



Ad-Hoc INDUSTRY

NATURAL RESOURCE
MANAGEMENT GROUP

**THE RELATIONSHIP BETWEEN CLEAN UP (AT SUPERFUND AND OTHER
HAZARDOUS WASTE SITES) AND RESTORATION OF NATURAL RESOURCES:
A BEST PRACTICE APPROACH FOR INDUSTRIAL COMPANIES AND OTHERS**

Draft for Discussion

Definition of the Issue

The statutes, regulations and guidance governing the cleanup/remediation process and the natural resource damage assessment (NRDA) and restoration process mandate that these processes are separate and sequential in that NRD is a residual after clean up.¹ However, experience has shown that some joint consideration of the two processes and opportunities for coordination of data collection and analysis and other activities can save time and money and sometimes even restore the injured natural resources to baseline. This document outlines some of the background regarding this matter and the kinds of circumstances which can favor remediation/restoration coordination, or, conversely, argue for complete bifurcation of the two processes -- or warrant a possible middle ground, where certain portions of the cleanup/assessment processes (but not all) can be better coordinated. A best practice approach is provided here to aid companies and others considering coordination of remediation and restoration.

Historical and Current Practice

There have been some limited prior efforts to explore the topic of coordinating cleanup/remedial activities and natural resource damage assessment and restoration. In 2008, a workshop was convened by the Society for Environmental Toxicology and Chemistry (SETAC), "The Nexus Between Ecological Risk Assessment and Natural Resource Damage Assessment Under CERCLA: Understanding and Improving the Common Scientific Underpinnings" which examined the interface between the Ecological Risk Assessment (ERA) and the NRDA Process. In June 2014, SETAC, in collaboration with the Society of Ecological Restoration (SER), further examined the relationship

¹ See Appendix A which summarizes the statutory and regulatory requirements concerning the relationship between remediation and restoration.

between remediation and restoration, including restoring contaminated ecosystems and preventing contamination during restoration activities. In addition, the 2012 Department of Energy (DOE) policy, “Directive 140. Natural Resource Damage Assessment Cooperation and Integration”, strongly advocates coordination of the two processes, in part because DOE can be both a Trustee and PRP at a site. Finally, the State of Texas has regulatory requirements allowing Trustee participation in the Texas Risk Reduction Program’s Ecological Risk Assessment process, mandating notification of Trustees at several points in the process, and outlining the details of coordination between the NRD Trustees, responsible parties, and response agencies.²

Each of these sources provides “food for thought” relative to the interplay between statutory and regulatory requirements, scientific commonalities such as characterization and quantification of risk and injury, cost efficiencies and common sense. In actual practice, we currently see a mix of coordination, bifurcation and middle ground. In general, the interrelationship between cleanup and NRDA and restoration is much more clearly seen in oil spills, typically involving emergency response efforts than Superfund or other long term continuing hazardous waste release situations. However, the remedial investigation/feasibility study and remedial selection process under CERCLA requires the consideration of whether natural resources “... are or may be injured by the release...”³ as part of the evaluation of remedial alternatives, thereby providing an opportunity to evaluate net environmental benefits of remedial alternatives, including potential enhancements of ecological and human use services, prior to implementing the site’s remedy. In theory, under CERCLA, the net benefits analysis is part of the Feasibility Study process reviewed by both EPA/state agencies and Trustees (e.g., Biological Technical Assistance Group, BTAG) as part of their review. There are several potential benefits to a PRP, including a more natural resource friendly and less costly remedial actions, reduced areal extent of remediation, quicker recovery to baseline and more.

Toward a Possible Improved Practice Approach

Based on recent experience, considering the remediation/restoration interface at specific sites from the outset can be both productive and beneficial. Where appropriate, given a site’s specific characteristics and assuming there is agreement among the parties, coordination of remediation and restoration activities can result in an overall process that is more cost-effective, streamlined and efficient; prevents duplication of effort; minimizes the potential to “over engineer” a remedy; has the potential for parties to get to settlement and resource restoration sooner; and maximizes the potential for incorporating ecological enhancements into post-remediation restoration. Despite the potential benefits of coordinating cleanup/restoration processes, there are also risks, including legal barriers

² Texas Risk Reduction Program Rules, 30 Tex. Admin. Code 350, Texas Natural Resource Conservation Commission Memoranda of Understanding, 30 Texas Admin. Code 7.124

³ 40 CFR §300.430 (b)(7)

which could prevent and/or delay settlement of an NRD claim if restoration activities are done prior to a Record of Decision.

Circumstances Favoring Coordination of Remediation and Restoration

There are site-specific, as well as party-specific, factors that will likely play a role as to whether and how the remediation/restoration interface is considered at a particular NRD case or site. Listed below are examples of some of the circumstances when closer alignment remediation and restoration may be beneficial. Also provided are those circumstances where a sequential approach to remediation and restoration may be more appropriate.

Closer alignment of the remediation, assessment and restoration processes may be favored at a specific NRD case or site IF:

- a. The site involves a single or few Trustees/Potentially Responsible Parties (PRPs), as this can potentially be a less complex situation and encourage more streamlined communication;
- b. The parties are open to coordination of remediation and restoration;
- c. Agreement can be established between parties relative to the level of communication and coordination needed to facilitate the process;
- d. The spatial and temporal scope and allegedly injured natural resources/services are clearly identifiable;
- e. The remedial investigation/feasibility study and selection of remedial remedy are in a state that allows incorporation of enhanced restoration;
- f. Cleanup is in the early stages and enhanced restoration can be considered in an adaptive management approach;
- g. Trustees are open to being actively engaged in the remedial process;
- h. There is a desire and/or need to restore specific natural resources quickly;
- i. There is potential opportunity to collect data which could be used for purposes of both an Ecological Risk Assessment and NRDA at the site;
- j. Desired restoration projects have already been identified for the site, allowing for the parties to consider possible implementation of such projects during the cleanup phase;
- k. It is apparent, by reasonable assumptions, that the remedial action will likely not fully address the allegedly injured resources/services;
- l. Appropriate NRD liability credits and/or ways to resolve potential NRD claims can be identified and agreed to by the parties pursuant to the settlement of all liability claims at the site;

- m. Key issues related to liability limits (e.g., baseline, causation) can either be agreed to by parties or a negative determination can be made that they are not critical given site specific characteristics, including those instances where determining baseline and/or causation would be too arduous, expensive or time intensive;
- n. There is a solid working relationship between the PRP(s), Trustee(s), and the EPA, so as to facilitate agreement on key points; The timeline of the remedial action is such that it is advantageous to perform restoration before the remedial action is finished; There are potential opportunities to perform restoration work in tandem with the remedy;
- o. The site has a high potential to provide enhanced ecological and human use services, such as those outside urban areas and/or adjacent to undisturbed habitats or natural areas. Also, “attractive nuisances” may result in additional injury. For example, restoration of services at small sites in urban areas and/or highly impacted watersheds could potentially result in greater exposure of ecological receptors to chemical and anthropogenic stressors.
- p. There is opportunity to provide compensatory mitigation onsite above and beyond standard remediation.
- q. Clean up or restoration costs can be reduced by coordinating these projects.

Circumstances Favoring Bifurcation of Remediation and Restoration

The following circumstances and/or conditions generally encourage a sequential approach of remediation and NRDA and restoration activities IF:

- a. The site has a final remedial design and implementation schedule that would allow the for calculation of natural resource damages with greater precision;
- b. The PRP decides, as a legal matter, to keep the processes bifurcated;
- c. A proposed restoration project would be inconsistent, would be undone, or negatively impacted by future remediation work, or would interfere with ongoing or anticipated remedial actions;
- d. There are personnel or other resource conflicts in conducting remedial and restoration activities at the same time;
- e. Other possible factors.

A Best Practice Approach

In those instances where coordination of remediation/restoration is viewed to be potentially beneficial, the following best practices should be considered.

- a. Evaluate the potential benefits and burdens of coordination at the outset. Coordination does not always yield benefits, and a poorly designed coordination effort may require extra time and effort and ultimately increase costs;
- b. Commit to an open dialogue about benefits and burdens between PRPs, trustees and agencies as well as between agencies with different responsibilities when coordination offers benefits to all parties;
- c. Discuss and establish target timeline and endpoints during the remediation and NRDA processes;
- d. Identify decision junctures in the remedial and NRDA process where the parties can evaluate data adequacy, in order to prevent duplicative or needless studies and analysis from being undertaken during the remedy or assessment;
- e. Agree that implementation of restoration projects during the remedial phase is not an admission of liability by the PRP(s);
- f. Identify and discuss ways to overcome technical uncertainties when parties seek to resolve NRD claims prior to final ROD. For example, discuss legal barriers to settlement in order to obtain judicial approval, including commencing an NRD action under all possible statutory authorities and incorporating reliable estimates of PRP-specific and site-wide NRD.

Summary and Conclusion

There are opportunities and risks for companies to consider the interface between remediation and restoration at sites involving hazardous waste issues nationwide. The above is intended to identify ways in which industrial parties and other can evaluate potential opportunities and risks to coordinate the processes, ensuring a more cost-effective and productive result. This document will be updated as warranted.

August 2016

**APPENDIX A:
OVERVIEW OF KEY NATURAL RESOURCE DAMAGES
STATUTORY AND REGULATORY REQUIREMENTS**

This Appendix contains background information on the Natural Resource Damage (NRD) provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Oil Pollution Act (OPA) and the implementing regulations under these two statutes. Included are:

- A.1 Highlights of the key statutory provisions in CERCLA and OPA, respectively, pertaining to NRD (these descriptions are adapted from a U.S. Environmental Protection Agency (EPA) website, identified below; the Ad-Hoc Industry Natural Resource Damage Group does not warrant the validity of any statutory interpretation embodied in these descriptions);
- A.2 Chronologies of the development of Natural Resource Damage Assessment (NRDA) regulations under CERCLA and OPA, including challenges to the respective regulations;
- A.3 Summaries of the U.S. Department of the Interior's (DOI's) Natural Resource Damage Assessment (NRDA) regulations (under CERCLA) and the U.S. Department of Commerce National Oceanic and Atmospheric Administration's (NOAA's) NRDA regulations (under OPA); and
- A.4 Copies of the two sets of currently operative regulations.

NRD PROVISIONS IN CERCLA

The following material was adapted from: <http://www.epa.gov/superfund/programs/nrd/statute.htm>.

Section	Description
§101(6)	Definition of Damages - Defines "damages" as "injury or loss of natural resources," as set forth in Sections 107(a)(4)(C) and 111(b).
§101(16)	Definition of Natural Resources - 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, [or] any Indian [T]ribe." Any member of an Indian Tribe can be a trustee if the resources are subject to a trust restriction on alienation.
§104(b)(2)	Requirement of Trustee Notification - Directs the President to notify the appropriate Federal and State Natural Resource Trustees of "potential damages to natural resources resulting from releases under investigation ... and ... to coordinate the assessments, investigations, and planning" with such trustees.
§107(a)(4)(C)	Liability for NRD - Defines the scope of natural resource liability as "damages for, injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction or loss resulting from" a release of hazardous substances or a threatened release that causes the incurrence of response costs.
§107(f)(1)	Liability for Natural Resource Damages - States that, if NRD is proved under Section 107(a)(4)(C), liability shall be to the following parties: the United States Government, any State, or an Indian Tribe. For liability to extend to a State, the natural resources must be "within the State or belonging to, managed by, controlled by, or appertaining to such State." For liability to extend to an Indian Tribe, the natural resources must be "belonging to, managed by, controlled by, or appertaining to such [T]ribe, or belong to a member of such [T]ribe if such resources are subject to a trust restriction on alienation."
§107(f)(1)	Limitation on Natural Resource Liability - States the following conditions for not finding a party liable for NRD: (1) if the party has demonstrated that the NRD was specifically identified as an irreversible and irretrievable commitment of natural resources in an environmental impact statement or comparable analysis; (2) the decision to grant the permit or license authorizes the commitment of natural resources; and (3) the facility or project was operating within the terms of the permit or license. [In the case of Indian Tribes, the issuance of the permit or license must not be inconsistent with the fiduciary duty of the United States.]
§107(f)(1)	Designation of Trustees - Requires the President, or authorized representative of any State, to act on behalf of the public as trustee to recover damages.
§107(f)(1)	Use of Recovered Funds - Stipulates that sums recovered by Federal and State trustees for NRD shall be retained by the trustee "only to restore, replace, or acquire the equivalent of" the subject natural resources. When the United States Government is the trustee, the award can be used "without further appropriation."
§107(f)(1)	Measurement of Damages - States that measurement of NRD shall "not be limited by the sums which can be used to restore or replace" the subject natural resources.

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Section	Description
§107(f)(1)	Prohibition of Double Recovery - Prohibits double recovery for NRD, including recovering the costs of assessment, restoration, rehabilitation, or acquisition for the same release and same natural resource.
§107(f)(1)	Limitation on Retroactivity - Prohibits NRD recovery, where the damages and the release of hazardous substances occurred wholly before the date of enactment of CERCLA (<i>i.e.</i> , December 11, 1980).
§107(f)(2)(A)	Designation of Trustees - Requires the President to designate in the National Contingency Plan (NCP) the Federal officials who shall act on behalf of the public as trustees for natural resources. [This designation can be found at 40 CFR Part 300, Subpart G.]
§107(f)(2)(A)	Responsibilities of Trustees - Requires Federal trustees to "assess damages for injury to, destruction of, or loss of natural resources ... under their trusteeship." Federal trustees may assess damages for State natural resources "upon request of and reimbursement from a State and at the Federal officials' discretion."
§107(f)(2)(B)	Designation of Trustees - Requires the State Governor to designate State officials who may act on behalf of the public as trustees for natural resources. The Governor shall notify the President of these designations.
§107(f)(2)(B)	Responsibilities of Trustees - Requires State trustees to "assess damages for injury to, destruction of, or loss of natural resources ... under their trusteeship."
§107(f)(2)(C)	Rebuttable Presumption and Judicial Review - Requires that a determination or assessment of NRD made by a trustee in accordance with regulations promulgated under CERCLA Section 301 shall have "the force and effect of a rebuttable presumption" in any administrative or judicial proceeding.
§111(a)(3)	Use of Trust Fund for NRD - Authorizes the Hazardous Substance Superfund (Superfund) to pay claims for NRD. [Superfund monies cannot be used to pay for natural resource claims.] ¹
§111(b)	<p>Use of Trust Fund for NRD - Authorizes the Superfund to pay "any claim for injury to, or destruction or loss of, natural resources, including the cost of damage assessment." [Superfund monies cannot be used to pay for natural resource claims.]¹</p> <p>The President can assert a natural resource claim for 1) natural resources over which the United States has sovereign rights, or 2) natural resources within the territory of the fishery conservation zone of the United States to the extent they are managed by the United States. States may assert claims for natural resources "within the State or belonging to, managed by, controlled by, or appertaining to such State." Indian Tribes, or the United States acting on behalf of Indian Tribes, can file claims for natural resources "belonging to, managed by, controlled by, or</p>

¹ **Note:** While CERCLA provides authority for the Hazardous Substance Superfund to pay NRD claims [CERCLA § 111(a)(3) and § 111(b)], the Superfund Amendments and Reauthorization Act of 1986 and the Internal Revenue Code prohibit Superfund monies from being appropriated to pay such claims [26 U.S.C. § 9507(c)(1)(A)].

¹ **Note:** While CERCLA provides authority for the Hazardous Substance Superfund to pay NRD claims [CERCLA § 111(a)(3) and § 111(b)], the Superfund Amendments and Reauthorization Act of 1986 and the Internal Revenue Code prohibit Superfund monies from being appropriated to pay such claims [26 U.S.C. § 9507(c)(1)(A)].

Section	Description
	appertaining to such [T]ribe, or belong to a member of such [T]ribe if such resources are subject to a trust restriction on alienation."
§111(i)	<p>Restoration of Natural Resources - Prohibits Superfund monies to be used for "the restoration, rehabilitation, or replacement or acquisition of the equivalent of any natural resources until a plan for the use of such funds has been developed and adopted" by the affected trustee, and "after adequate public notice and opportunity for hearing and consideration of all public comment."</p> <p>There is one exception to this requirement: in situations that require action to avoid an irreversible loss of natural resources or to prevent or reduce any continuing danger to natural resources, funds may used without the Section 111(i) plan.</p> <p>Affected trustees are: (1) Federal agencies; (2) the Governor or Governors of any State having sustained damages to natural resources within its borders, belonging to, managed by or appertaining to such State, and (3) the governing body of any Indian Tribe having sustained damage to natural resources belonging to, managed by, controlled by, or appertaining to such Tribe, or belonging to a member of such Tribe if such resources are subject to a trust restriction on alienation. [Superfund monies cannot be used to pay for natural resource claims.]</p>
§113(g)(1)	<p>Period in Which NRD Action May be Brought - States a number of conditions for bringing an NRD action:</p> <p>No action may be commenced for NRD unless the action is commenced within three years after the later of: the date of discovery of the loss; or the date on which regulations pertaining to NRD assessment are promulgated under Section 301(c).</p> <p>An action for recovery of NRD must be commenced within three years after completion of a remedial action (excluding operation and maintenance). This condition is applicable for NPL sites, Federal facilities, and any vessel or facility where a CERCLA remedial action is scheduled.</p> <p>Actions may also not be brought (1) prior to 60 days after the Federal or State Trustee provides to the President and the potentially responsible party a notice of intent to file suit or (2) before the selection of the remedial action if the President is diligently proceeding with the remedial investigation and feasibility study (RI/FS). This limitation does not apply to actions filed on or before October 17, 1986.</p> <p>Sections 113(g)(3)-(4) provide exceptions for the Section 113(g)(1) limitation period on actions involving contribution and subrogation. Section 113(g)(3) provides that no action for contribution of NRD may be commenced more than three years after: (1) the date of judgment for recovery of NRD; or (2) the date of an administrative or court order for a <i>de minimis</i> or cost recovery settlement. Section 113(g)(4) requires that, when a party is subrogated to a claim because that party has paid the claim, an action for recovery of those monies must be made within three years of the payment. [Section 126(d) describes the period in which an NRD action may be brought for Tribal claims.]</p>
§122(j)(1)	<p>Coordination Between Federal Government and Trustees for NRD - Directs the President to "notify the Federal [N]atural [R]esource [T]rustees of the negotiations" and to "encourage the participation of such [T]rustee in the</p>

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Section	Description
	negotiations" when involved in negotiations concerning a release that may have resulted in damages to natural resources under the trusteeship of the United States.
§122(j)(2)	Covenant Not To Sue - States that covenants not to sue for NRD under Federal trusteeship may be entered into "only if the Federal [N]atural [R]esource [T]rustee has agreed in writing to such covenant." The Federal trustee may agree to a covenant not to sue if the potentially responsible party agrees to undertake appropriate actions to protect and restore the injured natural resources.
§126(d)	Period in Which Tribal NRD Claims May be Brought - Provides that for Tribal trustees, the deadline for filing NRD claims is the later of: (1) expiration of the otherwise applicable period of limitations; or (2) two years after the United States, acting in its capacity as trustee for the Tribe, gives written notice to the Tribe that it will not present a claim on behalf of the Tribe or fails to present a claim within the time limitations specified elsewhere in the statute.
§301(c)	<p>Regulations Pertaining to NRD Assessment - Directs the President to promulgate regulations pertaining to NRD assessment. The regulations shall specify (1) "standard procedures for simplified assessments requiring minimal field observation" ("Type A procedures") and (2) "alternative protocols for conducting assessments in individual cases" (Type B procedures). The regulations are to be reviewed and revised as appropriate every two years.</p> <p>The Type A procedures for "simplified assessments" shall include methods of establishing measures of damages based on units of discharge or release or units of affected areas. The Type B procedures for assessments in individual cases shall include methods of determining "the type and extent of short- and long-term injury, destruction, or loss."</p> <p>The regulations are to provide the "best available procedures to determine such damages, both direct and indirect injury, destruction, or loss and shall take into consideration factors including, but not limited to, replacement value, use value, and ability of the ecosystem or resource to recover."</p>

NRD PROVISIONS IN OPA

The following material was adapted from: <http://www.epa.gov/superfund/programs/nrd/statute.htm>.

Section	Description
§1001(5)	Definition of Damages - Defines damages as those specified in Section 1002(b)(2), including "the cost of assessing these damages."
§1001(20)	Definition of Natural Resources - 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 or Indian [T]ribe, or any foreign government." Federal natural resources include the "resources of the exclusive economic zone."
§1002(a)	Liability for NRD - Specifies that "each responsible party for a vessel or a facility from which oil is discharged, or which poses a substantial threat of a discharge of oil...is liable for . . . damages specified in Section 1002(b)(2) that result from such an incident." The discharge or threat of discharge of oil must be into or upon navigable waters, adjoining shorelines, or the exclusive economic zone.
§1002(b)(2)	<p>Definition of Damages - Outlines six categories of damages for which a responsible party is liable under Section 1002(a). These are: natural resources; real or personal property; subsistence use; revenues; profits and earning capacity; and public services.</p> <p>Damages to natural resources are defined as "injury to, destruction of, loss of, or loss of use of, natural resources, including the reasonable costs of assessing the damage." These damages are recoverable by Federal, State, Indian Tribe, and foreign government trustees.</p> <p>Damages to real or personal property are defined as "injury to, or economic losses resulting from destruction of, real or personal property." These damages are recoverable by the person who owns or leases that property.</p> <p>Damages to loss of subsistence use of natural resources "shall be recoverable by any claimant who so uses natural resources which have been injured, destroyed, or lost, without regard to the ownership or management of the resources."</p> <p>Damages for revenues are "equal to the net loss of taxes, royalties, rents, fees, or net profit shares due to the injury, destruction, or loss of real property, personal property, or natural resources. These damages are recoverable by the Federal government, a State, or a political subdivision of a State.</p> <p>Damages for profits and earning capacity are "equal to the loss of profits or impairment of earning capacity due to injury, destruction, or loss of real property, personal property, or natural resources." These damages are recoverable by any claimant.</p> <p>Damages for public services are the "net costs of providing increased or additional public services during or after removal activities." These damages are recoverable by a State or political subdivision of a State.</p>

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Section	Description
§1004	Limitation on Natural Resource Liability - Provides liability limits for potentially responsible parties and any removal costs incurred by, or on behalf of, the responsible party. The limits do not apply if the incident was proximately caused by gross negligence or willful misconduct of, or the violation of any applicable Federal safety, construction, or operating regulation by, the responsible party. In addition, the limits do not apply if the responsible party fails or refuses to report the incident as required by law or to provide all reasonable cooperation and assistance requested by responsible officials in connection with removal activities.
§1006(a)	Liability for NRD - Specifies that responsible parties shall be liable to the United States Government, States, Indian Tribes, or foreign government bodies for damages to natural resources "belonging to, managed by, controlled by, or appertaining to" each entity.
§1006(b)(1)-(5)	Designation of Trustees - States that the President or the authorized representative of any State, Indian Tribe, or foreign government, shall act on behalf of the public, Indian Tribe, or foreign country as trustee of natural resources "to present a claim for and to recover damages to the natural resources." Requires that the following parties designate trustees: the President will designate Federal trustees to act on behalf of the public; the Governor of each State will designate State and local officials to act on behalf of the public (and notify the President of such designation); the governing body of any Indian Tribe will designate Tribal officials to act on behalf of the Tribe or its members (and notify the President of such designation); and the head of any foreign government will designate the trustee to act on behalf of that government as trustee (and notify the President of such designation).
§1006(c)(1)-(5)	Responsibilities of Trustees - Sets up the functions of Federal, State, Indian Tribe, and foreign trustees. All trustees shall perform the following duties: assess NRD; and develop and implement plans for "the restoration, rehabilitation, replacement, or acquisition of the equivalent, of the natural resources under their trusteeship." These plans shall be developed and implemented only after adequate public notice, an opportunity for a hearing, and consideration of all public comment. The Federal government may, "upon request of and reimbursement from a State or Indian [T]ribe ... assess damages for the natural resources under the State's or Tribe's trusteeship."
§1006(d)(1)-(2)	Measurement of Damages - Specifies that the measure of NRD is the following: (1) "the cost of restoring, rehabilitating, replacing, or acquiring the equivalent of, the damaged natural resources"; (2) "the diminution in value of those natural resources pending restoration"; and (3) "the reasonable cost of assessing those damages." These costs shall be determined using the plans discussed under Section 1006(c).
§1006(d)(3)	Prohibition of Double Recovery - Prohibits double recovery for NRD for the same incident and natural resource.
§1006(e)(1)	Regulations Pertaining to NRD Assessment - Directs the President, acting through the Under Secretary of Commerce for Oceans and Atmosphere, to promulgate regulations for the assessment of NRD from discharge of oil no later than two years after the date of enactment of OPA.

Section	Description
§1006(e)(2)	Rebuttable Presumption and Judicial Review - Requires that any determination and assessment of damages made in accordance with the regulations promulgated under Section 1006(e)(1) shall have "the force and effect of a rebuttable presumption" in any administrative or judicial proceeding.
§1006(f)	Use of Recovered Funds - Specifies that sums recovered by trustees "shall be retained ... in a revolving trust account, without further appropriation, for use only to reimburse or pay costs incurred" by the trustee under Section 1006(c) with respect to the damaged natural resources. Any amounts in excess of those required for reimbursement and costs shall be deposited in this fund.
§1006(g)	Court Review of Non-Discretionary Duty - States that any person may have a Federal court review of actions by any Federal official where there is "alleged to be a failure of that official to perform a duty under Section 1006 that is not discretionary with that official." The court may award costs of litigation to any prevailing party.
§1007	Required Showing by Foreign Claimants - In addition to satisfying the other requirements of CERCLA, foreign claimants must make the following demonstration to recover NRD: (1) the claimant has not already been compensated for removal costs or damages; and (2) the recovery is authorized by a treaty or executive agreement between the United States and the claimant's country "or the Secretary of State...has certified that the claimant's country provides a comparable remedy for the United States claimants." There are special restrictions for foreign claimants making a claim for removal costs and NRD in foreign countries.
§1011	Consultation on Removal Actions - Requires the President to consult with the affected trustees, designated under Section 1006, on the appropriate removal action to be taken in connection with any discharge of oil.
§1012(a)(2)	Uses of Trust Fund for NRD - The Oil Spill Liability Trust Fund (Oil Spill Fund) is available for the payment of costs incurred by certain trustees in "assessing natural resource damages and for developing and implementing plans for the restoration, rehabilitation, replacement, or acquisition of the equivalent of damaged resources" that are determined by the President to be consistent with the NCP. Only Federal, State, and Indian Tribe trustees can receive payment of NRD costs from the Oil Spill Fund.
§1012(h)(2)	Limitation on Use of Trust Fund for NRD - No claim may be presented to the Oil Spill Fund for recovery of NRD unless: (1) "the claim is presented within 3 years after the date on which the injury and its connection with the discharge in question were reasonably discoverable with the exercise of due care" or (2) for NRD as defined by Section 1002(b)(2)(A), the date of completion of the natural resource damage assessment stipulated in Section 1006(e).
§1012(i)	Limitation on Use of Trust Fund for NRD - Prohibits the President from paying NRD from the Oil Spill Fund when an earlier claim for the same damages was paid by the Oil Spill Fund.
§1012(j)	Limitation on Use of Trust Fund for NRD - Requires that Oil Spill Fund monies be paid for the restoration, rehabilitation, replacement, or acquisition of natural resources only in accordance with a Section 1006(c) plan. However, such a plan is not required in situations "requiring action to avoid irreversible loss of natural resources or to prevent or reduce any continuing danger to natural resources or similar need for emergency action."
§1017(f)(1)	Period in Which NRD Action May Be Brought - An action for NRD shall be

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Section	Description
	<p>barred unless the action is brought within three years after: (1) "the date on which the loss and the connection of the loss with the discharge in question are reasonably discoverable with the exercise of due care" or (2) in the case of NRD under Section 1002(b)(2)(A), the date of completion of the NRD assessment authorized in Section 1006(e).</p> <p>Section 1017(f)(3)-(4) provides exceptions from the Section 1017(f)(1) limitation period for actions involving contribution and subrogation. Section 1017(f)(3) provides that no action for contribution of NRD may be commenced more than three years after: (1) the date of judgment for recovery of NRD; or (2) the date of a judicially approved settlement for NRD. Section 1017(f)(4) requires that, when a party is subrogated to a claim because that party has paid the claim, an action for recovery of those monies must be made within three years of the payment.</p>

**CHRONOLOGY:
NATURAL RESOURCE DAMAGE ASSESSMENT (NRDA)
REGULATIONS UNDER CERCLA**

Date	Action
12/11/1980	Comprehensive Environmental Response and Liability Act of 1980 (CERCLA) enacted; 42 U.S.C. 9601-9675
12/20/1985	Proposed Rule on Natural Resource Damage Assessment Regulations; 50 Fed. Reg. 52126
8/1/1986	U.S. Department of Interior (DOI) Type B NRDA NRDA Regulations – Final Rule Promulgated; 51 Fed. Reg. 27674
3/20/1987	DOI Type A Regulations – Final Rule promulgated; 53 Fed. Reg. 5166
2/22/1988	DOI Type A and Type B NRDA Regulations (Amendment to conform with SARA) – Final Rule promulgated; 53 Fed. Reg. 5166
3/25/1988	DOI Type A Regulations: Corrections – Final Rule promulgated; 53 Fed. Reg. 9769
7/14/2989	<i>State of Ohio v. U.S. Dept. of the Interior; State of Colorado v. U.S. Dept. of the Interior</i> ⁴ , decided; 880 F.2d 432-481 (D.C. Cir. 1989)
4/29/1991	DOI rule in response to <i>Ohio</i> decision proposed; 56 Fed. Reg. 19753-19773
7/22/1993	DOI rule in response to 1991 comments and NOAA panel report proposed; 58 Fed. Reg. 39328-39357
3/25/1994	DOI Type B – Final Rule promulgated; 59 Fed. Reg. 14262-14288
5/4/1994	DOI rule on Contingent Valuation proposed; 59 Fed. Reg. 23098 – 23111
8/8/1994	DOI rule for Type A models (GLE) proposed; 59 Fed. Reg. 40319 – 40337
12/8/1994	DOI Type A Models (CME) proposed; 59 Fed. Reg. 63300 – 63325
1/17/1995	Biennial Review Comment Period Ends; 59 Fed. Reg. 52749
5/7/1996	DOI Type A Models – Final Rule promulgated (Revised Type A Procedures for coastal and marine environments and established a new procedure for the Great Lakes environment); 61 Fed. Reg. 20560 - 20614
7/16/1996	Natural Resource Damage Regulations Second Biennial Review Comment Period Begins; 61 Fed. Reg. 37031
7/16/1996	<i>Kennecott Utah Copper Corp. v. United States Dept. of the Interior</i> ⁵ , decided; 88 F.3d 11901 (D.C. Cir. 1996)

⁴ These cases challenged the original DOI Type B and Type A regulations, respectively. The court upheld some portions of those regulations and remanded others to DOI for revision. In particular, the court held that the regulations' provisions limiting NRD recover to the "lesser of" restoration costs of the lost use value of the resource was contrary to Congress's intent and thus invalid.

⁵ This case challenged DOI's 1994 revised Type B regulations. The court upheld these regulations in most respects, but struck down the regulations' provision interpreting the CERCLA statute of limitations and also the provision requiring restoration of both the affected resource services and the resources themselves (held to be inconsistent with preamble to regulations).

1/16/1998	<i>National Association of Manufacturers v. United State Department of the Interior</i> ⁶ , decided; 134 F.3d 1095 (D.C. Cir. 1998)
2/08/2000	Further Technical Corrections to DOI Type A Regulations: Corrections – Final Rule promulgated (Technical corrections to two computer models) 65 Fed. Reg. 6012
2/29/2008	US DOI Natural Resource Damages for Hazardous Substance Proposed Rule; 73 Fed. Reg. 11081
10/02/2008	US DOI Natural Resource Damages for Hazardous Substance Final Rule; 73 Fed. Reg. 57259

⁶ This case challenged DOI's revised Type A regulations. The court upheld the regulations, but indicated that, in challenging the application of the Type A models in a given NRD case, PRPs may present evidence in court (rather than being limited to review on the trustee's own record).

**CHRONOLOGY:
NATURAL RESOURCE DAMAGE ASSESSMENT (NRDA)
REGULATIONS UNDER OPA**

Date	Action
8/18/1990	Oil Pollution Act (OPA) enacted; 33 U.S.C. 2701-2761
1/15/1993	National Oceanic and Atmospheric Administration (NOAA) panel report on Contingent Valuation published; 58 Fed. Reg. 4610, 4601-4614
1/7/1994	NOAA rule in response to NOAA panel proposed; 59 Fed. Reg. 1062-1191
8/3/1995	NOAA rule re-proposed; 60 Fed. Reg. 39804-39834
1/5/1996	NOAA final rule promulgated; 61 Fed. Reg. 440-510
11/18/1997	<i>General Electric Company v. United States Department of Commerce, National Oceanic and Atmospheric Administration</i> , ¹ decided; 128 F.3d 767 (D.C. Cir. 1997)
2/11/1998	NOAA Reconsideration of Final Rule; 63 Fed. Reg. 6846-6847
07/31/2001	NOAA published proposed amendments to the final regulation to address the remanded issues in the above case; 66 Fed. Reg. 39464
10/1/2002	NOAA promulgated its final rule relative to the remanded issues; 67 Fed. Reg. 61483

¹ This case challenged NOAA's final regulations. The court upheld the regulations in most respects (based, on some issues, on NOAA's concessions at oral argument). However, it vacated and remanded the regulations' authorization for recovery of legal costs and the regulations' authorization for recovery of the costs of removal of residual oil.

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**U.S. DEPARTMENT OF THE INTERIOR NATURAL RESOURCE DAMAGE
ASSESSMENT REGULATIONS UNDER CERCLA**

The U.S. Department of the Interior's (DOI's) Natural Resource Damage Assessment (NRDA) regulations⁷ are option procedures that trustees may use to conduct their assessment under the Comprehensive Environmental Resource, Compensation and Liability Act (CERCLA). However, a determination or assessment of damages to natural resources conducted in accordance with the regulations "shall have the force and effect of a rebuttable presumption on behalf of the trustee in any administrative or judicial proceeding under the statute"⁸. There are phases of an NRDA under the regulations: (1) Preassessment, (2) Assessment Plan, (3) Assessment Implementation and (4) Post Assessment.

(1) Preassessment Phase

The Preassessment Phase begins once trustees discover or are notified of a release or discharge that may involve natural resource injury. Natural Resource trustees (trustees) whose resources may be affected as a result of share responsibility for the resources are identified and notified. Any natural resource emergency must be reported to the National Response Center at this time. The trustees perform a Preassessment Screen in order to provide a rapid review of readily available information that focuses on resources over which they assert trusteeship, and to determine whether additional assessment work is warranted. Information must be available to form a preliminary determination that: (1) a discharge of oil or a release of a hazardous substance has occurred; (2) natural resources for which the Federal/State agency or Indian Tribe may assert trusteeship under CERCLA have been or are likely to have been adversely affected by the discharge or release; (3) the quantity and concentration of the discharged oil or released hazardous substance is sufficient to potentially cause injury to those natural resources; and (4) data sufficient to pursue an assessment are, or are likely to become available at a reasonable cost. During this phase, sampling of potentially injured natural resources is limited to early sampling in order to preserve data and materials that are likely to be lost if not collected at that time, and that will be necessary to the natural resource damage assessment. The results are documented, and if work is warranted, the Assessment Plan phase is initiated.

(2) Assessment Plan Phase

A plan for the assessment of natural resource damages must be developed if the Preassessment Phase determines that it is warranted. An Assessment Plan is therefore prepared which describes how injuries and damages will be determined for the purpose of ensuring that the assessment is performed in a planned and systematic manner and that assessment methodologies, including the Injury Determination, Quantification and Damage Determination phases can be conducted at a reasonable cost. The assessment includes specific reference to the type of assessment ("Type A"⁹, "Type B"¹⁰, or combination) that will be conducted, and serves as a reference to assess whether the approach used is likely to be cost-effective. All comments submitted must be reviewed and substantive responses must be provided. The Plan will then be modified if appropriate (additional public review may be required).

A number of factors are considered when determining which procedure will be employed. The regulations specify specific situations in which the Type A procedures may be used. If they are

⁷ 43 CFR §11.10 et seq.

⁸ 43 USC §9607(f)(2)(C)

⁹ See 43 CFR §11.40 et seq.

¹⁰ See 43 CFT §11.60 et seq.

not applicable, the Type B procedures must be used. If they are, the decision is based on the weight of “the difficulty of collecting site-specific data against the suitability of the averaged data and simplifying assumptions in the Type A procedure for the release being assessed. Type B procedures may be used if they can be performed at a reasonable cost and they provide a sufficient increase in accuracy so as to outweigh the increase in assessment costs”. Both may be used if the Type B procedures: (1) are cost-effective and can be performed at a reasonable cost; (2) do not create a situation of double recovery; and (3) are used only to determine damages for injuries or compensable values that do not fall into the categories addressed by the Type A procedure.

(3) Assessment Implementation Phase

Type A Procedures: Type A procedures are generally used when minimal field observation is required, due to the environment or the extent of the contamination, and limited data is required, including: the identify and amount of the substance released; the duration, time and location of the release; conditions existing at the time of release; and the extent of response actions and any closures resulting from the release. A model is then employed to determine the total damage amount. Two Type A procedures currently exist: one incorporate the Natural Resource Damage Assessment Model for Coastal and Marine Environments (NRDAM/CME) and is used for minor spills in coastal or marine areas; the other incorporate the Natural Resource Damage Assessment Model for the Great Lakes Environment (NRDAM/GLE) and is used for minor spills in the Great Lakes. The use of Type A procedures is limited on a cap of \$100,000 if the trustees wish to maintain the rebuttable presumption, as they are intended to address minor spills.

Type B Procedures: Type B procedures are based on more extensive field observation. They rely on scientific and economic studies to determine injuries and damages. They first provide that trustees must determine whether an injury has occurred, whether a pathway exists, and whether the injury was caused by the hazardous substance released (“Injury Determination Phase”); and they provide guidance and criteria for making those determinations. They then require the trustees to quantify the injury by identifying the function or services provided by the resource, determining the baseline level of those services, and provide for the determination of monetary damages (“Damage Determination Phase”). This damage determination consists of two components: (a) the cost to restore, replace or acquire the equivalent of the injured natural resources (“restoration costs”); and (b) the diminution in the value of the resources’ services pending restoration (“compensable value”). The regulations specify several available methodologies for estimating these components.

In determining the appropriate restoration actions, trustees identify a reasonable number of possible restoration activities, including natural recovery. They then select one (or a combination) of those alternatives, based on a number of specified factors, which include technical feasibility, relationship of costs to benefits and consistency with response actions.

Prior to completing its assessment of restoration costs and reasonable value, trustees develop a Restoration and Compensation Determination Plan setting forth the trustees’ proposed decisions on these issues. This Plan is published for public review and comment. After comments are received and the plan is revised (if necessary), Trustees estimate the costs of implementing the selected restoration alternative and complete the compensable value determination.

(4) Post-Assessment Phase

Trustees prepare a Report of Assessment detailing the results of the Assessment Implementation Phase. The Report is presented to the potentially responsible parties (PRPS) along with a demand

for damages and reasonable assessment costs. If the PRPs do not agree not pay within 60 days of receipt of demand, the trustees may file suit. A post-assessment Restoration Plan is prepare once damages have been awarded or settlement has been reached, and an account is established for the recovered damages. Once the Restoration Plan has been drafted, it is made available for public review and comment. All comments submitted must be reviewed and substantive responses must be provided. The Plan will then be modified if appropriate (additional public review may be required). Finally, the Plan is implemented using recovered natural resource damages.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATURAL RESOURCE DAMAGE ASSESSMENT REGULATIONS

In January 1996, the National Oceanic and Atmospheric Administration (NOAA) issued procedures for the assessment of natural resource damages (NRD) under the Oil Pollution Act (OPA). NOAA's regulations¹¹ provide a framework for conducting Natural resource Damage Assessment (NRDAs) that achieve restoration under OPA. Any determination or assessment of damages to natural resources made by a Federal, State or Indian trustee in accordance with the regulations has the force and effect of a rebuttable presumption on behalf of the trustee in any judicial or administrative proceeding. Natural resource trustees (trustees) must coordinate their activities with other trustees, response agencies and potentially responsible parties (PRPs) when operations are conducted concurrently. PRPs must be invited to join in a cooperative assessment process. NOAA's natural resource damage assessment regulations include the following three phases: Preassessment, Restoration Planning and Restoration Implementation.

(1) Preassessment Phase

This phase is intended to provide trustees with a process to determine whether they have jurisdiction to proceed. If a trustee is determined to have jurisdiction under OPA to conduct an NRDA, the trustee(s) must determine if it is likely that the discharge has caused any injury, if response actions will adequately address the injuries, and if feasible restoration alternatives exist. During this phase, trustees may collect and analyze data reasonably related to the Preassessment Phase activities, so long as it is coordinated with response actions so as not to interfere with these actions. If injuries are expected to continue and feasible restoration alternatives exist to address these injuries, trustees are to proceed with an NRDA. A Notice of Intent to Conduct Restoration Plan must be made publicly available and must be delivered to the PRPs to the extent they are known.

(2) Restoration Planning Phase

Injury Assessment: Injury assessment evaluates whether the discharge has resulted in an adverse change in natural resources or their services. Except for injuries resulting from response actions or incidents involving a substantial threat of a discharge of oil, trustees must establish whether natural resources were exposed, either directly or indirectly, to the discharged oil from the incident, and whether there is pathway linking the oil spill incident to the injury. Trustees must then quantify the injury, either in terms of the degree and spatial and temporal extent of the injury to the resource itself or in terms of the reduction in services provided by the resource. The natural recovery time for the resource (without restoration) must also be considered.

Restoration Selection: If restoration is determined to be justified, the trustee must develop and consider a reasonable range of restoration alternatives. Restoration actions include: (a) primary restoration action to return the injured resources and their services to the baseline condition or level; and (b) compensatory restoration actions, which are additional restoration measures designed to compensate the public for the interim loss of resources and their services pending recovery or primary restoration. The trustees must then determine the appropriate scale of the restoration actions (using scaling approaches set forth in the regulations).

After developing these restoration alternatives, the trustees evaluate them and select their preferred alternative(s) (including both primary and compensatory restoration). This evaluation and selection process is to be based on: (1) the cost to carry out the alternative; (2) the extent to

¹¹ 15 CFR §990.10 et seq.

which each alternative is expected to meet trustee goals and objectives; (3) the likelihood of success of each alternative; (4) the extent to which each alternative will prevent future injury and as a result of the incident and avoids collateral damage; (5) the extent to which each alternative benefits more than one natural resource and/or service; and (6) the effect of each alternative on public health and safety. Once a decision has been reached, the trustees must develop a Draft Final Restoration Plan. The Plan will describe the trustees' preassessment activities, as well as their injury assessment activities and results, an evaluation of restoration alternatives, and the identification of preferred restoration alternative(s). Opportunity for public review and comment on the Plan must be provided.

(3) Restoration Implementation

All comments submitted must be reviewed and substantive responses must be provided. The Restoration Plan will then be modified if appropriate (additional public review may be required). The Final Restoration Plan is presented to PRPs for implementation or to fund the trustees' costs for implementation. If the PRPs do not agree to this demand, the trustees may bring a judicial action for NRD.