebuttable presumption will aid in ending challenges to NRD assessments. Huguenin asserts that following the regulations closely may prove to be too expensive for most trustees, especially if CV methods become a mainstay.

XI. Settling CERCLA NRD Claims

The controversy surrounding the political and regulatory aspects of NRD often overshadows developments in the judicial forum. However, following the guide set out in United States v. Cannons Eng'g Corp., reviewing courts have begun to examine proposed NRD settlements with a discerning eye. In Utah v. Kenne-
The district court rejected a proposed consent decree that would have settled a $129 million NRD claim made by the state trustee, for contaminated groundwater, for $11.7 million. After noting that the settlement of NRDs before completing the remediation is like putting the "cart before the horse," the court held that there were at least three reasons why the consent decree could not be entered. The first and second reasons seemingly relied on section 122(j)(2) of CERCLA, which allows federal trustees to enter into covenants not to sue for NRDs only if the PRP agrees to undertake appropriate action necessary to protect and restore the injured natural resource. The state's failure to provide a sufficient foundation for its determination that the groundwater could not be feasibly restored, and its failure to require substantial protection from future contamination of its natural resources failed to meet the protection and restoration requirements. The court noted that the plain language of section 122(j)(2) was limited to federal trustees, but stated that the purposes of CERCLA required that both federal and state trustees be held to this standard when the NRD settlement precedes the remediation.

The third reason arose from the state's sole reliance on market values to calculate damages, as it failed to adequately assess the extent of present and future injuries to the state's natural resources. The court held that this method of valuation ignored the Ohio decision, which mandated the inclusion of option and existence values in a prima facie assessment. Moreover, the state failed to include in the assessment costs of containment of the plume of contamination and source control, apparently in reliance upon some future action by EPA.

417. See id. at 572.
418. Despite the fact that NRDs are partially based upon residual injury, NRD claims are sometimes settled before the site remediation is complete or the ROD is even signed. Some commentators assert that this practice should be limited. See Stephen C. Jones, Recent Assessment Regulations from Interior Department Indicate that NRDs Pose New Liabilities for Industry, NATL. L.J., Aug. 8, 1994, at B4, B10 n.4 (citing WNIUS D. BRIGHTON, THE NEW RULES FOR NRD ASSESSMENTS AND CLAIMS UNDER CERCLA AND OPA 618, 621 (1994)).
421. See id.
422. See id. at 571.
423. See id. The court stated that "it appears that the State adopted too narrow interpretation of use value by equating such with market value only." Id. Therefore, the proposed settlement failed to "capture fully all aspects of the loss." Id. (citing Ohio v. Dep't of Interior, 880 F.2d 432, 463 (D.C. Cir. 1989)).
Utah required not only that the substantive mandates of CERCLA be met, but also that the parties enter into evidence enough technical detail on both the proposed remediation and the valuation of the resource so that the court is able to determine the proposed settlement's appropriateness. One court has gone further, explicitly requiring that evidence of the valuation of the injured natural resource be entered into the record for review. In *United States v. Montrose Chem. Corp. of Cal.* (Montrose) the Court of Appeals for the Ninth Circuit reviewed the approval of a proposed consent decree between a number of trustees and local governmental and quasi-governmental entities (government defendants). Although the court of appeals noted that its role involved considerable deference, it held that the district court had abused its discretion by entering the consent decree without any evidence of the total NRD assessment.

Although the Special Master had vouched for the settlement's fairness, the court of appeals held that a settlement could not be approved without some indication of the relationship between settlement amount and the total NRD amount. The court noted that such a showing is especially important where joint and several liability did not attach and collection of the settlement amount appears tenuous. In so holding, the court refuted the district court's assertion that CERCLA's policy to facilitate early settlements created any additional deference to the reviewing court.

While the requirement to introduce evidence of the assessment may not seem problematic, it can present difficulties when no actual assessment has been completed and the parties are relying on a thumbnail sketch of the injury. Such cases are common when no or little permanent injury has been discovered that can be traced to a particular release or site and the PRP is demanding a total "walk" from the site. In such a case, the trustee is receiving an

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424. 50 F.3d 741 (9th Cir. 1995).
425. See id. at 743-46. The *Montrose* case involved four distinct groups of plaintiffs, which the Special Master assigned to the case had directed to negotiate with the plaintiff trustees separately and subject to a confidentiality agreement. The government defendants and another group had arrived at settlements with the plaintiff trustees, both of which had been approved by the district court. Only the settlement involving the government defendants was appealed. See id.
426. See id. at 746-47.
427. See id. at 747. The court held that reliance on the special master's recommendation cannot be so complete that it replaces the court's obligation to independently scrutinize the settlement terms. See id.
428. See id.
429. See *Montrose*, 50 F.3d at 748.
amount, usually relatively small, in order to comprise a claim it
never would have initiated. Some critics may assail this practice as
"legal blackmail," nevertheless the issue is usually introduced by the
PRP, who wants the assurance that they will never have to worry
about the case again.

Decisions rejecting proposed NRD settlements do not account
for the bulk of NRD settlements, so their philosophical value may
outweigh their practical consequences. Some of the concerns
raised by such cases, such as the "protect and restore" requirement
in Utah, may be avoided by skillful drafting of covenants not to sue
and the accompanying reopeners. However, in cases where several
PRPs or groups of PRPs have been contentiously fighting the
remediation or the NRDs, the trustees should review these opinions
and craft their case so as to avoid successful third-party appeals.
Such efforts should include showing how the settlement protects
and restores the injured natural resource, and introducing some evi-
dence of the total NRD value.

XII. How Government Trustees Use CERCLA NRDs

A. When Are NRDs Sought?

On a practical level, government trustees do not always seek
CERCLA NRDs, primarily because of the difficult legal, policy and
economic issues that accompany these claims. Government trustees
will tend to seek CERCLA NRDs when significant natural resources
are injured and complete clean-up is neither technically feasible
nor cost effective. In addition, NRD suits may potentially arise
when the clean-up of effected media does not restore damaged nat-
ural resources, such as biota, fisheries and the like. Habicht sug-

B. The Value of the NRD Claim in CERCLA Negotiations

Despite Congressional goals, the process required by CERCLA
is by no means quick. Taking a site through the entire remediation
process takes an average of a little over eight years. During this

430. Research at the time of this writing revealed only the two cases, Kennecott
and Montrose, both discussed earlier in this Article.
431. See Habicht, supra note 20, at 5.
432. See id.
433. See id. “The policy should be to evaluate claims carefully and bring ac-
tions for natural resource damages only where restoration or replacement, in some
form, advances or contributes to the overall response to the hazardous substance
contamination.” Id.
434. See Church & Nakamura, supra note 33, at 7-8.
time the PRPs typically will fight against more stringent clean-up standards and methods, which would increase their potential liability during cost recovery. For example, a PRP may petition EPA to waive a state clean-up standard or ARAR, such as groundwater remediation standards, based on a statutory waiver, such as technical impracticability. Because NRD claims aim to compensate the public for damages to a natural resource, they create a disincentive for PRP's to attempt to convince EPA and the state to agree to lower clean-up standards. This is because PRPs, after all, will bear the financial burden of compensating the public for the greater residual contamination left by a reduced standard. In negotiations, a particular trustee's ability to effectively present its NRD claim to a court increases both settlement amounts obtained from PRPs for NRD claims as well as the willingness of PRPs to accept more stringent standards.

XIII. ARE CERCLA NRDs A SLEEPING GIANT?

During recent Senate hearings on NRDs, Senator Bob Smith, agreed with witness' statements that NRDs are the "sleeping giant" of Superfund because of the lack of information available on the extent of NRD damages at Superfund sites. Since the 1980s, legal commentators have predicted that claims for CERCLA NRDs would become central to Superfund litigation. Recently, it appears that these predictions may be true. While cost recovery actions often push NRDs out of the spotlight, PRPs have begun to push for covenants not to sue that include NRDs in consent decrees and agreements. In addition, recent publication of several rules by DOI and NOAA markedly improve the chance that these

435. See Mazmanian & Morell, supra note 18, at 45.
438. Republican of New Hampshire.
440. See Habicht, supra note 20, at 1.
claims will become an integral part of CERCLA negotiations and litigation. Congress is currently examining the impact and role of CERCLA NRDs. This gives trustees a strong incentive to moderate their lobbying and prosecutorial activities, if only to convince Congress that they can be trusted with the CERCLA NRD provisions.

Several structural features also limit the ability of trustees to pursue CERCLA NRDs. States have complained for a long time that they do not have the financial resources to conduct the detailed assessments necessary to evaluate possible NRD claims. In addition, the trustees designated by the President and governors have other competing responsibilities that reduce energy available for the pursuit of NRDs. Also, the fact that state (and possibly federal) program personnel are reluctant to destroy working relationships with PRPs in order to pursue monies in addition to cleanup costs may further impede pursuit of NRDs. Even after the publication of the final NRD rules, these problems will impede the widespread filing of NRD claims.

XIV. REAUTHORIZATION IN THE 104TH CONGRESS

The 103d Congress avoided the NRD issue via a tightly-controlled system of negotiations between interested parties. In the 104th Congress, the NRD issue was one that doomed Republican efforts at Superfund reform. The two central Republican players in the CERCLA reauthorization during the 104th Congress were Representative Michael Oxley and Senator Robert Smith. Both issued position papers concerning their goals for Superfund reform.
changes. These proposals offered a dramatic departure from the past evolution of CERCLA NRDs and would have given industry an advantage in future NRD suits.449

In the newly-elected 105th Congress, the issue of Superfund reform will continue to be contentious. The Republican leadership in the Senate has already introduced a comprehensive Superfund reform bill, Senate Bill 8, to begin the debate.450 Senate Bill 8's NRD title, Title 7, attempts to correct some of the perceived unfairness of the CERCLA NRD provisions.451

The bill places a limitation in section 107(f) of CERCLA that only allows a Trustee's restoration or replacement of an injured natural resource or acquisition of a substitute resource to proceed if the project is "technologically feasible from an engineering perspective at a reasonable cost and consistent with all known or anticipated response actions at or near the facility."452 While seeking a laudatory goal, the language of this limitation provides little comfort because its terms are not defined. Technological feasibility, as many environmental practitioners know from PRP attempts to waive groundwater clean-up standards, is a truly malleable term, subject to deference from the courts. In addition, in the Superfund context, the term "reasonable" loses definition when compared to remedial actions with $100,000,000 price tags. A court reviewing whether the cost of a Trustee's chosen project is reasonable when compared to remedial actions, or other projects likely to be examined during the NRD assessment, is unlikely to evolve beyond the "shocks to the conscience" analysis taught in first-year law school classes.

Senate Bill 8 further modifies the language of section 107, limiting the amount of CERCLA NRD liability to an amount equal to the total of reasonable costs of restoration or replacement of the injured resource or acquisition of an equivalent replacement resource.453 More importantly, this provision explicitly prohibits recovery for impairment of lost non-use values.454 In addition, the

451. See id.
452. S. 8, § 701(3).
453. See S. 8, § 703(3)(B).
454. See id.
provision attempts to clarify the existing limitations on double recovery and retroactive application of NRD liability.\textsuperscript{455}

The value of the clarifications on double recovery and retroactive application do not seem, by their terms, to offer much more than the original provision.\textsuperscript{456} The limitations on the liability, however, offer the regulated community a glimpse of certainty, especially because they limit Trustees' recovery to real-world objectives. With a focus on restoration projects and the elimination of non-use values from the assessments, a PRP can be assured that the trustees are not simply inflating their claims or using questionable economic valuation techniques to obtain optimum recoveries.\textsuperscript{457}

Section 702 of Senate Bill 8 adds to this new certainty by limiting trustees, to the extent practicable, to assessment methodologies that conform to the section 301(c) rulemaking and “generally accepted scientific and technical standards and methodologies.”\textsuperscript{458} Further, the provision requires that the assessment rely on facility-specific information, rather than regional data or generic estimations of the value of a resource.\textsuperscript{459} While this process will make the trustees’ task of valuing an injury even more onerous, PRPs may be less resistant to an assessment revealing that the injury at a specific site served as the basis for the assessment. Additionally, section 702 also contains a limitation on the costs of an assessment that a trustee may recover that eliminates any costs of conducting a CV assessment.

The lack of definition of “generally accepted scientific and technical standards and methodologies” in section 702, is particularly bothersome given the Supreme Court’s decision in \textit{Daubert v. Merrill Dow Pharmaceuticals},\textsuperscript{460} which altered the traditional \textit{Frye v. United States} rule regarding the introduction of expert scientific opinion into evidence. The \textit{Frye} test only allowed scientific evidence that was generally accepted in the relevant scientific commu-

\textsuperscript{455} See id. Section 703(a) states: “[b]oth response actions and restoration measures may be implemented at the same facility, or to address releases from the same facility. Such response actions and restoration measures shall not be inconsistent with another and shall be implemented to the extent practicable, in a coordinated and integrated manner.” \textit{Id.}

\textsuperscript{456} See CERCLA § 107(f), 42 U.S.C. § 9607(f).

\textsuperscript{457} The term “nonuse value,” however, has not been defined, which could lead to difficulty as assessments are conducted.

\textsuperscript{458} S. 8, § 702(a).

\textsuperscript{459} See id.

\textsuperscript{460} 113 S. Ct. 2786 (1993).

\textsuperscript{461} 293 F. 1013 (D.C. Cir. 1923).
nity. The *Daubert* opinion liberalizes this rule by creating a four-part test to examine scientific evidence. While the details of the distinction between the two tests need not be examined here, the provision implies that NRD valuation somehow differs from other scientific evidence in terms of its importance, such that the more stringent *Frye* test is more appropriate.

Obviously, the elimination of recovery for CV assessments will serve as a nearly insurmountable barrier to the performance of these surveys by trustees. Together with the prohibition on recovery for non-use values, the Senate Republicans are sending a strong message that questionable economic methodologies are not acceptable. While this decision is completely justifiable from a policy perspective, especially given the astronomic fears of the regulated community, one should not look to legal or economic logic for further support. The fact that an injury is difficult to value does not mean it did not occur, or that an entity or a market segment did not profit by shifting the cost of that injury to the public domain. One caveat, however, derives from the federalist system. Although Congress may eliminate these hotly-contested economic devices from CERCLA, states do not have to follow suit. State statutes analogous to CERCLA will not change by the passage of a Superfund reform bill, and the vestiges of CV and non-use injury may still survive in these little-used statutes well after these issues have been resolved at the federal level.

The remainder of section 702 of Senate Bill 8 provides little ground for controversy. It forces trustees to allow the payment of NRDs over a period of years appropriate to the number of years over which the injury occurred, and considering the amount of the damages, the financial ability of the PRP and the pace of expenditures for the restoration, replacement or acquisition. It allows, but does not require, the designation of a lead trustee and the creation of an administrative record. It also curiously requires that the Administrator of EPA, as opposed to the President or the Secretaries of the Department of Interior and Department of Commerce, to promulgate a regulation regarding public participation in the assessment process.

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463. See id.
464. See S. 8, § 702(a).
465. See id.
466. See id.
The section also amends section 301 (c) of CERCLA regarding the NRD rulemakings to require that the various rules be adjusted to fit the new NRD paradigm. In addition to focusing the rules on restoration alternatives and appropriate criteria for the setting of schedules for NRD payments, section 702 of Senate Bill 8 requires the President to identify the "Best Available Procedures" to determine the reasonable costs of restoration and assessment and to take into account natural recovery of injured natural resources and the availability of replacement or alternative resources.467

Further, section 702 (b) requires the new 301 (c) rulemaking to provide for the designation of a single lead federal trustee. Furthermore, all trustees must identify the injured natural resources within their trusteeships and reveal the authority for the scope of their trusteeships as soon as practicable after the release affecting the natural resource.468 Despite the arduous history of the NRD rulemakings, Senate Bill 8 optimistically sets the deadline for this new rulemaking at one year from the enactment of the bill.469

Section 703 requires consistency between NRD restoration measures and CERCLA remedial actions and states that restoration measures and remedial actions should be implemented in a coordinated and integrated manner to the extent practicable.470 This provision recognizes the coordination that one would normally expect from responsible government officials and that PRPs will potentially welcome. A problem with this type of pronouncement is it fails to address the problems that may occur when NRDs are being pursued at a site that is not part of the CERCLA process, whether through the efforts of the federal Trustees without EPA or through state or tribal Trustees.

Section 704 of Senate Bill 8, the last provision in the NRD title, wisely amends the section 113 contribution claim provision to include NRDs.471 One remaining question, despite this provision, is whether strict liability would attach in contribution actions or whether causation must be established, as in trustee NRD actions. In other words, if a PRP enters into an NRD settlement with a trustee and later pursues other parties that it believes contributed to the injury, must it tie the other parties to the injury as a "sole or substantially contributing cause" or merely as a "contributing

467. See S. 8, § 702(b).
468. See id.
469. See id.
470. See S. 8, § 703.
471. See S. 8, § 704.
cause?"\textsuperscript{472} Alternatively, will the NRD contribution plaintiff receive the advantage of strict liability? As NRD contribution actions become more common, this issue will be a hotly-contested issue, whether Senate Bill 8 is enacted or not.

The ambiguities in the NRD scheme point to a thematic problem underlying the entire NRD program: the imprecise manner in which CERCLA attempts to craft modern statutory patterns onto common law theories. The following proposal is premised on the central idea that the NRD mechanism should be independent of both the common law and media-oriented federal statutes.

XV. A BALANCED PROPOSAL

In approaching CERCLA NRDs, the 105th Congress should remember several precepts. First, if they eliminate or significantly degrade NRDs, the pendulum may swing against them in the future and an even harsher legal tool may be created by a future Democratic Congress. Second, the theory behind NRDs, that polluters fully internalize their costs, including contamination, in the cost of their goods and service, is not fundamentally unfair or impracticable. By forcing corporations to account for the full costs of the goods produced, consumers will allocate society's resources more efficiently. Third, NRD trustees will, and should, seek to expand their available cause of action. If they do not, they will be doing a disservice to their trust.

With these precepts in mind, Congress should create a free-standing statutory scheme to replace the phalanx of federal and state NRD and quasi-NRD claims. Industry should not be forced to analyze and anticipate the nuances of even the three "major" federal statutes with NRD provisions (CERCLA, the Oil Pollution Act and the Clean Water Act). Instead, Congress should bring all of the NRD provisions of these statutes together under one title and create some consistency between the programs. This resulting statute should address the following concerns that arise out of the NRD provisions of CERCLA.

A. Expressly Preempt Any State Statutory Provision or Common Law Theory which Provides for NRD Claims

Preemption of state statutory provisions or common law theories may seem severe and may initiate wide opposition from state

\textsuperscript{472} For a discussion of the causation element in NRD claims, see supra notes 79-90 and accompanying text.
trustees, but it serves an important purpose echoed throughout this proposal: allow a full NRD and reasonable recovery, but provide PRPs with certainty. Preemption is justified for two reasons. First, by eliminating the possibility that a state trustee will assert an NRD claim under state law, PRPs will be assured that there will only be one NRD suit for a given injury. Second, preemption would lower the possibility of double recovery. However, it should be recognized that, when drafting such a proposal, Congress must pay careful attention to the language used, particularly to avoid preempting state civil penalty provisions that may incorporate some NRD characteristics.

B. Unify the Trusteeships

Unifying trusteeships addresses the need to assure that no new or unexpected trustees will be allowed or will be authorized to raise NRD claims. To achieve this goal of certainty, Congress should begin to take steps to eliminate ambiguity of the governors' designation. Specifically, Congress should require state governors, by executive order, to specify a single state official or executive agency who will act as its NRD trustee and require DOI to compile this information in the Federal Register. Moreover, to eliminate any further confusion of authorized trustees, Congress should expressly eliminate municipal trusteeships.

C. Require Trustees to Follow the Rules Promulgated by DOI

NRDs should be required, as opposed to being given discretion, to follow the assessment process described in DOI regulations. The rebuttable presumption created under section 107(f)(2)(C) of CERCLA, if it is actually worth anything, will help

473. Preemption would merely focus the basis of claims under which non-federal trustees could sue on CERCLA, removing the possibility of recovery under state statutes or common law theories. Delegation of federal trusteeship to the other trustees is not necessary to effectuate this end, and actually would harm the NRD program by removing the expertise of federal trustees from the NRD "program."

474. Conceptually, civil penalties serve a different purpose than NRDs, by providing a punitive disincentive to pollution rather than compensation and cost internalization and allocation. For this reason, reformulation of CERCLA NRDs should leave states with the ability to create their own policy with regard to civil penalties. CERCLA could preempt state statutory NRDs and similar common law claims without disturbing civil penalties. See discussion of Pennsylvania Fish and Boat Commission and Pennsylvania Game Commission, supra note 125 and accompanying text.

475. For a discussion of the rebuttable presumption, see supra notes 407-15 and accompanying text.
simplify NRD cases and potentially promote early settlement. By compelling all trustees to follow a pre-established routine, PRPs may be able to better analyze the extent of their liability more efficiently and accurately.

D. Make the Rules Simple, Flexible and Easy to Apply

The present rules are too difficult to understand and apply. Many mathematical commentators have compiled logic formulae to compare the complexity of rules and the effect such complexity has upon compliance. While I cannot offer calculus in support of this contention, the present rules are simply too complex to be viewed as fair or practical. Assessments cost too much to perform under the present rules and, consequently, will take too long to perform. The most recent regulatory approach to this issue is from NOAA and incorporates the principle that restoration costs should be attempted first, with valuation serving as both a supplement and a safety net. This regulation demonstrates that the conceptual focus of NRDs is properly shifting from valuation to restoration. It would follow the statutory mandate to restore, enhance or replace injured resources and lessen the reliance on contentious methodologies such as CV. For instance, as under the NOAA regulation, if reasonable restoration is not possible, the trustees should be required to replace the resource with the acquisition of an equivalent. Such an approach has been favored by commentators and legislators alike.

E. Fix the Obvious Problems

First, construct, through legislation as opposed to rulemaking, a clear statute of limitations provision. Through this provision Congress should attempt to avoid terminology that may potentially be subject to differing interpretations and should allow trustees adequate time to evaluate their claims. Second, Congress should con-

478. See id. at 86-99. Brown addresses “CERCLA's shortcomings,” and specifically states that “[r]emedies, including removal of hazardous waste, should be cost-effective.” Id. at 86.
sider clarifying the language of the fifty million dollar cap and attempt to formulate a clear approach to the retroactive application of NRDs. The actual mechanism to re-define these latter points is fundamentally a policy choice, therefore, the predominant concern from a legal perspective is to make that mechanism as clear as possible to avoid subjecting it to multiple interpretations. Senate Bill 8 does not offer much hope along these lines.

Third, Congress should strive to create an NRD bill that anticipates multiple party suits, brought both by trustees and private parties seeking contribution. This requires giving the causation requirement an explicit standard and allowing equitable considerations. The current Congressional attempt, in Senate Bill 8, solves the latter problem but not the former one.

F. Narrow the Scope of the Trusteeships

The first step to narrow the scope of trusteeships is to eliminate the “appertaining to” and “otherwise managed” clauses from the definition of “natural resources.” In practical effect, these omissions would potentially curtail the scope of the trusteeships, but allow trustee ownership and the Public Trust Doctrine to remain as bases of NRD trusteeship. This allows greater certainty for industry at what is likely a minimal cost from an environmental prospective,

XVI. CONCLUSION

CERCLA NRDs are a theoretically complex and statutorily undefined mechanism. NRDs properly attempt to internalize costs thrust upon society by pollution into the costs of goods and services. The importance of this goal cannot be denied. However, the present NRD program not only offends a sense of fairness, but also fails to accomplish this goal. To initiate the process of internalizing the costs of pollution, Congress should begin by removing the NRD program from CERCLA and other relevant statutes and setting forth a precise and dogmatic scheme to enable incentives for early settlements and expeditious restoration measures. Specifically, Congress should design a process for NRD claims that is simple,

481. For a discussion of the fifty million dollar cap, see supra notes 389-96 and accompanying text.
482. For a discussion of Senate Bill 8, see supra notes 450-56 and accompanying text.
483. See S. 8, § 704 (addressing contribution).
484. For the definition of natural resources, see CERCLA, 101(16), 42 U.S.C. § 9601(16).
relatively easy to estimate, and reflects the cost of the injury as the reasonable cost of restoration. By creating a new federal NRD program outside the media-based statutes, Congress can remove the uncertainty faced by industry and effectuate the goal of internalization.