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ABA SECTION OF ENVIRONMENT ENERGY AND RESOURCES

Superfund and Natural Resource Damages Litigation Committee Newsletter

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OVERVIEW OF THE NEWSLETTER

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This issue of the committee's newsletter covers a broad array of topics. The Department of the Interior recently proposed revisions to regulations governing natural resource damage assessments (NRDA). Given the importance of these proposed revisions, we start the issue with articles that summarize the proposed revisions and provide an overview of the comments submitted in response to the proposed rule.

Mindful that many parties are confronted with the hard choice of whether to participate in a cooperative assessment process with natural resource trustees, the newsletter continues with an article that provides a practical (pros and cons) discussion of the implications of engaging in such a process. Shifting focus to developments in CERCLA case law, the newsletter contains an article concerning the United States Supreme Court's opinion in *United States v. Atlantic Research Corp.*, 127 S. Ct. 2331 (2007), discussing how the case effects the cross roads between CERCLA sections 107 and 113. The newsletter also includes a case note regarding a recent federal district court opinion that suggests that vessel owners (and perhaps others) may face liability at surface water sites for resuspension or redistribution of contaminated sediments resulting from prop-wash.

The newsletter concludes with articles that address economic valuation and ecological science issues related to the NRDA process. On the subject of valuation of damages, one article provides a critical analysis of the New Jersey Department of Environmental Protection's study, "Valuing New Jersey's Natural Capital," with a review of economic principles and references to literature that are relevant to damages assessments. The final article offers a technical view of what the authors believe is an emerging trend "for trustees to rely on biomarker measurements in individual organisms as a short cut to determining population-scale injuries for input into calculations of service reductions."

We hope the newsletter is informative and sparks discussion. As a vice chair of the committee and as editor of the newsletter, I welcome your thoughts and comments, as well as suggestions regarding future newsletters.

ABA Section of Environment, Energy, and Resources

16TH SECTION FALL MEETING
Sept. 17-20, 2008
Phoenix

PLAN TO ATTEND!

Superfund and Natural Resource Damages Litigation Committee Newsletter
Vol. 4, No. 1, July 2008
Ira Gottlieb, Editor

In this issue:

This newsletter is a publication of the ABA Section of Environment, Energy, and Resources, and reports on the activities of the committee. All persons interested in joining the Section or one of its committees should contact the Section of Environment, Energy, and Resources, American Bar Association, 321 N. Clark St., Chicago, IL 60654.

PROPOSED UPDATE TO THE DEPARTMENT OF THE INTERIOR'S NATURAL RESOURCE DAMAGES REGULATIONS

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The U.S. Department of the Interior (DOI) published draft amendments to its natural resource damages (NRD) regulations on Feb. 29, 2008. *See* 73 Fed. Reg. 11,081. The public comment period closed on May 29, 2008. The proposed regulations contain significant amendments that are expected to improve the way natural resource trustees conduct assessments and settle claims against potentially responsible parties. These proposed amendments are not without controversy, however, as is discussed in a companion article in this newsletter. *See* "Expanding the Trustees Tool Kit."

DOI's NRD regulations were most recently amended in 1996. *See* 43 C.F.R. Part 11. The regulations are authorized under CERCLA, *see* 42 U.S.C. § 9651(c), and prescribe the procedures by which DOI and other federal resource trustees are expected to perform damages assessments and recover for injuries to natural resources.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requires DOI to review and revise the regulations every two years. 42 U.S.C. § 9651(c)(3). But, DOI is now proposing the first significant changes to the regulations in twelve years.

As part of its required regulatory review process, DOI convened a federal advisory committee in 2005 to provide recommendations regarding possible changes to DOI's assessment procedures. DOI appointed thirty members to the committee, including representatives from state, tribal, and federal trustee agencies, industry groups, representatives of potentially responsible parties, scientists, economists, and environmental and public interest organizations. The committee issued a report in May 2007. That report has provided the foundation for many of the provisions in the proposed

regulations. *See* Natural Resource Damages Assessment and Restoration Federal Advisory Committee, Final Report, May 1, 2007 (Final Report). Available at: http://restoration.doi.gov/pdf/facamtg5_finalreport.pdf.

The committee endorsed the development of a damages assessment and claims settlement process that would be faster and more efficient, targeting more cost effective resolution of NRD claims. The committee's report contains a number of recommendations for improving DOI's damages assessment system. The report endorses a phased approach to implementing changes to DOI's program. Final Report, p. 18.

Most importantly, the report recommends changes to the regulations that would emphasize the development of restoration projects while reducing efforts to quantify economic damages. These changes would also provide explicit authorization for DOI to make broader use of tools that some of the National Oceanic and Atmospheric Administration (NOAA) regional offices have begun using as a matter of course at larger regional sites—for example, habitat equivalency analysis. The report also calls for the development of technical guidance and the streamlining of restoration planning, items which are not covered by these proposed regulatory changes. Final Report, p. 18.

DOI's proposed regulations address one of the committee's key priorities—introducing a restoration focus to the regulations. DOI intends to leave the broader range of recommendations contained in the report for later implementation efforts. 73 Fed. Reg. 11,081, 11,083 (Feb. 29, 2008).

The following represents a brief summary of the principal changes in the proposed regulations:

Cleanup of Kennecott Issues—Baseline Level of Services

Most of the regulatory changes proposed by DOI involve revisions that are required by the decision in *Kennecott v. United States*, 88 F.3d 1191 (D.C. Cir.1996). In the *Kennecott* case, the Court invalidated regulatory language that defined the measure of natural resource damages as the cost of restoration of injured natural resources and the loss of related services that those resources provide. *See Kennecott*, 88 F.3d at 1220. The court found that the language failed to reflect DOI's intent to focus damages quantification on the services lost due to injury. *Id.*

The revised language of the proposed regulations is intended to clarify that the measure of damages is more properly the cost of restoring injured natural resources to their baseline level of services. *See* 73 Fed. Reg. at 11,084 and proposed changes to 43 C.F.R. § 11.80(b). Conforming changes also appear at numerous other locations in the proposed new regulations, including in sections 11.38, 11.81, 11.82, and 11.83(a) and (c). The services orientation of these changes fits with DOI's advisory committee recommendations.

New Methodologies for Assessing Compensable Value

The current regulations contain a list of six methodologies that are approved, under appropriate circumstances, for use in resource injury valuations. *See* 43 C.F.R. § 11.83. DOI is proposing to expand the list of injury valuation methods that are authorized by the regulations. The proposed regulations would now specifically allow conjoint analysis, habitat equivalency analysis, resource equivalency analysis, and random utility models to be used by trustees in determining the value of resource losses. 73 Fed. Reg. at 11,086 - 87. These are techniques that have been outside the scope of the regulations previously.

These proposed revisions would allow expanded use of methodologies that DOI has previously found useful in the context of negotiating settlements. *See* 73 Fed Reg. at 11,083. The proposed regulations, however, do not specifically favor or limit the use of any of these methodologies.

These new methodologies arguably represent the most important of the changes to the regulations, and the most significant effort by DOI to move its regulatory system toward restoration oriented negotiations. DOI also follows the recommendation of the advisory

committee to promote the connecting of injury quantification to appropriate restoration activities. *See* Final Report, p. 11-12. Many trustee groups have begun using these new techniques as constructive settlement tools that tend to reduce assessment costs and produce earlier settlements and restoration. The proposed revisions to the regulations will provide a firmer footing for these efforts.

Selecting Valuation Methodologies

The current regulations identify the factors that the trustees must consider in selecting a cost estimation or loss valuation methodology for use at a site. *See* 43 C.F.R. § 11.83(a)(3). Trustees shall ensure that methodologies selected are feasible and reliable for a particular purpose or application. *Id*. Current regulations require that the methodology can be performed at a reasonable cost. They also require that the selected methodology can be used in a way that avoids double counting of injury effects, or that such double counting can be eliminated in the final damage calculation. *Id*.

Interior's new regulations would retain the requirement that methodologies selected be "feasible and reliable." 73 Fed. Reg. at 11,086. But, the "reasonable cost" and "no double counting" requirements have been reduced to two of ten factors that trustees "should consider" in assessing the feasibility and reliability of any particular methodology. *See id*. Some of the additional factors include whether the methodology would provide useful information in determining restoration costs, whether it is cost-effective, whether it has been subject to peer review, whether it has widespread acceptance in the field, and whether it has standards governing its application. *Id*. The regulations would retain the existing requirement that trustees document their consideration of these factors when selecting a particular methodology. *See id*.

Conclusion

Interior's proposed regulations take a significant step toward implementing the committee's recommendation to enhance the focus on restoration-based claims resolution. While the changes leave the legal framework of the regulations fundamentally unaltered, the new regulations will, if implemented, produce significant changes in the underpinnings for DOI's implementation of its restoration programs. The changes also tend to support ongoing work by various NOAA regional offices. Some of the changes are controversial. But, overall, they represent important efforts by DOI to streamline its NRD process.

EXPANDING THE TRUSTEE TOOLKIT: ISSUES PRESENTED BY THE DEPARTMENT OF THE INTERIOR'S PROPOSED REVISIONS TO THE NATURAL RESOURCE DAMAGES ASSESSMENT REGULATIONS

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Introduction

The U.S. Department of the Interior (DOI) recently published proposed revisions to 43 C.F.R. Part 11, the regulations governing natural resource damage assessments (NRDA) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Clean Water Act. *See* 73 Fed. Reg. 11,081-11,087 (Feb. 29, 2008). These proposed revisions are summarized in a previous article in this newsletter. *See* "Proposed Update to the Department of Interior's Natural Resource Damages Regulations."

An array of interested parties submitted comments on the proposed rule by the May 29, 2008 deadline. Industry commenters included BP America, Inc. and General Electric Company (submitting jointly), Lockheed Martin, the Ad-Hoc Industry Natural Resource Damage Group, and the Utility Solid Waste Activities Group. State commenters included Colorado, Massachusetts, New Jersey, New Mexico, and the Association of State and Territorial Solid Waste Management Officials. Private consultants also

submitted comments. *See* http://www.regulations.gov/fdmspublic/component/main?main=DocketDetail&d=DOI-2008-0003.

The filed comments indicate that certain aspects of the proposal are relatively non-controversial. For example, commenters widely support a major element of the proposal: allowing trustees to calculate the compensable value of interim losses by using the cost of restoration actions that are estimated to provide services that will offset the interim losses, instead of requiring trustees to measure the economic value of the interim losses.

At least three elements of the proposed revisions, however, generated conflicting views among the commenters: (1) the clarification of the measure of damages; (2) the criteria for selecting valuation methodologies; and (3) the proposed new methodologies for assessing compensable value. DOI's resolution of these issues in its final rule will have important implications for future natural resource damage settlements and litigation. We discuss each of these three elements in turn.

Measure of Damages

In the proposed rule, DOI attempts to clarify that "the measure of damages is the cost of restoring injured natural resources to their baseline level of services, and, at the discretion of the trustees, the compensable value of services lost pending restoration." 73 Fed. Reg. 11,081, 11,084 (Feb. 29, 2008). The proposed revisions would insert various versions of this formulation in several locations in the NRDA regulations. The stated purpose of these revisions is to address the decision in *Kennecott Utah Copper Corp. v. U.S. Department of the Interior*, 88 F.3d 1191 (D.C. Cir. 1996), which invalidated rule language stating that the measure of damages was the cost of restoration of "the injured natural resources *and* the services those resources provide." (Emphasis added.)

Industry commenters supported use of a services metric throughout the NRDA regulations, though some suggested corrections to avoid conceptual or syntactical problems arising from the proposed language. Several state commenters, however, took issue with the extent to which DOI proposed to revise the existing regulations. Among other things, these commenters were concerned that the proposed rule was overemphasizing the service-based approach and deemphasizing the actual restoration of injured resources. (One state commenter went so far as to raise the specter under the proposed rule of a potentially responsible party providing only "services" in the form of "seal pelts" to compensate for injuries to a seal rookery.) In general, the state commenters sought changes in the proposed rule that would mandate restoration, replacement, or acquisition of the equivalent of the injured resources themselves, unless doing so were infeasible.

The state commenters suggested that the proposed rule is inconsistent with the decision in *Ohio v. U.S. Department of the Interior*, 880 F.2d 432 (D.C. Cir. 1989), which invalidated the portion of the original NRDA rule that limited damages to the lesser of restoration costs or diminution in use values. While that case held that CERCLA creates a distinct preference for restoration costs as the measure of damages, however, it does not preclude the measurement of restoration costs using the costs of restoration of resource services, particularly given the comprehensive definition of "services" as the physical and biological functions performed by the resource, including the human uses of those functions. 43 C.F.R. § 11.14(nn).

From the perspective of a practitioner representing industry in NRD cases, the proposed rule provides an important clarification to the measure of damages that creates a standard metric for the estimation of losses from injured resources and benefits from restoration projects. Combined with the overall emphasis in the proposed rule on restoration-based approaches, the services metric, particularly if clarified as suggested in the industry comments, will enhance the ability of all parties to negotiate reasonable resolutions of NRD claims and minimize unnecessary litigation costs. Under the proposed rule, trustees maintain the discretion and authority to implement a wide range of restoration projects and will be able to ensure the implementation of appropriate resource restoration measures.

Selecting Valuation Methodologies

DOI also proposes important changes to the criteria that trustees are to consider when selecting valuation methodologies. Under the proposal, trustees may only utilize valuation methodologies that are "feasible and reliable for a particular incident and type of damage to be measured." DOI proposes that trustees "should" consider ten factors (including several that were not in the original regulations) when ascertaining the feasibility and reliability of a particular methodology for a given set of circumstances.

Industry commenters generally supported the requirement for feasibility and reliability and the ten criteria, but strongly disagreed with the use of the term "should," which appears to make consideration of these criteria discretionary rather than mandatory. They argued that, because of the emphasis on, for example, peer review and acceptance in the field, the new criteria will ensure that trustees will only use appropriate and proven valuation methodologies. They also pointed out that the existing language of 43 C.F.R. § 11.83(a)(3) mandates trustee consideration of certain criteria in selecting cost estimating and valuation methodologies, and that DOI has not provided any explanation or basis for making that consideration discretionary.

State commenters also took issue with DOI's proposal, but from the opposite perspective. Not only did they support making consideration of the ten factors discretionary, but they expressed concern that the new criteria are too "*Daubert*-like" (referring to *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 5790 (1999), the Supreme Court case requiring trial courts to evaluate a proffer of expert scientific testimony to determine, based on various considerations, whether the testimony's underlying reasoning or methodology is scientifically valid and properly can be applied to the facts at issue). *Daubert* factors, according to the state commenters, are unnecessary because agencies already possess expertise and are entrusted by Congress to implement the law. The state commenters were also concerned that the requirement for a method to be "feasible and reliable for a particular incident and type of damage to be measured" may impose an onerous burden on trustees to create highly particularized findings that could easily be second-guessed in court. To defend against such second-guessing, the commenters argued, trustees would have to expend considerable resources creating records that would support a particular methodology in a legal challenge. They further argued that until a given methodology were applied to a particular type of damage, that method would be subject to challenge.

These differing viewpoints reflect the goals of the commenters. Entities facing potential NRD claims would like to ensure that any damages calculation methodology used by the trustees satisfies rigorous criteria, particularly if it is intended to be used to prove a damages claim in court. Trustees would like to face as few administrative and practical obstacles as possible in selecting and applying assessment methodologies. Given the stakes in many of these cases, there is no reason assessment methodologies should be exempted from the evidentiary requirements that other scientific evidence must meet. At the same time, the requirements can not be so rigorous that, in practice, trustees are unable to fulfill them. Given DOI's experience in the NRD program to date, it seems unlikely that the agency would propose standards that trustees cannot meet.

New Methodologies for Assessing Compensable Value

Perhaps the most controversial aspect of DOI's proposal is the proposed addition of four methodologies for assessing compensable value: conjoint analysis, habitat equivalency analysis (HEA), resource equivalency analysis (REA), and random utility models (RUMs). The proposed rule would allow trustees to choose among these four methodologies, or six previously codified methodologies, when estimating compensation for interim lost services. If the methodologies remain in the rule and the trustees can justify their application in a given case, the trustees will be able to obtain a rebuttable presumption of validity for the results of these methodologies. While RUMs (*e.g.*, the travel cost model) have been used for many years to estimate human use service losses, both trustees and potentially responsible parties have much less experience with the other three methodologies.

Conjoint analysis involves the use of surveys to elicit people's preferences for different attributes or levels of attributes of various goods or services. It has been used for years in market research, but only recently has begun to be used for NRDA, and has almost never been used to value ecological services. Industry commenters sharply criticized the inclusion of conjoint analysis in the proposed rule, arguing that it is unproven, unsupported, and unreliable for purposes of NRDA. They pointed out that the U.S. Fish and Wildlife Service itself criticized conjoint analysis in comments to the State of Colorado on the latter's proposal to use the method in assessing natural resource damages at the Rocky Mountain Arsenal site. They also noted that EPA has expressed concerns about whether conjoint analysis has been sufficiently tested as a methodology. A technical appendix to one set of industry comments described in detail a variety of substantive issues associated with conjoint analysis.

HEA and REA have been used in the context of NRD settlements to estimate losses in ecological services from injuries and gains in ecological services from restoration projects. The proposed rule does not limit their use to such purposes, or prescribe any other criteria that these methodologies must meet to be used in particular situations. Industry comments noted the difficulties that would arise if HEA or REA were to be used to estimate human use losses, and stressed the need for several conditions to be met for HEA and REA to provide reliable estimates of the appropriate scale of compensatory ecological restoration projects. The comments also described the shortcomings of HEA and REA in CERCLA cases with multiple affected services, multiple contaminants or sources of injury, long or uncertain injury periods, and other complexities. The preamble of the proposed rule is silent on all of these issues.

With respect to all three of the relatively untested methodologies, industry commenters noted the requirement in CERCLA Section 301(c)(2)(B), 42 U.S.C. § 9651(c)(2)(B), that the NRDA regulations are to provide the "best available" procedures for assessing damages. The commenters argued that the administrative record for the proposed rule does not show that DOI has carefully considered the relevant literature, acknowledged legitimate criticisms, and adopted appropriate measures to guide application of the new methodologies to avoid biased or otherwise anomalous results, contrary to the requirements of the *Ohio* decision, *see* 880 F.2d at 476-79.

State commenters uniformly indicated their support for inclusion of the new methodologies in the rule, but did not provide any substantive rationales for doing so that would have bolstered the administrative record of the rule.

Notwithstanding its many uncertainties, HEA has been a valuable tool in cooperative assessments and in helping trustees and potentially responsible parties reach negotiated settlements of NRD claims. Unfortunately, the proposed rule does not limit the use of HEA or the other new methodologies to the settlement context or impose other limitations to ensure that they are not used inappropriately in litigation. Given the stakes potentially associated with the use of these new methodologies to prepare a damages assessment that would then be subject to a rebuttable presumption of validity, the concerns raised by the industry commenters could well lead to a challenge to the rule when it is finally promulgated.

Conclusion

The proposed NRDA rule usefully addresses certain recommendations of the Natural Resource Damage Assessment and Restoration Federal Advisory Committee (FAC) that met between 2005 and 2007 to evaluate changes to the NRD program, particularly with respect to emphasizing restoration over the calculation of economic damages and using compensatory restoration projects to address interim losses. The rule goes beyond the recommendations of the FAC, however, in proposing new methodologies as the "best available procedures" for NRDA. If this element of the proposal is preserved in the final rule, DOI's attempt to broaden the trustees' toolkit of NRDA methods may result in a legal challenge to the rule. State trustees also appear sufficiently concerned over aspects of the proposed rule that they too might mount a legal challenge. DOI will not find it easy to reconcile the very different views expressed by commenters on the DOI proposal. How DOI resolves these issues will have major ramifications for both

trustees and potentially responsible parties in future assessments, negotiations, and litigation. And whether DOI will significantly reevaluate its approach under the direction of a new administration is unknown, but many interested parties will be paying close attention.

SHOULD POTENTIALLY RESPONSIBLE PARTIES COOPERATE WITH TRUSTEES IN A NATURAL RESOURCE DAMAGE ASSESSMENT?

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Suppose that your company (or a client) is identified as a Potentially Responsible Party (PRP) at a site and receives a "Notice of Intent to Conduct a Natural Resource Damage Assessment" letter from a state or federal agency. Most of these letters invite the PRPs to participate in the assessment. Should the company accept that invitation? This article addresses that question.

Possible Cooperative Assessment Arrangements

Cooperative natural resource damage (NRD) assessments can come in many forms. For example, the trustees and PRPs might cooperate on gathering and distributing available information for the NRD assessment, but the two parties may choose to analyze that information separately. Furthermore, the two parties may cooperate on collecting new information, but may choose to analyze that information separately. Alternatively, the two parties may cooperatively gather and analyze all of the information used in the assessment.

It is possible for the trustees and PRPs to cooperatively assess all aspects of some elements of an NRD claim but not others. For example, the two parties might fully cooperate on alleged injuries to surface water and biological resources, but not groundwater. Alternatively, the two parties might cooperate on all aspects of a NRD assessment except for alleged nonuse damages. (Nonuse damages are damages that are allegedly incurred for irreversible injuries to unique natural resources by people who do not use the injured resource and who have no plans to use that resource in the future. These damages allegedly arise because of concerns that other people will not be able to use the injured resource or merely because of the perspective that the injured resource should exist in an uninjured condition even if no one ever uses it.)

Most PRPs do not have sufficient scientific and/or economic expertise to actively participate in a cooperative assessment. In those cases the PRPs (or their outside counsel) retain the services of a consultant for technical assistance. Some trustees have extensive internal NRD expertise, while other trustees have almost no in-house NRD experience. The latter alternative leads to an issue of whether each party has its own consultants working on a cooperative NRD assessment or whether one consultant conducts the assessment under the supervision of both parties. Setting aside process issues regarding who is doing what on which aspects of the NRD assessment, a more substantive issue arises regarding the extent of actual cooperation between the two parties. PRP staff and their remediation consultants usually know more about their injured site than the trustees. Additionally, PRPs often have relationships with local government agencies and representatives of local non-governmental organizations that can be very useful in identifying possible restoration projects. Finally, NRD consultants retained by PRPs may have very relevant experience with similar natural resource injuries, services, and/or damages from previous assessments. In a truly cooperative effort, the trustees are willing to integrate the PRPs' knowledge, contacts, and experience into the assessment. Furthermore, the trustees and PRPs in a fully cooperative assessment will agree on the scope of the assessment (*i.e.*, the resources to be assessed) and the approach used to assess damages (*e.g.*, restoration-based approach using Habitat Equivalency Analysis). The trustees ultimately are responsible for the scope and approach used in an NRD assessment.

In most cooperative assessments the trustees ask the PRPs to pay for the trustees' assessment costs on a periodic basis (*e.g.*, quarterly or semi-annually).

Ultimately, the PRP is required to reimburse trustees for "reasonable" assessment costs, so the PRPs will eventually have to pay such trustee assessment costs. The main difference is the timing of those costs. The scope, required documentation, and timing for the funding arrangement are usually determined as part of a Memorandum of Understanding (MOU) at the beginning of the cooperative assessment. As with other aspects of a cooperative assessment, these terms can vary substantially.

Advantages of Cooperative Assessments

One of the main advantages of a cooperative assessment is that it offers PRPs the possibility of helping determine the scope and approaches used in the assessment, which affect the assessment results. For example, trustees might evaluate potential injuries to some natural resources in a non-cooperative assessment that they may be willing to forgo in a cooperative assessment. In particular, PRPs may be willing to stipulate to some natural resource injuries in order to save the time and money required to formally document those injuries. Similarly, trustees might be willing to implement less time consuming and/or less expensive injury determination approaches in a cooperative assessment than in a non-cooperative assessment.

Almost all NRD cases settle out of court and most NRD settlements involve some negotiations between the parties. Settlement negotiations usually require less time and effort following a cooperative process compared to a non-cooperative process, because each party has a better understanding of the other party's data, assumptions, methodologies, and concerns. Typically, the cooperative process also results in greater awareness of the strengths and weaknesses of the assessment by both parties. Finally, a cooperative process usually results in a smaller range in the damage estimates than a non-cooperative process. Most cooperative assessments do not result in a single estimate of damages, because of different technical perspectives by the two parties on various damage-assessment parameters. Despite such differences, the two parties still may agree on one or more restoration projects that will sufficiently compensate the public for the estimated damages. Other things being equal, a smaller range in the damage estimates increases the likelihood of a settlement, rather than litigation.

The cooperative process involves fewer steps than the non-cooperative process. For example, one joint data collection may occur, rather than two separate data collections. Consequently, the cooperative process usually is completed is less time than the non-cooperative process. Accordingly, this decreases the time required in reaching a settlement and resolving the case. Since it is more likely to lead to a settlement, a cooperative assessment tends to avoid the substantial time and costs associated with litigation.

Cooperative assessments that are conducted concurrently with a remediation process may offer cost-savings opportunities for PRPs. For example, one data collection might be designed to serve both the Remedial Investigation and Injury Determination processes. This usually results in cost savings relative to two separate data collections. Additionally, ongoing remediation activities may provide opportunities for cost-effective "early" restoration projects. For example, suppose contaminated soils are going to be excavated and replaced with uncontaminated soil. It may be possible to create compensatory trails or other recreation opportunities for the public on the remediated area for a modest additional cost.

Finally, a cooperative assessment may provide benefits in other matters involving the two parties. For example, a cooperative assessment may result in a good working relationship between the trustees and PRPs that is helpful in resolving remediation issues at the site or in assessing NRD at another site involving the same PRPs and trustees. Also, a cooperative assessment may be more compatible with the corporate philosophy of some PRPs and may even provide some public-relations benefits with various stakeholders.

Disadvantages of Cooperative Assessments

PRPs that enter cooperative assessments are accepting some liability for NRD at least implicitly, if not explicitly. Thus, PRPs who are not certain that they are liable for NRD or who are not certain that the trustees can prove their case against the PRP in court may

choose to reject a cooperative assessment with Trustees.

Cooperative assessments involve relatively high transactions costs (*i.e.*, costs for consultants and attorneys), because of numerous meetings of both parties to discuss various assessment components. While a cooperative assessment usually results in a quicker settlement, it does not necessarily lead to a less costly assessment because of the meetings. Even when a cooperative assessment costs less than a non-cooperative assessment, the costs of the former will be incurred sooner than the costs of the latter. Additionally, a quicker settlement means that settlement costs are incurred sooner. Consequently, PRPs in poor financial condition may prefer a non-cooperative assessment in order to postpone NRD assessment and settlement costs.

When PRPs are paying the trustees' costs in a cooperative assessment on a periodic basis, the trustees have no financial incentive to complete the assessment quickly. (A tolling of the statute of limitations deadline for bringing an NRD claim is typically part of an MOU for a cooperative assessment.) The same is true of the consultants working for the trustees and the PRPs. This can contribute to assessment "creep," whereby the scope of the assessment expands later in the assessment, new approaches are introduced, and deadlines for deliverables are missed. This can transform a two-year cooperative assessment into a three-year (or more) cooperative assessment. Typically, the expanded timeframe for the assessment does not lower the ultimate settlement cost—it just increases assessment costs.

In some cooperative assessments the PRPs pay the trustees' assessment costs periodically but the trustees are unwilling to accept technical input on the assessment from the PRPs or their consultants. In this situation the PRPs are simply paying the trustees to strengthen their case against the PRPs, which is not desirable.

When the trustees and PRPs agree on an approach to determining an alleged injury, quantifying an alleged service loss, or determining an alleged damage, both parties are committed to accepting the outcome of that approach to some extent. This may reduce the PRPs' flexibility in subsequent litigation, if a settlement is not reached. Also, if a settlement is not reached following a cooperative assessment, then the PRPs may have to retain a different set of technical experts for the litigation. This increases the cost of resolving the case.

Keys to Successful Cooperative Assessments

PRPs can take several actions to avoid some of the disadvantages of a cooperative assessment. First and foremost, the PRPs and trustees should agree on the scope, approach, and timetable for the cooperative assessment at the very beginning of the process. These elements should be memorialized in the MOU for the cooperative assessment. Subsequent assessment meetings should be scheduled as much as one year in advance and the general agenda for those meetings should be identified. Then, both parties need to work hard to meet the milestones, minimizing potential assessment creep.

Since restoration is the ultimate goal of the NRD process, restoration topics should be on the agenda for every cooperative-assessment meeting from the beginning. In effect, the restoration project evaluation should proceed on a parallel track with the injury determination and service quantification. Early restoration efforts can focus on identifying potential projects and the criteria for evaluating those projects.

Successful cooperative assessments require flexibility from both the PRPs and trustees. Neither party will prevail on every technical element in a successful cooperative assessment—some compromises must be made by each party. These compromises help narrow the results of the assessment, which increases the likelihood of a settlement. However, one recalcitrant person for either the trustees or PRPs can derail a cooperative assessment.

A cooperative assessment is not the best alternative for all NRD cases, but it can be the best choice for many cases. The ultimate decision on whether to participate in a cooperative assessment must be made on a site-specific basis, preferably after some preliminary

discussions between the trustees and PRPs on the key factors for successful cooperative assessments.

U.S. V. ATLANTIC RESEARCH: THE SUPREME COURT RE-OPENS THE ROAD TO CERCLA COST RECOVERY

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On June 11, 2007 the Supreme Court quelled much of the anxiety and confusion caused by their 2004 decision in *Cooper Industries v. Aviall*, 543 U.S. 157 (2004), (hereinafter "*Aviall*") when Justice Thomas delivered a unanimous decision that restored the ability of potentially responsible parties (PRPs) to pursue cost recovery actions under Section 107 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9607. PRPs may once again proceed under theories of contribution or cost recovery, or perhaps even both, depending on the procedural circumstances surrounding the cleanup. *See United States v. Atlantic Research Corp.*, 127 S. Ct. 2331 (2007). This article provides background on CERCLA cost recovery and contribution, and reviews the decision in *U.S. v. Atlantic Research Corp*. In addition, it considers some of the issues likely to arise as the courts direct traffic between these new avenues for shifting cleanup costs among PRPs.

Background: Road Closed to PRP Cost Recovery under Section 107

The language of CERCLA § 107 describes: (1) who may be held liable under the statute and (2) what PRPs may be liable for. CERCLA § 107(a)(1)-(4) identifies "covered persons," commonly referred to as "potentially responsible parties" or "PRPs." Section 107(a)(4) authorizes recovery of cleanup costs from these PRPs. Subsection A grants the United States government, states or Indian tribes authority to recover as follows:

> (A) all costs of removal or remedial action … not inconsistent with the national contingency plan. 42 U.S.C. § 9607(a)(4)(A).

Subsection B also authorizes recovery of the following costs:

> (B) any other necessary costs of response incurred by any other person consistent with the national contingency plan. 42 U.S.C. § 9607(a)(4)(B).

Federal courts applied Section 107(a)(4)(A) to allow recovery of all cleanup costs incurred by federal, state or tribal government entities, under theories of retroactive, strict, joint and several liability. *See United States v. Chem-Dyne Corp.*, 572 F. Supp. 802 (S.D. Ohio 1983), *U.S. v. Mottolo*, 695 F. Supp. 615 (D.N.H. 1988). For ease of reference, we refer to the road mapped by this provision and travelled by these courts as "Superhighway A." This road is well travelled and reflects what most people think of when they think of Superfund liability.

By contrast, many courts and parties found § 107(a)(4)(B) confusing. In the early 80's, some courts referred to that language as they struggled to balance the equities among parties subject to strict, joint and several liability on Super Highway A. Other courts used the language in § 107(a)(4)(B) to justify cost recovery between responsible parties. *See City of New York v. Exxon Corp.*, 633 F. Supp. 609, 615-618 (S.D.N.Y. 1986); *Wickland Oil Terminals v. Asarco, Inc.*, 792 F.2d 887, 890-892 (9th Cir. 1986); *Walls v. Waste Resource Corp.*, 761 F.2d 311, 317-318 (6th Cir. 1985); *Philadelphia v. Stepan Chemical Co.*, 544 F. Supp. 1135, 1140-1143 (E.D. Pa. 1982). Many courts looked for a right to contribution in subsection B or elsewhere, before such a right was expressly articulated in the statute. *See United States v. New Castle County*, 642 F. Supp. 1258, 1262 (D. Del. 1986) (noting uncertainty about whether CERCLA originally provided contribution rights and finding a right to contribution under federal common law) *Colorado v. ASARCO, Inc.*, 608 F. Supp. 1484, 1486-1493 (D. Colo. 1985) (federal common law provides a right of contribution), and *Wehner v. Syntex Agribusiness, Inc.*, 616 F. Supp. 27, 31 (E.D. Mo. 1985) (a right of contribution implied in § 107(e)(2)), United *States v. Westinghouse Electric Corp.*, 1983 WL 160587 (S.D. Ind. 1983) (finding no right of contribution).

This second "road" was more analogous to a path through the CERCLA briars than a highway. We refer to it as the "B Path."

Congress addressed the lack of an express right to contribution in 1986 when it passed the Superfund Amendment and Reauthorization Act of 1986 (SARA). Pub. Law No. 99-499, § 113, 100 Stat. 1613 (1986). Congress wrote section 113 to provide an explicit right of contribution, subject to certain civil actions, (42 U.S.C. 9613(f)(1)) or to allow parties who had resolved their CERCLA liabilities in an administratively- or judicially-approved settlement to pursue contribution (42 U.S.C. 9613(f)(3)).

With the passage of SARA and the addition of an explicit right to contribution to the statute, federal district and appellate courts began directing liable parties away from the B Path that some Courts had mapped using § 107(a)(4)(B). Further use of the B Path was discouraged, irrespective of whether or not it led to an implicit right of contribution or an explicit right to cost recovery. *See Atl. Research Corp. v. United States*, 459 F.3d 827 (8th Cir. 2006).

PRPs were all but foreclosed from taking this path. Landowners who were technically PRPs under § 107(a)(1) were occasionally invited to travel this path, although passage was contingent on proof of something reminiscent of a fairy tale or a J.R. Tolkein story, namely, that they were "innocent" landowners. *See Rumpke of Ind. v. Cummins Engine Co.*, 107 F.3d 1235, 1240 (7th Cir. 1994).

The contribution road paved by § 113 became "Super Highway 113" for parties seeking recovery of costs incurred as a consequence of enforcement actions brought by the federal and state entities powering down Super Highway A, as well as for all other enforcement actions related to cleanup or voluntary cleanup of hazardous substances, including voluntary actions undertaken by potentially liable parties. The Eighth Circuit's decision in *Atlantic Research* succinctly describes the expansion of the § 113 route and the further closure of the B Path as follows:

> To prevent § 107 from swallowing § 113, courts began directing traffic between the sections. As a result, regardless of which CERCLA section a plaintiff invoked, courts typically analyzed §§ 107 and 113 together, aiming to distinguish one from the other. . . . Traffic-directing dramatically narrowed section 107 by judicial fiat.

Id.

Cooper Industries v. Aviall Services: A Bottleneck on the Contribution Super Highway

The Supreme Court's decision in *Cooper Industries v. Aviall Services* significantly narrowed the 113 Super Highway by limiting contribution actions to those allowed under the plain meaning of the language Congress added in 1986. *Cooper Indus. v. Aviall Servs., Inc.*, 543 U.S. 157 (2004). Justice Thomas, writing for the majority, characterized section 113(f)(1) as follows:

> [T]he enabling clause that establishes the right of contribution, provides: 'Any person *may* seek contribution . . . *during* or *following* any civil action under *section 9606* of this title or under *section 9607(a)* of this title,' 42 U.S.C. § 9613(f)(1) (emphasis added). The natural meaning of this sentence is that contribution may only be sought subject to the specified conditions, namely, 'during or following' a specified civil action.

Id. at 165-166 (*quoting* 42 U.S.C. § 9613(f)(1)).

After *Aviall*, many parties travelling down the 113 Super Highway found themselves shunted off the nearest exit ramp. Parties in various stages of settlement negotiations, voluntary cleanup, and contribution actions without what *Aviall* now required, namely a civil action under sections 106 or 107, faced motions for dismissal for their claims filed under section 113.

As a practical matter, the party to benefit the most from the bottleneck created by *Aviall* was the U.S. government. The United States is the major party to file civil actions under section 107, and the only entity with the authority to file civil actions under section 106.

After *Aviall*, the United States largely controlled whether parties could seek contribution from the government, since only parties subject to civil actions or settlements (again frequently initiated by the United States) could file contribution actions.

The discretion held by the United States in deciding how to pursue cleanups had a huge impact on whether contribution was available to PRPs. This is because the United States could often achieve many of its cleanup goals by filing suit under the Resource Conservation and Recovery Act (RCRA) or using administrative authorities under CERCLA. By doing so, it would foreclose 113 actions by PRPs, since there would be no § 106 or § 107 action to support a post-*Aviall* contribution action.

While states or possibly Indian tribes may file a civil action against a private party that would give the private party the green light to seek contribution from the U.S. government, this option was a less than attractive detour from the contribution super highway that private parties travelled before *Aviall*. *See* 42 U.S.C. § 9607(a)(4)(A).

The *ARC* Case: Detours and Road Construction on the Way to the Supreme Court

The Atlantic Research Corporation (ARC) was one among many parties hurried off the 113 Super Highway by the *Aviall* decision. ARC sought to recover costs associated with its cleanup of contamination caused by its work retrofitting rocket motors for the United States at the Shumaker Naval Ammunition Depot, a facility operated by the Department of Defense. At the time the *Aviall* decision was announced, ARC was in the midst of final negotiations with the United States to settle its suit under section 113 of CERCLA. Settlement negotiations folded. ARC amended its complaint to seek recovery under § 107(a). The U.S. filed a motion to dismiss. *United States v. Atl. Research Corp.*, 127 S. Ct. 2331, 2335 (2007).

The district court in the *ARC* case characterized the effect of the *Aviall* decision as a "sea change in this law suit." *Atl. Research Corp. v. United States*, 2005 U.S. Dist Lexis 20484 at 2 (W. D. Ark. 2005). Judge Barnes acknowledged that the combined result of *Aviall* and prior Eighth Circuit precedent directing PRPs to recovery only under § 113 left ARC and many parties like ARC without a remedy. The district court concluded that *Aviall* did not undermine prior precedent and, as a result, the court felt it was bound to follow that precedent until the Eighth Circuit revisited the issue in light of *Aviall*. *Id.* at 9-10.

ARC's appeal provided the opportunity for the Eighth Circuit to reconsider its prior decision in *Dico, Inc. v. Amoco Oil Co*, 340 F.3d 525 (8th Cir. 2003). *Atl. Research Corp.*, 459 F.3d 827, 833 (citing *to Dico.*) In *Dico*, like many circuits before it, the Eighth Circuit had directed a responsible party to seek cost recovery only under § 113, rather than using the potentially broader authority provided under § 107(a)(4)(B). *Atl. Research Corp.*, 459 F.3d at 830-831. Following *Aviall*, theories for how to reopen this "B Path" followed the same two tracks that had pre-dated the initial addition of section 113 to the statute. As described above, one line of argument was that § 107(a)(4)(B) provided an implied right of contribution. The other line of cases identified a direct recovery of costs under the language of § 107(a)(4)(B). ARC sought to recover only an equitable share under § 107(a)(4)(B), in effect combining a contribution claim with a direct cost recovery claim. *Atl. Research Corp.*, 459 F.3d at 829-831.

Judge Rosenbaum observed that, in light of *Aviall*, the traffic-directing that the circuits engaged in before *Aviall* was no longer appropriate. The court followed the Second Circuit's decision in *Consolidated Edison Co. of N.Y. v. UGI Utilities*, 423 F.3d 90, 99 (2d Cir. 2005), and ruled as follows:

> We agree with our sister Circuit, and hold that it no longer makes sense to view § 113 as a liable party's exclusive remedy. This distinction may have made sense for parties such as *Dico*, which was allowed to seek contribution under § 113. But here, Atlantic is foreclosed from using § 113. This path is barred because Atlantic—like *Aviall*—commenced suit before, rather than "during or

following," a CERCLA enforcement action. Atlantic has opted to rely upon § 107 to try to recover its cleanup costs exceeding its own equitable share. We conclude it may do so.

Atl. Research Corp., 459 F.3d at 834-35.

The Eighth Circuit's decision granted ARC the right to cost recovery under § 107 and also granted an implied right to contribution under § 107(a)(4)(B). *Id.* at 835.

Road Construction: The Supreme Court Re-opens 107(a)(4)(B) to PRPs Seeking Recovery of Cleanup Costs

In addition to the decisions in the Second and Eighth Circuits discussed above, the Third Circuit in *E.I. DuPont de Nemours & Co. v. U.S.*, 460 F.3d 515 (3d Cir. 2006), (vacated, 127 S. Ct. 2971 (2007), overruled by *Montville Twp. v. Woodmont Builders, LLC*, 2007 U.S. App. LEXIS 18825 (3d Cir. 2007), reversed and remanded by *E.I. Dupont De Nemours & Co. v. United States*, 508 F.3d 126 (3d Cir. N.J. 2007)) and the Seventh Circuit in *Metro. Reclamation Dist. v. N. Am. Galvanizing & Coatings, Inc.*, 473 F.3d 824 (7th Cir. 2007), had issued opinions addressing the question of how section 107 applied in a post-*Aviall* world. The Seventh Circuit agreed with the decisions in the Second and Eighth circuits, allowing recovery for PRPs under § 107. *Id.* at 834-35. The Third Circuit had created a split in the circuits, reaffirming its pre-*Availl* rulings and declining to allow recovery under section 107 to all private parties who are not "innocent." *E.I. DuPont de Nemours & Co. v. U.S.*, 460 F.3d 515, at n32 (3d Cir. 2006).

On Jan. 19, 2007, the Supreme Court granted certiorari to the United States' appeal of the Eighth Circuit's decision. The question before the Supreme Court was whether parties that were not eligible to file a claim under § 113(f) could nonetheless bring an action against another PRP under § 107. Petition for Writ of Certiorari, *Atl. Research Corp. v. United States*, No. 06-562, 2006 WL 3024300 at i (U.S. Oct. 24, 2006).

The Court's answer to this question hinged on the meaning of the two provisions discussed above, the § 107(a)(4)(A) "super highway" and the § 107(a)(4)(B) "path." The United States argued that § 107(a)(4)(B) only allowed "innocent persons," not PRPs, to recover their response costs. *United States v. Atl. Research Corp.*, 127 S. Ct. 2331, 2336 (2007). For its part, ARC argued for a broader definition of the term "any other person" under § 107(a)(4)(B). Under ARC's reading, the term included any person who had incurred "any other necessary costs of response . . . consistent with the national contingency plan." CERCLA § 107(a)(4)(B).

Justice Thomas, writing for a unanimous Court, drew on several rules of statutory construction to explain the Courts' conclusion. The first maxim relied upon was that "statutes must 'be read as a whole.'" *United States v. Atl. Research Corp.*, 127 S. Ct. at 2336. The Court applied that maxim to subsections (A) and (B) as follows:

- noting the proximity of the two provisions ("adjacent" (*Id.*)), and
- the structure ("remarkably similar" (*Id.*)).

Both provisions refer to actions that are consistent with or at least not inconsistent with the National Contingency Plan. Moreover, while subsection A allows governments to recover "all costs of response" (CERCLA § 107(a)(4)(A)), subsection B refers to "other necessary costs" (CERCLA § 107(a)(4)(B)) which, the Court observed, "differentiates the relevant costs from those listed in subparagraph A." *United States v. Atl. Research Corp.* 127 S. Ct. at 2336.

The Court held that the links between the two subsections created another "natural meaning" for the term "any other person" in subsection B, drawing a distinction between those persons and the parties identified in subsection A, *i.e.*, persons other than the United States, a state, or an Indian tribe. *Id.*

The Court rejected the U.S. government's arguments that "other persons" are those other than the PRPs listed in the above sections 107(a)(1)-(4). Justice Thomas criticized these arguments as "making little textual sense." *Id.* The Court explained its analysis as follows:

> Although "any other necessary costs" clearly references the costs in subparagraph (A), the Government would inexplicably interpret "any other person" to refer not to the persons listed in subparagraph (A) but to the persons listed as PRPs in paragraphs (1)-(4). Nothing in the text of § 107(a)(4)(B) suggests an intent to refer to antecedents located in two different statutory provisions.

Id.

The Court also found unpersuasive the government's argument that § 107(a)(4)(B) is available only to "innocent" persons, *i.e.*, someone other than the PRPs listed in paragraphs (1)-(4). The government's interpretation would have had the practical effect of nearly zeroing out the range of people who would be able to recover under § 107(a)(4)(B). *Id.* The Court acknowledged the government's argument that the universe of persons eligible to invoke § 107(a)(4)(B) under the government's reading had been expanded in the 2002 amendments to CERCLA. The Small Business Liability Relief and Brownfields Redevelopment Act (Pub. L. 107-118, 115 stat. 2356) added certain exemptions to those subject to section 107, such as bona fide prospective purchasers. *Id.* at 2336-37. Even so, the Court concluded that this expansion did not explain § 107(a)(4)(B)'s meaning for the twenty-two years prior to these amendments. *See United States v. Atl. Research Corp.* 127 S. Ct. at n. 4.

The Supreme Court reflected on the statute's scope of responsible persons in § 107(a)(1)-(4) and observed that even "innocent" landowners are still "owners" within the purview of § 107(a)(1), and hence still PRPs within the broad contours of § 107:

> The Government's reading of the text logically precludes all PRPs, innocent or not, from recovering cleanup costs. Accordingly, accepting the Government's interpretation would reduce the number of potential plaintiffs to almost zero, rendering § 107(a)(4)(B) a dead letter.

Id. at 2336-2337.

The Court further explained its plain reading of § 107(a)(4)(B), in its rejection of the government's argument that if the terms "other persons" were to include PRPs, the words would create surplusage. The United States had argued that "other necessary costs" in § 107(a)(4)(B) precluded the United States, states, and Indian tribes' recovery under § 107(a)(4)(B), and that to interpret "other person" as precluding those same parties from cost recovery would result in duplication within the statute. The Court did not view this possibility as fatal to its reading of the statute:

> In any event, our hesitancy to construe statutes to render language superfluous does not require us to avoid surplusage at all costs. It is appropriate to tolerate a degree of surplusage rather than adopt a textually dubious construction that threatens to render the entire provision a nullity.

Id. at 2337.

New Maps: How Many Roads Lead to Cost Sharing under CERCLA and Where Do They Cross?

The U.S. Supreme Court squarely ruled in favor of a right for cost recovery under § 107(a) that is separate from the right of contribution authorized under § 113, at least when the liable parties (or other persons) themselves incur cleanup costs. *Id.* at 2338. Justice Thomas took pains to distinguish costs which PRPs incurred themselves from those which "a party pays to satisfy a settlement agreement or a court judgment." *Id.* The Court considered these latter costs as "reimbursed" costs to others who themselves had incurred response costs. *Id.* Those parties who reimburse the costs incurred by others subject to a court judgment or a settlement agreement under the terms required under § 113(f) may pursue a claim for contribution, but they may not pursue a claim for cost recovery under § 107. *Id*. Reading the statute in this way assures that liable parties will not choose their cause of action based on the more beneficial statutes of limitation provided for claims under § 107 or other reasons. Instead, parties are required to pursue recovery of costs under § 107 or § 113, depending on the procedural circumstances surrounding the payments. *Id.*

Despite the Supreme Court's resolution of the most obvious of the problems created by their *Aviall* decision, questions remain. Not all procedural circumstances clearly fall into the categories the Supreme Court outlined to help determine which section of the statute is the appropriate route to cost recovery. The *Atlantic Research* decision describes what appear to be two separate, non-intersecting roads to CERCLA cost allocation—roads that only certain parties may travel. Footnote 6 may have the effect of creating a cloverleaf interchange between the reopened § 107 cost recovery route and the § 113 contribution highway. Justice Thomas described in this footnote one of the troubling procedural circumstances, *i.e.* "the PRP does not incur costs voluntarily but does not reimburse the costs of another party." *Id.* at n. 6. This situation may occur when PRPs expend money pursuant to a consent decree following a suit under § 106 or § 107. The example demonstrates the potential for overlap between § 107 and § 113(f), as alluded to in dictum in the Court's 1994 decision in *Key Tronic Corp. v. United States*, 511 U.S. 809, 816 (1994) (stating the statutes provide "similar and somewhat overlapping remedies").

The question remains as to the extent and nature of the overlap, however, because the *Atlantic Research* Court backed away from deciding the issue: "We do not decide whether compelled costs of response are recoverable under § 113(f), § 107(a) or both." *U.S. v. Atlantic Research* at n. 6. Related questions linger about whether administrative actions under § 106, so called "106 orders" or Administrative Orders on Consent present procedural circumstances to qualify as claims for response costs under § 107 or claims for reimbursement.

Other areas which the Court left open for further consideration are whether or not responsible parties who incur response costs may recover those costs under theories of joint and several liability. The Court "assume[d] without deciding that § 107(a) provides for joint and several liability." *Id.* at n. 7. The Court was clear in expressing support for counter claims under §113(f). Parties subject to § 107 claims for joint and several liability filed by parties who are themselves also liable parties "could blunt any inequitable distribution of costs by filing a § 113(f) counterclaim." *Id.* at 2339.

The Court was unfazed by concerns raised in the briefs and at oral argument about the effect that allowing PRPs to travel the § 107(a)(4)(B) road will have on settlements and the contribution protection provided to settling parties. The Court agreed that "[t]he settlement bar does not by its terms protect against cost-recovery liability under § 107(a)." *Id.* For the Court, this concern was offset by its confidence in the federal courts' ability to weigh the protections provided in settlement agreements against other equitable factors when allocating costs between liable parties, something that may be required by a settling party's § 113 counterclaim. *Id.*

In the final footnote, the Court declined to address the issue of whether or not § 107 provides an implied right to contribution. The Court concluded that consideration of the issue was not necessary based on the Court's conclusion that an express right to cost recovery is provided in §107. *Id.* at n. 8. The Court continues to cite to cases that discourage implicit rights to contribution without saying clearly that such a right is not allowed under CERCLA. *See Id.*

Conclusion

While questions remain, the Supreme Court's decision in *U.S. v. Atlantic Research Corp*. provides relief to parties engaged in voluntary cleanup whom also seek recovery of at least a portion of their clean up costs. No longer are these parties required to ask state agencies to file civil actions against them so that they may seek contribution under CERCLA, nor must they remain obsessed with whether state settlements provide an avenue for recovery under § 113(f)(3)(B). Brownfields redevelopers can resume work without question about their ability to shift costs to liable parties. At the very least, *ARC* puts parties in much the same place they were before the *Aviall* decision upset CERCLA contribution and cost recovery norms.

The Court's decision may also move voluntary cleanup onto a new super highway. If parties incur necessary costs of response in the absence of either state or the Environmental Protection Agency orders and those response actions are consistent with the National Contingency Plan, section 107 may provide recovery of all those costs against other parties who failed to

take such action. After all, if one of the driving forces behind CERCLA was to encourage speedy and effective cleanup of contamination, why not reward those who take such action voluntarily with recovery under theories of joint and several liability? Of course, as is the norm in CERCLA, the standard of liability will be determined on a case by case basis. Even more likely is that such allocations will be assessed in the context of contribution counterclaims under § 113. Either way, CERCLA is back on track, spurring parties to take action and assess contamination without a specific order from a state or federal government requiring such measures.

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CASE NOTE: CERCLA STIR UP PROP-WASH COULD IMPOSE LIABILITY: *CITY OF WAUKEGAN V. NATIONAL GYPSUM CO.*, *ET AL.*, NO. 07-C-5008, 2008 WL 2278118 (N.D. ILL. APR. 7, 2008)

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The United States District Court for the Northern District of Illinois recently permitted a claim under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to proceed against a company that operated a submerged engine facility in the Waukegan Harbor. *City of Waukegan v. National Gypsum Co., et al.*, No. 07-C-5008, 2008 WL 2278118 (N.D. Ill. Apr. 7, 2008). The court's opinion also suggests that vessel owners could face CERCLA liability at harbors and other waterway sites where ship propellers caused the resuspension and/or redistribution of contaminated sediments.

In *City of Waukegan v. National Gypsum Co.*, the court granted various motions to dismiss by entities with business operations adjacent to the harbor, finding that the city's allegations that these private companies had caused vessels to come into the harbor in connection with their normal business operations insufficient to maintain a claim for CERCLA liability. Although the city fell short of convincing the court that these private companies had exercised sufficient direction or management over the conduct of the vessel activities to rise to the level of "operator" liability under CERCLA, a claim against defendant Bombardier did survive on the basis of an allegation that the company "operates a submerged engine testing facility …[with] propellers … [that] have caused prop wash which have [sic] routinely disturbed, suspended, and redistributed PCB-contaminated sediments thought the Harbor." *Id.* at *1, *2. The allegations that this prop wash "has mixed sediments into the water column, disrupted the benthic zone, and influenced water quality, thus exacerbating the PCB contamination in the Harbor" was enough for the court to conclude that the city had stated a claim that Bombardier "conducted operations in the Harbor specifically related to pollution, that is, operations having to do with leakage … of hazardous waste." *Id.* at *9 (quotations omitted).

Further finding that the city's complaint sufficiently alleged that Bombardier's operations caused a "release" of hazardous substances under CERCLA and that the city had incurred response costs consistent with a national contingency plan, the court denied defendant Bombardier's motion to dismiss and the case will proceed on the basis of Bombardier's liability for the operation of its submerged engine testing facility in the harbor. The court's decision, as well as a discussion of potential vessel operator liability under CERCLA, has stirred up discussion in the environmental law community and opens the door to interesting developments with respect to potential CERCLA claims against ship and other propeller-involved operations in the future.

A PANACEA FOR THE PRICELESS?

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In April 2007, the New Jersey Department of Environmental Protection (NJDEP) announced the completion of its study entitled "Valuing New Jersey's Natural Capital" (http://www.state.nj.us/dep/dsr/naturalcap/). This study places a per-acre dollar value on the ecosystem services provided by the various types of land cover within the state. Ecosystem services include functions that natural resources perform for humans and other natural resources that are not sold in a market. For example, riparian areas provide recreational fishing services to anglers and habitat for wildlife.

According to the study's authors, a potential role for the per-acre dollar values contained within the report is natural resource damage (NRD) applications. When describing this study, *The New York Times* wrote: "Should an oil spill ruin New Jersey's entire coastal shelf, for example, state officials might cite the report's estimate of an environmental value of $1,299 per-acre per year as they tried to recoup damages from those responsible" (Pam Belluck, *From Beaches to Pine Barrens, a Study Puts Values on New Jersey's Natural Assets*, N.Y. TIMES, May 21, 2007). Although the ease of calculating damages based on the per-acre values contained within the report may be appealing, these values should be used with caution in NRD applications.

The researchers who authored the NJDEP study compiled a database of approximately 100 studies from around the globe. The dollar values from the various studies are scaled to reflect per-acre values and then classified into approximately a dozen types of land cover (estuary, forest, freshwater wetlands, etc.) and simultaneously into approximately a dozen categories of ecosystem services (recreation, wildlife habitat, water supply, etc.). For each combination of a given land cover type and ecosystem service category, the resulting per-acre numbers are averaged to reflect the dollar value summarized in the report. For each type of land cover, the dollar values across the applicable ecosystem services are summed to yield the per-acre value provided by that type of land cover. For example, the $1,299 per-acre value for the coastal shelf cited above is comprised of $521 for water supply services, $723 for nutrient cycling, $20 for biological control, and $35 for cultural values.

The valuation approach used in the NJDEP study is widely recognized by natural resource economists as a "benefits transfer" or "value transfer" approach (*Guidelines for Preparing Economic Analyses*, U.S. EPA, 240-R-00-003, Sept. 2000; D.S. Brookshire and H.R. Neill, *Benefit Transfers: Conceptual and Empirical Issues*, 28 WATER RESOURCES RES. 651-655 (1992); V.K. Smith, *On Separating Defensible Benefit Transfers from Smoke and Mirrors*, 28 WATER RESOURCES RES. 685-694 (1992); W.H. Desvousges, M.C. Naughton & G.R. Parsons, *Benefit Transfer: Conceptual Problems in Estimating Water Quality Benefits Using Existing Studies*, 28 WATER RESOURCES RES. 675-683 (1992); K.E. McConnell, *Model Building and Judgment: Implications for Benefit Transfers with Travel Cost Models*, 28 WATER RESOURCES RES. 695-700 (1992); K.J. Boyle & J.C. Bergstrom, *Benefit Transfer Studies: Myths, Pragmatism, and Idealism*, 28 WATER RESOURCES RES. 657-663 (1992); W.H. DESVOUSGES, F.R. JOHNSON & H.S. BANZHAF, ENVIRONMENTAL POLICY ANALYSIS WITH LIMITED INFORMATION: PRINCIPLES AND APPLICATIONS TO THE TRANSFER METHOD (Edward Elgar, Cheltenham, UK, 1998). Using this approach requires valuing a similar type of resource service that is at issue in the NRD analysis. For example, if you wanted to know the value of a brand-new luxury SUV, you would not look up the blue book value of a ten-year-old compact car. If you wanted to know what you would pay to fly to Hawaii, you would not check prices for tickets to Chicago. Transferring values requires similar services to those provided by New Jersey's natural capital that are similarly valued by New Jersey residents.

A perusal of the underlying studies reveals that many of them value ecosystem services and preferences that

may not correspond to New Jersey. For example, the above-cited value of $521 for water supply services from the coastal shelf comes from three studies. The first is based on a survey of Swedish residents about their hypothetical willingness to pay for reduced eutrophication in the Stockholm archipelago (*The Regional Willingness to Pay for a Reduced Eutrophication in the Stockholm Archipelago*, T. Söderqvist and H. Scharin, Beijer Discussion Paper #128, Beijer International Institute of Ecological Economics, The Royal Swedish Academy of Sciences, Stockholm, 2000). Another comes from a hypothetical survey of residents in the Netherlands, which asked for their values for protecting against invasive marine species (Paulo Nunes & Jeroen van den Bergh, *Can People Value Protection against Invasive Marine Species? Evidence from a Joint TC–CV Survey in the Netherlands*, 28 ENVTL. & RESOURCE ECON. 517-532 (2004)). The third study includes a contingent behavior survey of Scotland residents about the impact of sewage discharges on coastal swimming opportunities (N. Hanley, D. Bell, & Alvarez-Farizo, *Valuing the Benefits of Coastal Water Quality Improvements Using Contingent and Real Behaviour*, 24 ENVTL. & RESOURCE ECON. 273-285 (2003)). Although ecologists may argue that the ecosystem services provided by these European ecosystems are ecologically similar to New Jersey's coastal shelf, European residents do not necessarily have the same preferences for ecosystem services that New Jersey residents do. Moreover, the specific scenarios for reduced eutrophication, prevention of invasive marine species, and sewage treatment in the hypothetical surveys may not correspond to the NRD issues experienced along the New Jersey coastal shelf. Arguably, these three studies may not be sufficiently similar to NRD claims in New Jersey to be the basis of a damage estimate.

An appropriate NRD assessment measures a specific change in resource services that results from the hazardous substance release. (The recently proposed revisions to the NRD regulations emphasize the change in resource services relative to baseline as a key component of NRD (73 Fed. Reg. 11,084). Because many of the underlying studies were not undertaken for NRD purposes, they may not measure the marginal changes in resource services that correspond to NRD needs. For example, suppose that an oil spill closes one acre of New Jersey's beaches for one week in February and prevents users from accessing the beach during that one week of clean-up. After clean-up is complete, use of the beach is fully restored. As it turns out, none of the underlying beach studies that value recreation services corresponds to this specific marginal change in resource services. Accordingly, none of the transfer values provides a reliable basis for estimating the value of lost beach use from this hypothetical spill.

Transferring values also requires that the underlying studies are scientifically sound. The overall quality of a study is widely recognized as a primary criterion for applying the results from one study to another situation. The consideration of quality encompasses all aspects of a study, such as the data, the methodology, the survey protocols, and the analysis technique. This criterion effectively asks whether the original study is sufficiently sound to pass scientific muster. If the original results were not based on reliable data, rigorous protocols, and valid analyses, then the study is not sound and should not be used as a transfer value, particularly in an NRD application.

Because most of the underlying studies were not designed or implemented to withstand the scrutiny of NRD, many of the transfer values from the underlying studies may not yield reliable damage estimates. For example, nearly one-third of the dollar values are based on a hypothetical survey methodology called contingent valuation (CV). Whether or not CV can produce values sufficiently reliable for use in NRD applications has been long and previously debated (CONTINGENT VALUATION: A CRITICAL ASSESSMENT (J.A. Hausman, ed., Elsevier Science Publishers, Amsterdam, 1993); *Report of the NOAA Panel on Contingent Valuation*, K. Arrow, R. Solow, P.R. Portnoy, E.E. Leamer, R. Radner, and H. Schuman, 58 Fed. Reg. 4601 *et. seq*., Jan. 15, 1993). Moreover, nearly half of the underlying CV studies used in the NJDEP study pre-date the NRD guidelines for CV studies (*Report of the NOAA Panel on Contingent Valuation*, K. Arrow, R. Solow, P.R. Portnoy, E.E. Leamer, R. Radner, and H. Schuman, 58 Fed. Reg.

4601 *et. seq.*, Jan. 15, 1993) and do not comply with them.

Cost-based approaches in some of the underlying studies are often not appropriate in NRD applications. The recently proposed revisions to the NRD regulations would explicitly permit the use of a "restoration cost" as a measure of damages in lieu of a damage estimate based on economic values (73 Fed. Reg. 11,083, 11,086). The preamble to the proposed revisions indicates that this "restoration cost" would be based on a site-specific, publicly reviewed restoration plan (73 Fed. Reg. 11,083). At this writing, the author contends that this "restoration cost" is not intended to be a cost-based transfer value from the literature. For example, some of the underlying values are based on avoided costs and replacement costs. An avoided cost approach estimates the total value of property that would be lost if the wetlands protecting property against floods were not there. Specifically, the flood control (or water regulation) service value for New Jersey is based on a study of more than 8,500 acres of freshwater wetlands in the Charles River Basin in Massachusetts (F.R. Thibodeau & B.D. Ostro, *An Economic Analysis of Wetland Protection*, 12 J. OF ENVTL. MGMT. 19-30 (1981)) and amounts to a per-acre value of nearly $6,000 annually in the NJDEP study. In NRD applications, avoided costs are not recognized as valid economic values because they do not correspond to changes in societal well-being and because they do not recognize the potential for mitigating behaviors.

Replacement costs focus on physical, biological, and/or chemical relationships. Sagoff (*Can We Put a Price on Nature's Services?*, M. Sagoff, Report from the Institute for Philosophy & Public Policy, Vol. 17, No. 3, pp. 7-12, 1997) notes that there is no clear relationship between the economic value of ecosystem services and the costs of technically replicating them. Bockstael et al. (*On Measuring Economic Values for Nature*, Nancy E. Bockstael, A. Myrick Freeman III, Raymond J. Kopp, Paul R. Portney, and V. Kerry Smith, 34 ENVTL. SCI. & TECH. 1384-1389 (2000)) describe ecosystem values based on replacement costs as "usually misleading." Replacement costs do not consider people's behavior or preferences when determining values, ignoring the demand component of natural resource services. They are not consumer or producer surplus values and thus are rarely appropriate measures of economic values, particularly for NRD applications.

Aside from the value transfer criteria, the NJDEP study has other limitations that may affect its ability to reliably estimate damages for NRD applications. One of the weaknesses of the NJDEP study's methodology is the per-acre aspect of the values. The value of ecosystem services that a specific habitat in a specific area provides is a function not only of its size, but more importantly of its quality and its substitutes. Bockstael et al. (Nancy E. Bockstael, A. Myrick Freeman III, Raymond J. Kopp, Paul R. Portney & V. Kerry Smith, *On Measuring Economic Values for Nature*, 34 ENVTL. SCI. & TECH. 1384-1389, 2000) point out that environmental services are usually not divisible into discrete units. Thus, "simple multiplication of a physical quantity by 'unit value' (derived from a case study that estimated the economic value for a specific resource) is a serious error." As Bockstael et al. reveal, this "scaling up error" violates one of the basic tenets of economics: that an individual's willingness to pay decreases with increased units of the good or service. Smith (*Reflections on the Literature*, V. Kerry. Smith, 1 REV. OF ENVTL. ECON. & POL'Y 300-319 (2007)) has dubbed the NJDEP approach as "supersizing" benefits transfer and remains skeptical of the reliability of the results.

Because the dollar value for each service and land cover combination is based on a handful of values from a handful of studies, the resulting averages are sensitive to the inclusion or exclusion of any one study. Thus, an important consideration is the sensitivity of estimates to the selection of the underlying studies. For example, the annual, per-acre value for aesthetic and recreational services from beaches is cited as $14,847. This value is the average of four numbers from four different studies: $131, $725, $20,680, and $37,853. Excluding the study with the lowest value (of $131) changes the resulting per-acre average value to $19,753, more than 30 percent higher. On the other hand, excluding the study with the highest value (of $37,853) results in a decrease of more than 50 percent

in the per-acre value. The resulting per-acre values are an artifact of the number and values of the underlying studies and may be unduly influenced by the transfer study selection process.

In summary, while the NJDEP study may aspire to be a formulaic panacea for estimating damages for NRD applications, attorneys and their consultants should treat the resulting per-acre values with caution. The fit or similarity of the underlying studies, as well as the reliability of the underlying studies, must be carefully considered. Moreover, the sensitivity of the resulting values to the inclusion or exclusion of any one study and the per-acre calculations of the NJDEP values should be fully explored for reliability implications in an NRD context.

EMERGING ISSUE: USE OF BIOMARKERS TO ASSESS AND QUANTIFY INJURY IN NATURAL RESOURCE DAMAGE ASSESSMENTS

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Natural resource damage assessments (NRDAs) focus extensively on methods to determine whether injuries (defined as measurable adverse changes in the quality or viability of natural resources resulting from exposure to oil or a hazardous substance) have occurred, and to quantify the service losses resulting from those injuries. A rapidly emerging trend is for trustees to rely on biomarker measurements in individual organisms as a short cut to determining population-scale injuries for input into calculations of service reductions. Use of biomarkers adds convenience to the process, but at the same time, it introduces significant uncertainties.

Under U.S. Department of the Interior (DOI) NRDA regulations, determination of injury to biological resources relies primarily on measurement of sub-organism or organism-level (*i.e.*, individual-level) endpoints. For example, 43 C.F.R. §11.62(f)(1)(i) defines injury as occurring if a biological resource or its offspring have "undergone at least one of the following adverse changes in viability: death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), or physical deformations." By contrast, for quantification of injury, the DOI regulations state, "[t]he extent to which the injured biological resource differs from baseline should be determined by analysis of the population or the habitat or ecosystem levels" (43 C.F.R. §11.71(l)(1)). Thus, there is an inherent mismatch between the level of biological organization at which injuries are defined and the level at which they are quantified. This mismatch creates problems in NRDA cases because of the difficulty in extrapolating data for injury identification (*i.e.*, has injury occurred) to injury quantification (*i.e.*, measuring the extent of the injury). This is important because injury quantification is the basic metric for determining the scope of liability (restoration or monetary compensation) in an NRDA claim.

As noted above, determination of injury to biological resources is often made on the basis of adverse effects to an organism. Typically, these types of effects might be a measure of some reduction in survival, growth, or fecundity. However, as defined by the DOI NRDA regulations, injury determination can also be made on the basis of adverse effects at the cellular or subcellular level (*i.e.*, biomarkers). The NOAA (1996) guidance document for NRDA under the Oil Pollution Act of 1990 (OPA) defines a biomarker as: "a biochemical, physiological, or histological indicator of either exposure to, or effects of, xenobiotic contaminants such as oil at the suborganismal or organismal level." The problem regarding data extrapolation, as described earlier (extrapolating data for injury identification to injury quantification), tends to be more intractable for injury determinations that rely on biomarkers than those that rely on measures of organism-level effect. For example, injuries such as reduction in survival, growth, or fecundity can be extrapolated to vital rates of the population, such as abundance, productivity, or survivorship, using fairly well established ecological modeling methods. However, no such methods exist for reliably extrapolating physiological or metabolic effects to population- or ecosystem-level effects. In fact, the relevance of many biomarker endpoints to the growth,

survival, or reproduction of an individual organism is unknown. Thus, extrapolation of these measurement endpoints to population-level endpoints introduces substantial additional uncertainty to injury quantification. The limitations in using biomarkers to assess chemical impacts on populations have been discussed extensively by others. *See, e.g.,* Forbes *et al*. (2006).

Despite these limitations, natural resource trustees have implemented injury assessment approaches using biomarkers to predict ecological service losses in many NRD cases, including the assessments conducted for the Lower Fox River/Green Bay, and the Exxon Valdez reopener (described below). In the quantification phase of an NRDA, an attempt is made "to establish the extent of the injury to the resource in terms of the loss of services that the injured resource would have provided had the discharge or release not occurred" (43 C.F.R. §11.13(e)(2)(i)), where services are defined as "the physical and biological functions performed by the resource including the human uses of those functions" (43 C.F.R. §11.14(nn)). In past Comprehensive Environmental Response, Compensation, and Liability Act cases and oil spills, trustees used data such as counts of killed fish and birds, toxicity studies, or decreases in population abundance or fecundity to quantify injury. Today it is becoming more commonplace for trustees to measure biomarker endpoints such as enzyme induction or inhibition, physiological responses, reductions in growth, immunosuppression, and histopathology to identify natural resource injuries, and then to apply simplistic approaches to infer some level of service reduction in the injury quantification phase of an NRDA. These biomarker-based injury determination methods are gaining popularity among trustees, because they are inexpensive and relatively easy to perform, they provide rapid approaches to measure exposure, and they are generally more sensitive to lower contaminant concentrations than endpoints such as growth, survival, or reproduction.

One prominent example of the application of biomarkers is in the *Exxon Valdez* NRDA, where recent "reopener" claims by the trustees are based, in part, on data from molecular endpoints such as cytochrome P450 CYP1A (as measured by ethoxyresorufin O-deethylase (EROD) activity assays, or gene mRNA expression) (liver enzyme) induction and other assay techniques. The trustees are attempting to use these noncontaminant-specific biomarkers to allege continuing exposure 18 years after the spill at a very small number of sites in a vast ecosystem, and to make the case for population-level impacts.

Measurements of effects or use of biomarkers at the cellular or subcellular levels are not recommended for injury quantification because of the high degree of uncertainty in translating such measurements into population-level effects. For these reasons, we recommend developing technical strategies in support of NRD claim defense that focus on evaluating impacts at the organism, population, or community levels, to counter trustee injury claims based on biomarker studies.

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