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Statement of Purpose

The purpose of the *Texas Environmental Law Journal* is to provide the members of the Environmental and Natural Resources Law Section of the State Bar of Texas and the public with legal articles and recent development columns on relevant environmental and natural resources law issues. The *Journal* also provides news of Section activities and other events pertaining to this area of law. The *Journal* is the leading source for articles on Texas environmental and natural resources law.

Joint Publication

The *Texas Environmental Law Journal* is an official publication of the Environmental and Natural Resources Law Section of the State Bar of Texas and is published jointly with the University of Texas School of Law's *Texas Environmental Law Journal*. In 1990, the Environmental and Natural Resources Law Section reached an agreement with this student organization at the University of Texas School of Law to co-produce the *Journal* as the *Texas Environmental Law Journal*. The students' involvement began with the summer issue in 1990.

Other Information

The opinions expressed in the *Journal* are solely the opinions of the respective authors and are not the opinions of the State Bar of Texas, the Environmental and Natural Resources Law Section of the State Bar of Texas, the University of Texas School of Law, or the University of Texas School of Law's *Texas Environmental Law Journal.*

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For attorneys licensed by the State Bar of Texas, membership in the Environmental and Natural Resources Law Section includes an electronic subscription to the *Journal*. To receive hardcopy issues of the *Journal*, please email Publications@law.utexas.edu or write the Publications Office at the above address stating your Section membership number and your mailing address. Hardcopy requestors will receive only those issues published after your Section membership begins. All subscriptions expire on May 31 unless your annual Section membership is renewed, regardless of the date of initial membership.

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Journal Announcements

With Volume 39, the *Journal* changed from a quarterly publication to a triannual publication (Fall, Winter, and Spring & Summer). Also, the *Journal* is no longer carrying the "Changes in the Environment" section. Those announcements can be found on the Section's website at www.texenrls.org.

Solicitation of Articles

The *Journal* is soliciting articles from authors on environmental and natural resources subjects that will assist Texas environmental and natural resource law practitioners and develop the advancement of environmental and natural resource law.

If you are interested in submitting an article, please contact:

1. Solicitations Associate Editor (lkalisek@lglawfirm.com); or
2. Student Lead Articles Editor (telj@law.utexas.edu); or
3. Editor-in-Chief (jahall@fbjah.com)

From The Editors

Dear Readers,

As noted in Volume 39 of the *Journal*, the Editorial Board instituted certain changes effective with the publication of that issue. The changes are designed to provide information to Section Members and *Journal* subscribers in a more timely manner, including making information more quickly available on the Section's website (www.texenrls.org), and to achieve our goal of "catching up" on our production schedule.

The *Journal* is now published on a triannual basis (Fall, Winter, and Spring & Summer) to reflect the recurring down time during summer. However, it is our intent to increase the number of articles and notes in the three annual issues to more than offset the reduction in the number of issues per volume.

Also, to provide our Recent Development columns more "recently," we will post them on the Section's website once complete, but often before they are combined into a published issue of the *Journal.*

Again, to provide information more rapidly as the internet allows, we are moving the Changes in the Environment Section of the *Journal* to the Section's website.

For our "catch-up" plan, we are combining Issue Numbers 1, 2, and 3 of Volume 40 into this one published issue.

In one of our lead articles for this combined issue, **Paul G. Gosselink** provides a "Solid Waste Update." His article focuses on three "game-changers," two U.S. Supreme Court cases and one Environmental Protection Agency rule. These three game changers are: (1) the case of *Burlington Northern and Santa Fe Railway Co. v. United States*, which arguably redefined "arranger liability" and "apportionment" in federal Superfund cases; (2) the case of *United Haulers Ass'n v. Oneida-Herkimer Solid Waste Authority*, which held that a flow control ordinance that mandated that all the municipal waste collected within particular jurisdictional boundaries be taken to a specific facility because it is public, did not violate the dormant commerce clause; and (3) the latest version of the EPA's Definition of Solid Waste Rule and the legal challenges that have been brought against that rule. Each game changer "will likely result in a change in the way environmental lawyers evaluate business opportunities and/or risks and in a change in the advice environmental lawyers give to their clients."

Our other lead article is by **Mary W. Koks** and **Tim Million** and is entitled "Environmental Issues in Bankruptcy." Their article provides an analysis of how two bodies of law — Bankruptcy and Environmental — mesh to allow environmental liabilities to be handled in the bankruptcy context. The authors point out that "the analysis of the nature and extent of environmental obligations in a bankruptcy case and how those obligations will be treated can be extremely complex and will many times depend on not only the type of debtor, the type of obligation, when the obligation arose, or the type of creditor, but even on public policy involved in the case." They note that practitioners need to give extra care in considering the position that the government or potentially responsible party creditors should take prior to asserting any obligation against a debtor in bankruptcy.

From The Editors (cont.)

In one of our three student notes, "Wind Severance," **Michael J. Stephan** examines a relatively new issue. In his note, Mr. Stephan tries to fill gaps in the legal issue of wind severance left by legislative, judicial, and academic responses to the issue. His opinion is that the severance of wind rights should be allowed because "it harmonizes with many normative interests that our law pursues, and because it is supported by existing legal schemes." He believes that the extraordinariness of wind energy fits comfortably into existing legal structures.

Our second student note, "Categorizing Environmental Crimes**:** *Malum in Se or Malum Prohibitum*?" is by **Michael Parker**. The author's purpose for his note is "to examine society's sentiments towards environmental crimes and to analyze what, if any, objectives society has set for itself." Mr. Parker explores whether the justifications on which governmental entities base their promulgation of environmental legislation and regulations match society's justifications for punishing environmental crimes. Mr. Parker proposes that "although many governments and academics currently view environmental crimes as *malum prohibitum* and merely regulatory, to accurately reflect society's attitude towards environmental crimes, governments must treat environmental crimes as *malum in se*, morally repugnant, offenses."

David Webster examines a green, alternative energy source in our third student note, "Achieving the High-Water Mark of Wave Technology." In the United States, wave energy is not yet a commercially viable method of supplying power. Mr. Webster's note analyzes the barriers to the development of wave energy and other offshore energy sources such as ocean wind farms. The note also investigates recent developments in technology, financial incentives, and environmental impacts. The note examines these factors both at the federal level and in Texas — where wave-energy development benefits from an unusual regulatory exemption. Based on his findings, Mr. Webster argues that wave energy and other forms of ocean-based energy production may indeed be a viable alternative resource in the future. His caveat is that continued technological and environmental challenges may substantially slow this sector's growth.

We hope that the materials in this issue provide you a valuable tool in your practice and/or educational insight and substance for discussion.

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Solid Waste Update

By Paul G. Gosselink

I. INTRODUCTION

This article will focus on three "game changers," two Supreme Court cases and one Environmental Protection Agency (EPA) rule, which can change the way we practice and the way our clients do business. These three game changers are: (1) the case of *Burlington Northern and Santa Fe Railway Co. v. United States ("BNSF")*,[1] which arguably redefined "arranger liability" and "apportionment" in federal Superfund cases; (2) the case of *United Haulers Ass'n v. Oneida-Herkimer Solid Waste Authority ("Oneida")*,[2] which held that a flow-control ordinance that mandated that all the municipal waste collected within the jurisdictional boundaries of the Authority be taken to a specific facility because it was a public, as opposed to private, facility did not violate the dormant commerce clause, and (3) the latest version of the EPA's Definition of Solid Waste (DSW) Rule[3] and the legal challenges that have been brought against that rule. Each of these game changers represents a change from the existing law. Each will likely result in a change in the way environmental lawyers evaluate business opportunities and/or risks and in a change in the advice environmental lawyers give to their clients.

The potential implications of each of the two game-changing cases and the new EPA DSW Rule are offered at the end of each section. It is likely that different facts can lead to nuanced distinctions in future cases. For example, not all the cases involving apportionment and/or arranger liability are likely to have as clean a set of facts as the facts of the *BNSF* case. A revived Superfund tax is also a possibility as a result of the *BNSF* case. As a result of the *Oneida* case, how government entities and private haulers make future business decisions will likely be different; predictably more upfront negotiations and long term agreements. Finally, with respect to the DSW Rule, we will have to wait and learn how the EPA responds to the Motion for Reconsideration, whether the EPA's response spawns additional litigation, and whether Texas chooses to adopt the new rule. Perhaps it will still be a topic that needs to be discussed again in the future

II. *BURLINGTON NORTHERN AND SANTA FE RAILWAY CO. V. UNITED STATES*

A. INTRODUCTION

On May 4, 2009, the U.S. Supreme Court issued a game-changing decision in the Superfund arena in the *Burlington Northern & Santa Fe Railway Co. v. United States*[4] case ("*BNSF*"). In this one case, the U.S. Supreme Court reversed the Ninth Circuit on two separate counts, both affecting how the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)[5] will be litigated in the future. First, the Supreme Court narrowed who can be held liable for the cleanup of a site as an "arranger" by holding that "arrangers" must have intended to dispose of the material when the waste was a new and useful product at the time. Second, the Supreme Court

1 *See generally* Burlington N. & Santa Fe Ry. Co. v. United States, 129 S. Ct. 1870 (2009).
2 *See* United Haulers Ass'n v. Oneida-Herkimer Solid Waste Auth., 550 U.S. 330 (2007).
3 Revisions to the Definition of Solid Waste, 40 C.F.R. §§ 250-70 (2009).
4 129 S. Ct. 1870 (2009).
5 42 U.S.C. §§ 9601-75.

expanded the ability of Potentially Responsible Parties (PRPs) to avoid "joint and several" liability if the PRP can show a "reasonable basis" for apportionment. The full implications of these changes are yet to be seen but will likely include:

- An increase in litigation over "intent" to dispose of hazardous waste;
- A decrease in the number of PRPs to share the cost of remediating contaminated sites;
- A decrease in the number of voluntary clean-ups undertaken, because it may be more difficult to recover any orphan share they might have paid;
- An increase in litigation regarding what is considered a "reasonable basis" for apportionment;
- A potential rethinking by the EPA regarding how to prioritize sites to elect to remediate;
- An increase in support for reinstating the Superfund tax.

B. Facts and Procedural History[6]

1. The Contamination

In 1960, Brown & Bryant, Inc. ("B&B") began operating as an agricultural chemical distribution business on a 3.8-acre parcel of land that it owned. It stored and distributed various hazardous materials at the site, including "D-D" (a pesticide), and "Nemagon" (also a pesticide) that it purchased from Shell.[7] In 1975, B&B began leasing an adjacent 0.9-acre parcel owned by neighboring railroad companies ("Railroads").[8] Both properties were graded to drain to a pond in the south-east corner of the property, which was not lined until 1979.[9] As the sketch of the site[10] (Figure 1 on the following page) shows, the pond, where the majority of the contamination was believed to originate, was the furthest point from the Railroads' property.

Throughout the time that B&B was operating, Shell would arrange for delivery of the pesticides to B&B, where B&B would transfer the pesticides from a tanker truck to a bulk storage tank, located on the 3.8-acre tract, not the 0.9-acre tract.[11] During the transfers, leaks commonly occurred.[12] Shell was aware that its buyers commonly spilled chemicals, and took steps to minimize leaks, including providing detailed safety manuals, offering discounts to buyers that made improvements to their facilities, and ultimately requiring buyers to provide Shell with a certification and an inspection of the facilities.[13] Despite these efforts by Shell, B&B continued to spill the three chemicals on the property.[14]

In 1983, the California Department of Toxic Substances Control (DTSC) and the EPA (collectively, the "Governments") discovered soil and groundwater contamination

6 *BNSF*, 129 S. Ct. at 1872-73.
7 *Id.* at 1872.
8 *Id.* at 1874.
9 *Id.*at 1874-75.
10 *Id.* at 1883.
11 *Id.* at 1874-75.
12 *Id* at 1875.
13 *Id.*
14 *Id.*

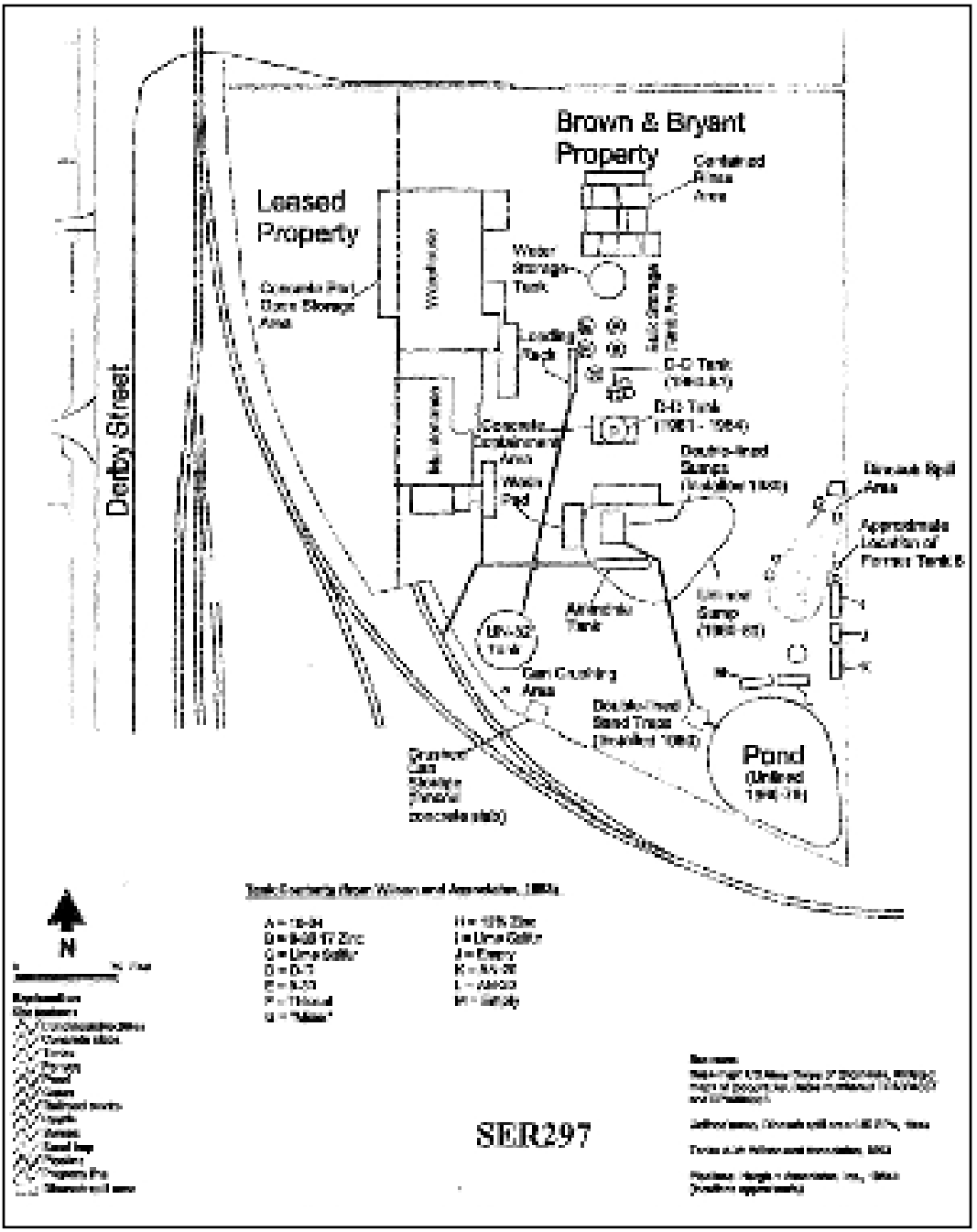

FIGURE 1: SKETCH OF BROWN & BRYANT SITE

on the site.[15] B&B became insolvent in 1989, after beginning remediation efforts.[16] The EPA added the site to the National Priorities List shortly thereafter, ultimately spending more than $8 million for the cleanup. The EPA issued an administrative order in 1991 requiring the Railroads to undertake some of the clean-up on both parcels.[17] After spending over $3 million, the Railroads brought suit against B&B.[18] That suit was consolidated with recovery actions by the EPA and DTSC in 1996, and became the case that the U.S. Supreme Court ultimately decided.[19]

2. The District Court

The District Court held the Railroads were Potentially Responsible Parties (PRPs) under CERCLA, because they owned a portion of the facility.[20] Shell was also held to be a PRP as an "arranger" under CERCLA, based on its sale of the herbicide D-D to B&B.[21] However, the District Court, instead of holding the Railroads and Shell jointly and severally liable, found that the contamination was divisible and could be apportioned.[22] Significantly, the District Court made this finding despite the fact that neither party argued for apportionment.[23] Notwithstanding the fact that the Railroads did not argue for apportionment, the court on its own motion used three factors to calculate the Railroads' portion: the amount of area of the facility that the Railroads owned, the amount of time that the Railroads leased the property to B&B, and an estimate of the portion of the chemicals spilled on the Railroads' property that required remediation – resulting in a finding that the Railroads portion of the clean-up should be allocated at 9%.[24] Similarly, Shell was allocated 6% of the clean-up.[25] The Government and Shell both appealed the decision.[26]

3. The Court of Appeals

Shell appealed the District Court's opinion, claiming that it should not be held to be an "arranger" at all, and therefore, should not be responsible for any of the cleanup.[27] The Court of Appeals disagreed and upheld the District Court's finding that Shell was an "arranger". The Court noted that "disposal" as defined in CERCLA

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15 *Id.* at 1875-76.
16 *Id.* at 1876.
17 *Id.* at 1876.
18 *Id.*
19 *Id.*
20 *See* 42 U.S.C. § 9607(a)(1)-(2) (2006); *See also* Burlington N. & Santa Fe Ry. v. United States, 129 S. Ct. 1870, 1876 (2009).
21 *See* 42 U.S.C. § 9607(a)(3); *See also BNSF*, 129 S. Ct. at 1876.
22 *BNSF*, 129 S. Ct. at 1876-1877.
23 *Id.* at 1877.
24 The Court provided more detail later in the opinion. *See id.* at 1882. (The Railroad parcel was 19% of the area of the Arvin site; the lease 45% of the time that B&B operated the site; the two chemicals, Nemagon and dinoseb (not D-D) substantially contributed to the contamination and they contributed to 2/3 of the overall site contamination. After rounding up and adding a 50% factor for errors, the total was 9%. 0.19 x 0.45 x 0.66 x 1.5 = 0.84%).
25 *Id.* at 1877.
26 *Id.* at 1877.
27 *Id.*

includes "leaking" and "spilling".[28] Therefore, the Court reasoned, Shell could be an "arranger" since the spilling of the chemicals was foreseeable, even though it was not the purpose of the transaction.[29]

The Governments appealed the District Court's opinion, claiming that the Railroads and Shell should be held jointly and severally liable for the entire $8 million clean-up cost.[30] On this point, the Court of Appeals reversed the District Court, finding that apportionment, although possible when adequate information is available, was not proper in this case.[31] The Court of Appeals noted that the burden of proof was on Shell and the Railroads to establish a reasonable basis for apportionment and held that Shell and the Railroads had not met that burden.[32] Thus, they were jointly and severally liable for the entire cost of the cleanup.[33] The Railroads and Shell filed for certiorari to the Supreme Court.

4. The Supreme Court

The Supreme Court held that the Court of Appeals erred in finding (1) that Shell was an "arranger" and (2) that the cleanup could not be apportioned.[34]

Although it appears that this case will significantly change Superfund litigation going forward, we caution that the facts of this case helped drive the decision, and nuanced distinctions between this case and others are likely to be carved out in future cases. It is unusual in Superfund litigation for a case to involve such a "clean" set of facts: only three PRPs only one of which was an "orphan" share, only two distinct properties, and a groundwater plume that was clearly traceable to a source (the pond) located entirely on one of the tracts. This relatively simple set of facts likely led to the District Court's decision to apportion liability sua sponte, and to the Supreme Court's decision to accept the case. The 8-1 majority decision by the Supreme Court also implies that the Court seized on this case because the facts enabled it to more easily render a decision that corralled aspects of Superfund litigation it felt needed reform.

C. Arranger Liability

Perhaps the less surprising of the two most important holdings of this case is the Supreme Court's reversal of the Court of Appeals on the question of whether Shell was an "arranger" under the CERCLA statute. A company becomes a Potentially Responsible Party or PRP under CERCLA, and therefore, subject to liability for at least a portion of the costs of cleaning up a site, in one of three ways: it is either an "Owner," an "Arranger," or a "Transporter."[35] An Arranger is "any person who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned

28 *See* 42 U.S.C. §6903(3) (2006); *See also BNSF*, 129 S. Ct. at 1877.
29 *BNSF*, 129 S. Ct. at 1877.
30 *Id.*
31 *Id.*
32 *Id.*
33 *Id.*
34 *Id.* at 1878.
35 42 U.S.C. §9607(a) (2006); *See also BNSF* at 1878.

or possessed by such person…"[36] Both the District Court and the Court of Appeals found that Shell was an Arranger under this definition, and the Supreme Court reversed both courts.

The key words at issue in the case were "arranged for disposal." The Governments argued that they need not show intent to prove that an entity is an Arranger.[37] "Disposal," the Governments pointed out, is defined in the statute as "the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste of hazardous waste into or on any land or water."[38] Since the "disposal" includes at least two terms that do not require intent, "spilling" and "leaking," they argued that the broader term "arranged for disposal" also did not require a showing of intent.[39] Knowledge that some of the D-D would spill or leak during the process of transferring the D-D to B&B's tanks, according to the Governments, was sufficient for Shell to be an Arranger.[40]

The Court instead followed an ordinary reading of the term "arranged." "In common parlance, the word 'arrange'" said the Court, "implies action directed to a specific purpose."[41] The Court described a continuum, in which on one extreme, "CERCLA liability would attach under § 9607(a)(3) if an entity were to enter into a transaction for the sole purpose of discarding a used and no longer useful hazardous substance," and on the other extreme, "an entity could not be held liable as an arranger merely for selling a new and useful product if the purchaser of that product later, and unbeknownst to the seller, disposed of the product in a way that led to contamination."[42] However, the Court noted that the determination is highly fact-specific, and "in some instances an entity's knowledge that its product will be leaked [or] spilled . . . may provide evidence of the entity's intent to dispose of its hazardous waste."[43] In this case the Court determined that Shell did not intend for spills to occur, and in fact took steps to reduce the likelihood of spills.[44]

This portion of the *BNSF* decision may have broad implications in those circuits that have read the term "arrange" expansively. In fact, California District Courts have cited this portion of the *BNSF* decision for its arranger liability holdings. However, the arranger portion of the *BNSF* decision is consistent with existing Texas law on the subject.[45] Regardless, the arranger portion of the *BNSF* decision will still likely have some impact going forward. For one, entities that are looking at potential CERCLA li-

36 42 U.S.C. § 9607(a).

37 *BNSF*, 129 S. Ct. at 1879-80.

38 *Id.* at 1879; *See* 42 U.S.C. § 6903(3).

39 *BNSF*, 129 S. Ct. at 1879-80.

40 *Id.* at 1880.

41 *Id.* at 1879.

42 *Id.* at 1878.

43 *Id.*

44 *Id.* at 1880; It is notable that at least one prior case has held that intent is required for CERCLA liability. *See* United States v. Aceto Agric. Chem. Corp. 872 F.2d 1373 (8th Cir. 1989). (However, the *Aceto* case did not concern the sale of a useful product).

45 *See, e.g.*, R.R. St. & Co. v. Pilgrim Enter., Inc., 166 S.W.3d 232, 241 (Tex. 2005) (stating that "courts consider factors such as the parties' intent and the usefulness and value of the product when sold" in determining whether a sale of a product that is ultimately disposed of constitutes an arrangement for disposal).

ability for existing contamination will likely try to uncover more facts to support a lack of intent (and likewise, governments seeking to impose CERCLA liability will seek more discovery responses to show intent). In addition, entities that are selling products that may be spilled during transfer to the buyer are likely to take significant steps to encourage the buyers to minimize the potential for accidental spills. Also, cases that have fewer Arrangers will necessarily have fewer PRPs available, and those PRPs that remain risk even more liability. Finally, litigation on "intent" will certainly increase as a result of this ruling.

D. APPORTIONMENT

The more potentially far-reaching portion of the *BNSF* decision addressed CERCLA joint-and-several liability. Joint-and-several liability in the context of CERCLA essentially means that any entity that is held to have contributed pollution to a site is liable for the entire cost of remediating the site (or must reimburse the government for costs that it paid in cleaning up the site).[46] For that entity to recoup its costs, it must sue other PRPs in an action for contribution.[47] When other PRPs cannot be reached for contribution, for example when some are insolvent, the entities that still exist remain liable for the costs of those "orphan shares."

Joint-and-several liability is not spelled out in the CERCLA statute. Rather, it is a judicial doctrine based on the common law.[48] Section 443a of the Restatement (Second) of Torts states that:

> when two or more persons acting independently caus[e] a distinct or single harm for which there is a reasonable basis for division according to the contribution of each, each is subject to liability only for the portion of the total harm that he has himself caused...but where two or more persons cause a single and indivisible harm, each is subject to liability for the entire harm.[49]

However, although the Supreme Court reaffirmed that the burden is on the defendant to show that a harm is divisible to avoid joint-and-several liability,[50] it did so despite the fact that the Railroads never argued for divisibility.

As applied to CERCLA cases, "harm" is a somewhat amorphous concept. The term is not defined in CERCLA, and it can theoretically be measured in any number of ways, including by the cost of remediation, the relative toxicity of the chemicals involved, the volumes of the chemicals involved, or the potential for exposure from the chemicals involved. The Court, in deciding this case, lowered the burden of proof on defendants attempting to establish a case for apportionment, and increased the discretion of the district courts. Whereas the Court of Appeals held that, due to the complexity involved, virtually all of the data and assumptions on which the District Court relied were insufficient to establish apportionment, the Supreme Court concluded that the "the facts contained in the record reasonably supported the apportionment

46 *See* 42 U.S.C.§ 9607 (2006).
47 *See* 42 U.S.C. § 9613(f).
48 *See* U.S. v. Chem-Dyne Corp., 572 F. Supp. 802 (S.D. Ohio 1983).
49 *BNSF*, 129 S. Ct. at 1881. (citing RESTATEMENT (SECOND) OF TORTS §§ 433A, 881, 875).
50 *BNSF*, 129 S. Ct. at 1881.

of liability" despite the criticisms of the Court of Appeals that the evidence failed to "establish the precise proportion of contamination."[51] Therefore, under this ruling, the District Court's method for determining apportionment will stand so long as it is "reasonably supported."

E. Importance of *BNSF*'s "Apportionment" Holding

The potential importance of *BNSF*'s apportionment holdings has not developed as suggested although the *BNSF* decision has been cited in fifty-two cases to date,[52] as courts have disagreed as to whether *BNSF* represents new law, or simply restates existing law. In both of these line of cases, the courts have determined they have the discretion to apportion liability based on the facts of each case but are not mandated to do so. The following two cases exemplify this debate.

In *Evansville Greenway & Remediation Trust v. S. Ind. Gas & Elec. Co., Inc.*, the City of Evansville was interested in acquiring two adjacent sites for bicycle and walking trails.[53] A scrap metal business had previously used the sites, and testing showed high levels of lead and PCBs in the soil.[54] The court denied a request for summary judgment, "to the extent that it seeks a conclusive determination that SIGECO [one of the defendants] would be jointly and severally liable for all past and future remediation costs of the...sites."[55] The court noted in deciding on this issue, that "prior to [*BNSF*], issued during the course of the briefing..., the court would have had little difficulty concluding that the harm here is not divisible, [and] that SIGECO would be jointly and severally liable for all remediation costs of both sites."[56] The court decided that, because the law "appears to be in a state of flux" with respect to apportionment, it needed to hold a trial to "make the detailed findings of fact needed to inform higher courts as they address the questions of law."[57]

Another court put far less weight on the importance of the *BNSF* decision. In *U.S. v. Iron Mountain Mines, Inc.*, the district court was asked to reconsider its ruling in light of the *BNSF* decision.[58] In the *Iron Mountain* case, the district court, in 2002, granted partial summary judgment against the defendants.[59] The defendants, relying on *BNSF*, asked that the court reconsider the portion of the order that held that the harm caused by the hazardous waste in question was not divisible.[60] The court noted that the standard for reconsideration requires that the defendants show that *BNSF* represented "an intervening change in the law."[61] The district court denied the motion, holding that *BNSF* "does not constitute a change in law as required for recon-

51 *Id.* at 1882.
52 *BNSF* has been cited more than 600 times to date in the cases and literature.
53 Evansville Greenway & Remediation Trust v. S. Ind. Gas & Elec. Co., Inc., 661 F. Supp. 2d 989, 992 (S.D. Ind. 2009).
54 *Id.*
55 *Id.* at 1013.
56 *Id.* at 1011.
57 *Id.* at 1012-13.
58 United States v. Iron Mountain Mines, Inc., 2010 WL 1854118 (E.D. Cal. May 6, 2010).
59 *Id.* at 1.
60 *Id.*
61 *Id.* at 2.

sideration. Burlington Northern simply reiterated the law as established in 1983 by Chem-Dyne, and then examined the record to resolve a factual question of whether the record supported apportionment."[62]

So, in practice, the effect of *BNSF's* apportionment holding has not been as significant as was expected. Courts have viewed its holding as supporting their right to apportion clean-up costs, but not as a mandate to do so. Some courts, such as the *Iron Mountain* court, have continued to be largely reluctant to apportion clean-up costs, preferring the certainty of finding liability to be joint and severable.

F. Conclusion

Notwithstanding the debate on the importance of the *BNSF* decision, the case will likely have far-reaching effects on future CERCLA litigation. First and most important, the *BNSF* decision will make it much more difficult for the EPA to reach settlements with PRPs who may believe that their risk of joint-and-several liability is low or that they can establish their apportionment in court. Second, PRPs will likely shift some of their focus from avoiding liability to limiting their liability by developing facts to support an apportionment favorable to them. In complex, multiparty litigation, this resulting strategy creates a danger that multiple parties, all arguing different theories of apportionment, will in effect convince the district court that apportionment cannot be "reasonably supported," leading to the third effect: that PRPs will try to work together in advance of trial to develop one coherent theory of apportionment to present to the district court.

From a public policy standpoint, perhaps the most important outcome of this case is that, when the PRPs can establish apportionment, whoever conducts the cleanup (the government in most cases, or the initiator of a voluntary clean up in some cases) will be left to pick up the costs of the orphan shares (in the *BNSF* case, 91% of the total cost of cleaning up the B&B site). This effect will likely decrease the number of voluntary cleanups and may make the Government more selective about what sites it chooses to remediate. The Government may also be more inclined to attempt to lower the costs of cleanups by considering innovative solutions or lower levels of remediation.

The results of this decision could also lead to additional efforts to reinstate the Superfund tax. As of the time of this writing, four related bills have been introduced in Congress: Rep. Blumenauer (D-OR) has introduced H.R. 564, the "Superfund Reinvestment Act of 2009," Rep. Pallone (D-NJ) has introduced H.R. 832, the "Superfund Polluter Pays Act," Sen. Nelson (D-FL) has introduced S. 3125 the "Superfund Polluter Pays Act," and Sen. Lautenberg (D-NJ) has introduced S. 3164, the "Polluter Pays Restoration Act." All four bills would reauthorize the Superfund Tax. Both House bills have been referred to the House Ways and Means Committee, and both Senate bills have been referred to the Senate Finance Committee. And recall that in the Fall of 2008, then-Senator Obama co-sponsored a bill with Sen. Lautenberg (D-NJ)

62 *Id.* at 3; *see also*, Ashley II of Charleston, LLC v. PCS Nitrogen, 2010 WL 3893599 (D.S.C. Sept. 30, 2010) ("The court concurs with the *Iron Mountain Mines* court that *Burlington Northern* did not change the law with regard to divisibility, but merely recognized a reasonable basis for apportionment based on the facts of a particular case.")

to reinstate the Superfund tax. Although that bill did not make it out of committee, President Obama included one billion dollars from this tax in his 2011 budget.

III. *United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Management Authority*

A. Introduction

The federal courts have had a long history of considering the constitutional balance between allowing states and local governments to provide for the public health and safety of their citizens and preventing economic protectionist measures that would run afoul of the dormant Commerce Clause doctrine. The Supreme Court specifically applied the Commerce Clause to a local solid waste flow control ordinance in the 1994 case of *C & A Carbone, Inc. v. Clarkstown* ("Carbone"),[63] in which the Court struck down the ordinance because it directed solid waste to a local private transfer station.[64] The Court held that "[s]tate and local governments may not use their regulatory power to favor local enterprise by prohibiting patronage of out-of-state competitors or their facilities."[65] In 2007, the Court distinguished its holding in Carbone when it decided the case of *United Haulers Ass'n, Inc. v. Oneida – Herkimer Solid Waste Management Authority* ("Oneida").[66] In *Oneida*, the Court upheld two counties' flow control ordinances that benefitted a public facility and treated all private facilities equally.[67] The implications of the *Oneida* decision for the solid waste industry, both its public and private members, are game changing.

B. Background

Two counties in New York, Oneida and Herkimer ("Counties"), faced with waste disposal problems during the 1980s, commissioned several professional studies and conducted a series of public and legislative hearings and debates in order to fashion a long term comprehensive solid waste management plan.[68] The Counties faced environmental issues so extreme that they were potentially subject to "exposure to federal and state liability."[69] Despite the Counties' extensive efforts, the problems remained unresolved and the Counties faced "price fixing, pervasive overcharging, and the influence of organized crime [on private waste management companies]."[70] These problems led the Counties to lobby for and ultimately persuade the New York Legislature to approve the creation of a public waste management system.[71] The Oneida-Herkimer

63 C & A Carbone, Inc. v. Clarkstown, 511 U.S. 383 (1994).

64 *Id.* (Although the dissent in *Carbone* recognized the facility in that case as essentially public; the majority declined to treat it differently from a purely private facility).

65 *Id.* at 394.

66 550 U.S. 330 (2007).

67 *Id.* at 334.

68 United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth., 2000 WL 33955170 at *1 (N.D. N.Y. 2000).

69 United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth., 261 F.3d 245, 248 (2d Cir. 2001).

70 *United Haulers*, 550 U.S. 330, 335 (2007).

71 *Id.*; *See* N.Y. Pub. Auth. L. §§ 2049-aa, et seq. (McKinney 2000).

Solid Waste Management Authority Act created a public benefit corporation, the Oneida-Herkimer Solid Waste Management Authority ("Authority"), and vested it with "power to collect, transport, process and dispose of solid waste; to plan, develop and construct waste management projects; to contract with the Counties regarding waste management; to issue regulations and set and collect fees related to waste management projects; and to borrow money and issue bonds."[72]

In 1989, the Authority contracted with the Counties to manage and dispose of all solid waste within the Counties.[73] The Counties agreed to deliver "all solid waste originated or brought within their respective jurisdictions to the transfer station or stations or other facility designated by the Authority."[74] Among other things, the Authority agreed to take control of the operation of the county-owned recycling center and to collect tipping fees sufficient to pay its operating and maintenance costs.[75] Within the next year, the Counties passed their respective flow control laws, both of which mandated that all solid waste within the Counties be delivered to an Authority designated facility and directed recyclables to the recycling center.[76] The Authority also issued revenue bonds to fund the purchase and construction of a transfer station and accepted bids from "all private waste disposal companies, in-state and out-of-state" to operate the transfer station and accept the waste for ultimate disposal.[77] In 1995, the Authority began charging tipping fees for bringing solid waste to its facility that were higher than similar fees at various New York and out-of-state landfills.[78] According to the private haulers involved in the *Oneida* case,[79] these tipping fees were partially to blame for essentially doubling their operating costs.[80] The haulers further claimed that the flow control laws prevented them from accessing a viable and cheaper interstate market for waste disposal.[81] In response, the haulers brought suit against the Authority and the Counties claiming that the flow control laws violated the Commerce Clause by discriminating against interstate commerce to finance the Counties' solid waste management program.[82]

C. Discussion

The Federal District Court of the Northern District of New York first considered this case and found the flow control laws "virtually indistinguishable from the laws examined and struck down" in *Carbone* and granted summary judgment in favor of the haulers.[83] Upon appeal to the Second Circuit in 2001, that court decided: (1) that

72 N.Y. Pub. Auth. L. §§ 2049-ee.
73 *United Haulers*, 261 F.3d at 249.
74 *United Haulers*, 2000 WL 33955170, at *1.
75 *United Haulers*, 261 F.3d at 249.
76 *Id.* at 249-50.
77 *Id.* at 250.
78 *United Haulers*, 550 U.S. at 330, 336 (2007).
79 *Id.* at 337.
80 *Id.*
81 *United Haulers*, 261 F.3d at 251.
82 *Id.* at 252.
83 *Id.* at 252 (no discovery took place prior to the determination of the summary judgment motion).

the *Carbone* case left open the possibility that laws passed for the benefit of the public could be legitimate, and (2) that "a statute does not discriminate against interstate commerce when it favors local government at the expense of *all* private industry."[84] The Second Circuit reversed and remanded the case, and charged the District Court with making the determination of what it called the second line of inquiry: whether the Counties' ordinances imposed burdens on interstate commerce that were "clearly excessive in relation to the putative local benefits."[85] Upon remand, the District Court, and later the Second Circuit, found that any arguable burden posed by the ordinances did not outweigh their benefits.[86] The Supreme Court granted certiorari to resolve a circuit split[87] on the issue of whether it is constitutionally acceptable to pass laws in favor of a public entity.[88]

In *Oneida*, the Supreme Court specifically distinguished *Carbone* as not having decided the "public-private" question. In other words, the *Carbone* court considered only whether an ordinance that benefitted a private local enterprise was unconstitutional, "studiously avoid[ing]" an analysis of laws favoring public entities.[89] The majority further decided that "[t]he flow control ordinances in this case benefit a clearly public facility, while treating all private companies exactly the same...[and therefore]...such flow control ordinances *do not* discriminate against interstate commerce for purposes of the dormant Commerce Clause."[90]

The Supreme Court analyzed *Oneida* under the dormant Commerce Clause, which it recognized "as an implicit restraint on state authority, even in the absence of a conflicting federal statute."[91] Dormant Commerce Clause analysis directs the court to look at the law in question to see if it is facially discriminatory against interstate commerce.[92] The Court emphasized the fact that it considered it constitutionally acceptable to pass an ordinance such as the one in this case, which treats all private businesses, whether in-state or out-of-state, exactly the same.[93] In-state and out-of-state private entities receive equal treatment under the ordinances in that they both: (1) may

84 *Id.* at 263 (emphasis added).

85 *Id.* at 256.

86 *United Haulers*, 438 F.3d 150, 155 (2d Cir. 2006)(the District Court found that the ordinances did not impose any cognizable burden on interstate commerce).

87 *United Haulers*, 550 U.S. 330, 338 (2007)("Because the Sixth Circuit had recently issued a conflicting decision holding that a flow control ordinance favoring a public entity *does* facially discriminate against interstate commerce...we granted certiorari..."); *see* Nat'l Solid Wastes Mgmt. Ass'n v. Daviess County., 434 F.3d 898 (6th Cir. 2006).

88 *United Haulers*, 550 U.S. at 338 (the review and appeals process for this case took over twelve years before the Supreme Court made its final ruling).

89 *Id.* at 340.

90 *Id.* at 342 (emphasis added).

91 *Id.* at 338 (citing Case of the State Freight Tax, 82 U.S. 232 (1873); Cooley v. Board of Wardens of Port of Philadelphia ex rel. Soc. for Relief of Distressed Pilots, 53 U.S. 299 (1852)).

92 *United Haulers*, 550 U.S. at 338 (citing American Trucking Ass'ns, Inc. v. Michigan Pub. Serv. Comm'n, 545 U.S. 429, 433 (2005); Fort Gratiot Sanitary Landfill, Inc. v. Michigan Dep't of Natural Resources, 504 U.S. 353, 359 (1992)).

93 *United Haulers*, 550 U.S. at 342.

bid for the ability to operate the Authority's transfer station and dispose of the waste,[94] and (2) have an equal opportunity to collect solid waste from citizens' homes.[95]

In Part II-D of the opinion, Chief Justice Roberts, joined by Justices Souter, Ginsburg, and Breyer, opined that this case should also be examined under *Pike v. Bruce Church Inc.*,[96] which would allow the ordinances to stand "unless the burden imposed on [interstate] commerce is clearly excessive in relation to the putative local benefits."[97] The justices examining this case under the *Pike* balancing test found that "any arguable burden the ordinances impose on interstate commerce does not exceed their public benefits."[98]

Thus, the majority of the Court determined that the ordinances do not facially discriminate against the Commerce Clause,[99] and a plurality of the Court concluded that the ordinances do not unduly burden interstate commerce.[100]

D. ANALYSIS

The Supreme Court recognized several reasons to treat a public entity differently from a private company for purposes of the Commerce Clause.[101] The Court differentiated government from a private business by pointing out its "responsibility of protecting the health, safety, and welfare of its citizens."[102] According to the Court, "[t]hese important responsibilities set state and local government apart from a typical private business . . . [and] [g]iven these differences, it does not make sense to regard laws favoring local government and laws favoring private industry with equal skepticism." [103]

Further, the Court noted that the Counties' motives for passing legislation favoring local government were more likely to be acceptable than if they were trying to favor local businesses.[104] In this case, the Court pointed out that "the flow control ordinances enable[d] the Counties to pursue particular policies with respect to the handling and treatment of waste generated in the Counties, while allocating the costs of those policies on citizens and businesses according to the volume of waste they generate."[105]

Finally, the Court pointed to the fact that the residents of the Counties passed the flow control ordinances by vote, and declined to extend the Commerce Clause to invalidate this choice.[106] Chief Justice Roberts, who wrote the majority opinion,

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94 *United Haulers*, 261 F.3d 245, 250 (2d Cir. 2001).
95 *United Haulers*, 550 U.S. at 335.
96 *Id.* at 346 (citing Philadelphia v. New Jersey, 437 U.S. 617, 624 (1978)).
97 *Id.* at 346 (citing Pike v. Bruce Church Inc., 397 U.S. 137, 142 (1970); Northwest Central Pipeline Corp. v. State Corporation Comm'n of Kan., 489 U.S. 493, 525-526 (1989)).
98 *United Haulers*, 550 U.S. at 347.
99 *Id.* at 342.
100 *Id.* at 347.
101 *Id.* at 342.
102 *Id.* (citing Metropolitan Life Ins. Co. v. Massachusetts, 471 U.S. 724, 756 (1985)).
103 *Id.* at 343.
104 *United Haulers*, 550 U.S. at 343.
105 *Id.*
106 *Id.* at 344.

respected the designation of "[w]aste disposal [as] both typically and traditionally a local government function."[107] He also pointed to the fact that the citizens who voted for the flow control ordinances would also bear the burdens they imposed: the higher cost of waste disposal.[108]

Because the effect of the flow control ordinances at issue in *Oneida* was to treat in-state and out of state private business equally,[109] and because of the differences found by the Court between favoring government as opposed to favoring private businesses,[110] the Court held that the ordinances did not violate the Commerce Clause.

E. Post *Oneida* Issues

The differing results in the *Carbone* and *Oneida* cases clearly rest on the distinction between public and private facilities. However, that distinction may not be as clear as it seems. For example, what does it take to be considered "public"? In *Oneida*, the Authority both owned and operated the transfer station, and the Court considered this facility to be "public". In *Carbone*, the town of Clarkstown neither owned nor operated that transfer station, and, even though the contract involved conveyed the facility to Clarkstown in five years, the Court still considered it "private". Obviously, the permutations in between these two fact situation are numerous. How will a court treat a case in which the government owns but does not operate a facility? This fact pattern exists all over Texas. Is ownership enough to be included within the "typical and traditional" public function stressed by the Supreme Court? If mere ownership satisfies this test, how attenuated can that ownership rule be? Can the town lease the facility and just retain a reversionary interest?

Another not fully defined issue is what it takes to satisfy the local cognizable benefit criteria in the Pike balancing test. Will revenue generation be enough? The first court to answer this issue said "yes." Specifically, the U. S. District Court for the Middle District of Georgia in the *Quality Compliance Services v. Dougherty County, Georgia*[111] held that Dougherty County's flow control ordinance, enacted for the acknowledged purpose of revenue generation, was a sufficient rationale. However, note that this court is just one district court and that the burdens on interstate commerce against which the local revenue benefit was being weighed were fairly insubstantial.

Yet another challenge is exemplified by the case of *Escambia County, Florida v. Allied Waste Services of North America, LLC*[112], in which the waste company claimed that the County's flow control ordinance was a violation of its rights under the Contracts Clause of the U.S. Constitution because it impaired the waste company's rights under contracts it had entered into with the County itself as well as with other mu-

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107 *Id.* (citing United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth., 261 F.3d 245, 264 (2d Cir. 2001)).

108 *United Haulers*, 550 U.S. at 345.

109 *Id.* at 345.

110 *Id.* at 342-45.

111 *Quality Compliance Services v. Dougherty County, Georgia*, 553 F. Supp.2d 1374 (M.D. Ga. 2008).

112 *Escambia County, Florida v. Allied Waste Services of North America,* LLC, 2008 WL 4999229 (N.D. Fla. 2008).

nicipalities. The Contracts Clause argument recently withstood a summary judgment challenge, and, if the case does not settle, it could establish the first carve out from *Oneida*.

Consider what effect the *Oneida* case would have on the business plans of a private company considering siting a new landfill and relying upon its continued ability to bring the waste collected in the host city or cities to its proposed new landfill. How could this company address the risk that it will spend millions of dollars on the property and the permitting process only to subsequently discover that the city in which its customers live could pass a flow control ordinance?

IV. Changes to the Definition of "Solid Waste"

A. Introduction

The Environmental Protection Agency recently adopted revisions to its Definition of Solid Waste (DSW) Rule, effective December 29, 2008. The DSW Rule provisions are a central part of the EPA's regulations of hazardous waste under the Resource Conservation and Recovery Act of 1976 (RCRA).[113] The main revisions allow secondary materials recycled by reclamation that have previously been regulated as hazardous waste to be excluded from the definition of "solid waste" (and therefore regulation as a "hazardous waste") if they are legitimately recycled and are:

- generated and reclaimed under the control of the generator;
- generated and transferred to another company for reclamation;
- exported for reclamation (the "export exclusion"); or
- determined by the Administrator to be non-wastes on a case-by-case basis.[114]

To be considered legitimately recycled and distinguished from sham recycling the materials must be *reclaimed* rather than *discarded*.[115] The rule provides examples of both.[116]

The revisions are intended to encourage and expand recycling of hazardous secondary materials by removing unnecessary controls over materials that are not discarded.[117] The provisions potentially affect approximately 5,600 facilities that generate hazardous secondary materials previously regulated as RCRA Subtitle C hazardous wastes such as industrial by-products.[118]

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113 42 U.S.C. §§ 6921-39 (2009).

114 40 C.F.R. § 261.2(a)(2)(ii) (2009); 40 C.F.R. § 261.4(a)(17), (23), (24) (2009); 40 C.F.R. § 260.30 (2009).

115 40 C.F.R. § 261.2(c)(3).

116 Examples of reclaimed materials eligible for exclusion include spent solvents that are regenerated and reused and manufacturing residues from which metals are recovered for reuse. Examples of materials that are not eligible for the exclusion include: materials burned for energy recovery; materials recycled in ways that involve placement on the land; spent lead-acid batteries; and spent petroleum catalysts (K171 and K172). 40 C.F.R. § 261.2(e).

117 *See* Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,668-75 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270).

118 73 Fed. Reg. at 64,668.

The 2008 revision to the DSW Rule is being challenged at the EPA and in the D.C. Circuit Court of Appeals.[119] These challenges may result in the EPA amending the rule provisions, or the court ordering the provisions to be set aside. On January 27, 2009, the American Petroleum Institute (API) filed a Petition for Review with the D.C. Circuit.[120] On January 28, 2009, the Sierra Club filed a Petition for Review with the D.C. Circuit.[121] The Petitions for Review are currently in abeyance pending further court order.[122] On January 29, 2009, the Sierra Club filed a Petition for Reconsideration with the EPA.[123] In the latter petition, the Sierra Club set forth two main reasons for its challenges to the DSW Rule:

- the rule substantially increases threats to public health and the environment without producing compensatory benefits; and
- the rule is "unlawful" and should be repealed.[124]

On March 6, 2009 a coalition of industry associations submitted a letter requesting that the EPA deny the Sierra Club Petition.

On June 30, 2009, the EPA held a public meeting regarding the Petition for Reconsideration.[125] The EPA indicated that it does not plan to repeal the rule in whole or stay its implementation, but will consider revisions.[126]

The 2008 DSW Rule represents yet another attempt by the EPA to clarify the meaning of "solid waste" and the EPA's jurisdiction under RCRA. Since Congress enacted RCRA in 1976, the EPA has undergone numerous rulemakings and has been subject to many lawsuits. Throughout that history parties have continued to believe that the EPA is either under-regulating, exceeding its jurisdiction, or both. This adoption is not an exception. Under the Petition for Reconsideration and associated filings, the Sierra Club and other groups oppose the rule, while Industry supports it. From surface level, it may seem counter-intuitive for the Sierra Club to oppose a provision to encourage recycling and Industry to support the EPA rule. However, the concern of the Sierra Club and others is that the decreased regulations will result in harm to public health and the environment, while industry is supportive of decreased regulations, which would decrease the costs and therefore encourage recycling.

Affected entities should be aware of the rule provisions that the EPA adopted and that the states authorized to administer RCRA provisions may adopt. However, this article will not focus on specific changes to the rule and the entire scope of their implications for three reasons.

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119 Petition for Reconsideration, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); Petition for Review, Sierra Club v. EPA, No. 09-1041 (D.C. Cir. Jan. 28, 2009); Petition for Review, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Jan. 27, 2009).

120 Petition for Review, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Jan. 27, 2009).

121 Petition for Review, Sierra Club v. EPA, No. 09-1041 (D.C. Cir. Jan. 28, 2009).

122 Order, No. 09-1038 (Mar. 3, 2009).

123 Petition for Reconsideration, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

124 Petition for Reconsideration at 1 and 6, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

125 Definition of Solid Waste Public Meeting, 74 Fed. Reg. 25,200, 25,200 (May 27, 2009).

126 *Id.*

- The changes to the rule provisions and the final rule provisions are lengthy and complex and exceed the scope of this article. The changes (both preamble and rule language) were published in over 100 pages of the *Federal Register*, and have implications throughout the hundreds of pages of EPA rules addressing Subtitle C of RCRA.
- Due to the legal challenges and uncertainty surrounding the rule, any discussion of the specifics of these provisions seems premature.
- Texas is in the majority of authorized states that have not adopted the revised rule provisions.

What this section will focus on, instead, are the arguments for and against amendment or repeal that were filed in the Petition for Reconsideration and responses to that petition. These arguments provide a context for understanding what the final rule looks like and the effects that it will have. This article will first give a brief background of the rule, as well as an overview of the rule and its revisions. It will then discuss the Petition for Reconsideration and responses, followed by a brief discussion of the Petitions for Review, the status of state implementation, and next steps.

B. Background

The EPA regulates hazardous waste under the authority of Subtitle C of RCRA, which established a federal program to regulate hazardous waste from "cradle-to-grave" (including treatment, storage, and disposal).[127] Hazardous waste cannot be disposed of unless treated to reduce hazardous constituents or stored to ensure that "the hazardous constituents will not migrate from the disposal unit."[128] Within the EPA's rule, the definitions of "solid waste" and "discarded material" are significant. A material cannot be a "hazardous waste" if it is not a "solid waste."[129] Therefore, "[w]hat constitutes a 'solid waste' is really the definitional starting point for the hazardous waste management system."[130] Additionally, a material must be "discarded" to be a "solid waste."[131] Accordingly, to be subject to regulation by the EPA under Subtitle C of RCRA, materials must meet the definitions of "discarded material," "solid waste," and "hazardous waste," and not meet the criteria for exclusions. Therefore, the increased exclusions from the definition of "solid waste" and the decrease in material considered "discarded" reduce the amount of material subject to the jurisdiction of the EPA under Subtitle C of RCRA.

Defining "solid waste" has been a problem for some time, with numerous rulemakings and lawsuits from 1980 to the present. Prior to its 2008 adoption, the latest version of the DSW Rule was first proposed in 2003, and then re-proposed in 2007.

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127 Hazardous Waste Management System: General, 45 Fed. Reg. 33,066, 33,066 (May 19, 1980) (to be codified at 40 C.F.R. pt. 260); Am. Petroleum Inst. v. EPA, 906 F.2d 729, 732 (D.C. Cir. 1990).

128 Ass'n of Battery Recyclers v. EPA, 208 F.3d 1047, 1050 (D.C. Cir. 2000).

129 Hazardous Waste Management System: Identification and Listing of Hazardous Waste, 45 Fed. Reg. 33,084, 33,090 (May 19, 1980) (to be codified at 40 C.F.R. pt. 261).

130 *Id.*

131 40 C.F.R. § 261.2 (2009); Am. Mining Cong. v. EPA, 824 F.2d 1177, 1193 (D.C. Cir. 1987).

(*See* Appendix A to this article for a timeline of the main rulemakings and lawsuits.) The controversy centers around the regulatory definition of "solid waste" found in 40 C.F.R. § 261.2(a)(2), but also involves associated definitions, conditions, and exclusions. Generally, the controversy has involved whether recycled materials are "discarded," and therefore, are "solid waste"; whether recycling is legitimate; and the exact scope of the EPA's jurisdiction under RCRA. Through the court cases, the D.C. Circuit has found that the EPA has exceeded its jurisdiction when it regulates certain recycled materials, but has stopped short of determining that the EPA does not have any jurisdiction over any recycled materials.[132]

Of course, the different stakeholders have different perceptions of how the 2008 DSW Rule will impact recycling and the environment. From the industry perspective, it is costly to comply with RCRA regulations. When businesses add this compliance cost to the cost to recycle rather than dispose of the materials, they are discouraged from recycling. Accordingly, if the regulatory costs associated with recycling are reduced or eliminated, the businesses are more likely to recycle. Additionally, industry believes that the EPA's jurisdiction is limited under RCRA, and that the EPA has previously exceeded its jurisdiction with its regulations of recycled materials. Not surprisingly, from the perspective of the Sierra Club and others, when fewer materials are under the regulation of the EPA, it is more likely that harm occur to the environment and public health.

C. Overview of Rule and Revisions

1. Purpose

The purpose of the revised rule is to both "encourage safe, environmentally sound recycling and resource conservation and to respond to several court decisions concerning the definition of solid waste."[133]

2. Overview of Rule Provisions

Persons who generate, transport, treat, store, or dispose of hazardous wastes that are identified by characteristic, or because they are specifically listed within the DSW Rule provisions are subject to regulation under the hazardous waste management system.[134] The regulations encompass requirements spanning from record keeping to security to emergency procedures. Under the previous and 2008 versions of the rule, certain recycled materials are designated as solid wastes depending on what they are and the recycling activity (such as reclamation or speculative accumulation).[135] Under the previous and 2008 versions of the rule, materials that can be considered solid wastes if recycled by reclamation, and not otherwise excluded under 40 C.F.R. § 261,

132 *See* Safe Food & Fertilizer v. EPA, 350 F.3d 1263, 1268 (D.C. Cir. 2003) (citing *Am. Mining Cong.*, 824 F.2d at 1186; *Ass'n of Battery Recyclers, Inc.*, 208 F.3d at 1056; Am. Petroleum Inst. v. EPA, 906 F.2d 729, 740-41 (D.C. Cir. 1990); Am. Mining Cong. v. EPA, 907 F.2d 1179, 1186-87 (D.C. Cir. 1990)).

133 Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,668 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270).

134 Hazardous Waste Management System: Identification and Listing of Hazardous Waste, 45 Fed. Reg. 33, 084, 33,084-85.

135 40 C.F.R. § 261.2(c) (2009).

are certain spent materials; sludges listed in the rule; by-products listed in the rule; and scrap metal.[136] The 2008 revisions provide new exclusions so that these newly excluded materials may not be considered solid waste (and therefore hazardous waste) if recycled by reclamation. The new exclusions are applicable for materials that are:

- generated and reclaimed under the control of the generator ("generator-controlled exclusion");
- generated and transferred to another company for reclamation ("transfer-based exclusion");
- exported for reclamation ("export exclusion"); or
- determined by the Administrator to be non-wastes on a case-by-case basis ("non-waste determination").[137]

It is important to note that the full rule provisions are much more complex. The full rule provisions include conditions that the generator must meet for the exclusions to apply, including that the material must be legitimately recycled within the criteria of the rule provisions which set forth two mandatory criteria and two criteria that must be considered but are not determinative.[138] Additionally, the rule provisions contain a requirement that those generators planning to operate under the generator-controlled, transfer-based, or export exclusions notify the Regional Administrator. Affected parties, however, should fully evaluate any provisions proposed or adopted in their state or territory to ensure compliance.

D. Legal Challenges and Uncertainty

The 2008 revision to the DSW rule is being challenged at the EPA and in the D.C. Circuit Court of Appeals.[139] On January 27, 2009, the American Petroleum Institute (API) filed a Petition for Review with the D.C. Circuit.[140] On January 28, 2009, the Sierra Club filed a Petition for Review with the D.C. Circuit.[141] On January 29, 2009, the Sierra Club filed a Petition for Reconsideration with the EPA.[142] The challenges at both levels introduce legal uncertainty to the DSW Rule because it is

136 40 C.F.R. § 261.2(c) (2009).

137 40 C.F.R. § 261.2(a)(2)(ii) (2009); 40 C.F.R. § 261.4(a)(17), (23), (24), (25) (2009); 40 C.F.R. § 260.30 (2009).

138 The two mandatory factors are that: (1) the materials must provide a useful contribution to the recycling process into a product or intermediate, and (2) recycling must produce a valuable product or intermediate. The two factors that must be considered are: (1) the materials must be managed as valuable commodities and (2) the products of recycling must not contain significantly higher levels of hazardous constituents than are in analogous products. This factor seeks to address the EPA's longstanding concern about what the critics have called the "toxics along for the ride" issue. As explained later, this EPA effort has been both supported and criticized depending on your point of view.

139 Petition for Reconsideration, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); Petition for Review, Sierra Club v. EPA, No. 09-1041 (D.C. Cir. Jan. 28, 2009); Petition for Review, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Jan. 27, 2009).

140 Petition for Review, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Jan. 27, 2009).

141 Petition for Review, Sierra Club v. EPA, No. 09-1041 (D.C. Cir. Jan. 28, 2009).

142 Petition for Reconsideration, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

unknown whether the provisions will remain in place, be set aside by the court, or amended by the EPA. However, a recent settlement between the Sierra Club and the EPA indicates that a new Notice of Proposed Rulemaking will be issued by June 2011, addressing the Sierra Club's concerns with the amended rule. Additionally, most authorized states have not adopted the provisions and have the discretion whether to do so. The Petition for Reconsideration sets forth the concerns of the Sierra Club behind both the Petition for Reconsideration and Petition for Review. This discussion will focus on the Petition for Reconsideration and associated responses, and then briefly address the Petitions for Review, the status of state implementation, and next steps.

1. Petition for Reconsideration and Responses

It may be surprising to hear that the Sierra Club opposes provisions that the EPA adopted with the intent to encourage recycling. However, the Sierra Club and other organizations (collectively "Opponents") express concern that the rule decreases the EPA's oversight over dangerous substances by excluding certain wastes destined for recycling from the definition of "solid waste."[143] Their concern is based upon the potential environmental harm that could occur if the recycling is not done responsibly. The Petition for Reconsideration requests that the EPA reconsider and repeal the rule, and stay its implementation for two main reasons:

- the rule substantially increases threats to public health and the environment without producing compensatory benefits; and
- the rule is "unlawful" and should be repealed.[144]

Industry-Respondents (IPC, Association Connecting Electronics Industries; and the National Mining Association (collectively, "Proponents")) filed responses to this Petition.[145] (Notably, the API did not file a response to the Petition for Reconsideration.) Proponents generally disagree with Opponents, believe the rule to be lawful, and do not believe that the rule should be amended.

a. The Threats to Public Health and the Environment and Associated Benefits

The first reason that the Opponents gave in their request for reconsideration and repeal is that the rule substantially increases threats to public health and the environ-

143 Petition for Reconsideration at 1-2, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); Letter to EPA at 1-2, Earthjustice, et al., EPA-HQ-RCRA-2009-0315 (Apr. 20, 2009) (hereinafter Letter to EPA) (*see* Appendix B).

144 Petition for Reconsideration at 1, 6, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

145 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 1, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009) (*see* Appendix B); Request to Affirm "Revisions to Definition of Solid Waste" at 1, IPC Association Connecting Electronics Industries, EPA-HQ-RCRA-2009-0315 (Apr. 23, 2009) (IPC is a trade association representing over 2,700 companies from the electronics interconnect industry); Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 1, National Mining Association, EPA-HQ-RCRA-2009-0315 (Apr. 21, 2009).

ment without producing compensatory benefits.[146] This concern is broken down into three parts: (1) health and environmental threats; (2) environmental benefits; and (3) economic benefits. Specifically, the Opponents believe that the rule increases threats to public health and the environment, brings negligible environmental benefits and results in only small economic benefits to the deregulated industries. The Proponents disagree, and contend that the rule provides environmental protections, results in environmental benefits, and produces significant cost savings.

(1) HEALTH AND ENVIRONMENTAL THREATS

Opponents — The Opponents generally believe that while recycling these wastes may be advantageous in certain circumstances, the recycling operations "pose all of the same risks that other hazardous waste operations pose to human health and the environment."[147] They contend that removing these operations from regulation will increase threats to public health and the environment. As evidence, the Opponents point to the EPA's own reports of evidence of damage at facilities that recycle hazardous waste or store it prior to recycling – *An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* ("*2007 Assessment*") and *Addendum: An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* ("*2008 Addendum*").[148] In these "damage cases," "toxic releases from recycling activities caused serious contamination of air, water and soil, necessitating costly clean-ups."[149] The Opponents believe these reports, which identify 218 cases of damage, present "compelling evidence of damage to health and the environment from mismanagement of hazardous wastes at recycling operations."[150] Adding to this concern is that the report was non-exhaustive, as the EPA acknowledged.[151] The Opponents note that the documented sites required over $200 million in remedial response costs.[152] The Opponents state that the large majority of damage cases identified in these reports were at facilities already subject to exemptions under 40 C.F.R. § 261.4.[153] They contend that this and other data demonstrate that exempting additional materials will increase the risk of harm to health and the environment and that facilities operating without RCRA permits are far more likely to cause damage.[154] The Opponents also note that of the 208 cases identified in the *2007 Assessment,* only 6% involved wholly

146 Petition for Reconsideration at 1, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

147 Letter to EPA, *supra* note 143, at 2.

148 Petition for Reconsideration at 2, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (citing EPA, EPA-HQ-RCRA-2002-0031-0355, *An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary* Materials (2007); EPA, EPA-HQ-RCRA-2002-0031-0601, *Addendum: An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2008)).

149 Letter to EPA, *supra* note 143, at 1.

150 Petition for Reconsideration at 2-3, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

151 *Id.* at 2-3.

152 *Id.* at 3 (citing EPA, EPA-HQ-RCRA-2002-0031-0355, *An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2007); EPA, EPA-HQ-RCRA-2002-0031-0601, *Addendum: An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2008)).

153 *Id.*

154 *Id.* at 3-4.

on-site recycling.[155] They point out that 95% of the facilities that the EPA is deregulating under the DSW Rule involve off-site recycling.[156] This distinction is important because while the Opponents believe that the off-site facilities "constitute the great majority of the damage cases," these facilities are part of the group now deregulated.[157] The Opponents conclude that the evidence demonstrates that recycling of hazardous materials is dangerous to human health and the environment if not done under a "stringent regulatory system;" that off-site recycling is inherently more dangerous than on-site recycling; and that the regulations applicable at the time of the *2007 Assessment* were not sufficient enough to prevent damages.[158]

Part of the Opponents' concern regarding the increased threats to health and the environment is their belief that the DSW Rule "does not account for the instability of recycling markets, and current financial conditions increase the risk of hazardous waste abandonment."[159] This concern centers on the new transfer-based exclusion under which certain secondary materials generated and transferred to another company for reclamation are not considered solid waste if they meet certain criteria. The Opponents further note that 25% of the facilities that the EPA is deregulating under the DSW Rule involve "transfer facilities or 'middlemen'" (*i.e.,* intermediate facilities eligible for the transfer-based exclusion).[160] The Opponents note that EPA documentation shows that abandonment prior to recycling accounted for a third of the damage cases in the 2007 Assessment, and "economic pressures are the most common reason" for this abandonment.[161] The Opponents state that the new rule requires generators only to make "'reasonable efforts' to determine the legitimacy and financial viability of middlemen and recycling facilities" to which they send their waste once every three years.[162] The Opponents believe that this standard relaxes the requirements that previously "prohibited 'fly-by-night' operations and allowed only companies with RCRA Part B permits that met strict storage and handling requirements, as well as financial standards, to recycle hazardous

155 *Id.*

156 Petition for Reconsideration at 3-4, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (citing EPA, EPA-HQ-RCRA-2002-0031-0602, *Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste* (2008)).

157 *See id.*

158 Petition for Reconsideration at 3, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (citing EPA, EPA-HQ-RCRA-2002-0031-0355, *An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2007)).

159 Petition for Reconsideration at 4, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

160 *Id.* (citing EPA, EPA-HQ-RCRA-2002-0031-0602, *Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste* (2008)).

161 Petition for Reconsideration at 4, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (citing Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,678 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270); EPA, EPA-HQ-RCRA-2002-0031-0355, *An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2007)).

162 Petition for Reconsideration at 4, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (citing 73 Fed. Reg. at 64,689; 40 C.F.R. § 261(a)(24)(v)(B) (2009)).

waste."[163] For these reasons, the Opponents believe that the rule increases threats to public health and the environment.

Proponents — The Proponents believe that the conditions placed on the exclusions are sufficient and ensure that the rule is environmentally protective. The Proponents believe that the Petition for Review ignores the conditions that the DSW Rule imposes.[164] The Proponents contend that the rule imposes stringent conditions under which generators and reclaimers as well as transporters and intermediate facilities must comply to be excluded from regulation under Subtitle C.[165] The Proponents state that these conditions will ensure that the recycling conducted under the rule will not result in the type of incidents addressed in the *2007 Assessment*.[166]

The Proponents note that in 209 of the 218 total damage cases, the damage occurred when almost none of the controls set by the revised rule were in place.[167] The Proponents assert that the damage, which was primarily due to mismanagement and abandonment, was addressed requirements in the revised rule, including that the hazardous secondary materials:

> be properly contained (or managed in a manner that is at least as protective as an analogous raw material), that materials not be speculatively accumulated, that generators perform comprehensive due diligence on reclamation facilities that do not have RCRA Part B permits, and that each reclamation facility (or intermediate facility where appropriate) obtain full financial assurance, among other requirements."[168]

The Proponents believe the requirements are acceptable and will likely be exceeded. Specifically, under the transfer-based exclusion, the Proponents believe that the reasonable efforts requirements reflect the "best practices within the industry."[169] The Proponents expect that good business practice as well as concern for liability and enforcement will result in additional measures "such as site-specific audits or detailed examinations of the company's financial and technical capabilities" by the generators.[170] The Proponents believe that since reclamation facilities typically have many customers that the rule and internal practices will require to perform reviews, but unlikely on the same schedules, the facilities will likely be subjected to frequent and ongoing due diligence reviews.[171] Additionally, the Proponents believe that the financial assurance re-

163 *Id.* at 4.

164 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 9, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

165 *Id.* at 6, 9.

166 *Id.* at 6 (citing EPA, EPA-HQ-RCRA-2002-0031-0355, *An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2007)).

167 *Id.*

168 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 9, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

169 *Id.* at 10.

170 *Id.* at 11.

171 *Id.*

quirements are substantial, and the legitimacy criteria will provide another layer of environmental protection.[172] The Proponents believe that these and other requirements will reduce, if not eliminate, the potential for mismanagement and abandonment.[173] Therefore, the Proponents believe the rule is environmentally protective.[174]

(2) Environmental Benefits

Opponents — An additional issue is whether the revised rule will result in environmental benefits. The Opponents note that hazardous waste recycling is expected to increase only by 23,000 tons per year as a result of these exclusions, a 1.1% increase over the 2005 baseline of 2.045 million tons. [175] They believe that a "substantial amount" of recycling occurred despite the more stringent regulations that were previously in place, and that any increase in hazardous waste recycling will be negligible.[176]

Proponents — The Proponents disagree that environmental benefits will be negligible, contending that by decreasing the costs and encouraging recycling, landfill volumes and environmental impacts will be reduced.[177] The Proponents note that in addition to the 23,000 tons per year of "potentially recoverable materials contained in metals, solvents and other chemicals" that "may now be recycled rather than being disposed" of, the "EPA estimates that the rule will conserve over 900 tons per year of virgin materials, at a market value of $4.7 million dollars."[178] The Proponents disagree that the rule must substantially increase hazardous waste recycling to be successful because the objective under RCRA is to simply encourage hazardous waste recycling, an objective that the rule fulfills.[179]

Without regard to their contention that the success of the rule should not be measured by how many tons are recycled, the Proponents expect that the Agency's estimate of an additional 23,000 tons per year that could switch from disposal to recycling is low, referencing the EPA's report indicating that a potential of an additional 327,000

172 *Id.* at 10,12.

173 *Id.* at 10.

174 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 10, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

175 Petition for Reconsideration at 5, Sierra Club, EPA-HQ-RCRA-2009-0315-0002 (Jan. 29, 2009) (citing EPA, EPA-HQ-RCRA-2002-0031-0602, Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste, EPA-HQ-RCRA-2002-0031-0602 (Sept. 25, 2008)).

176 *Id.*

177 *See* Request to Affirm "Revisions to Definition of Solid Waste", EPA-HQ-RCRA-2009-0315-0007 at 2 (Apr. 23, 2009); *see also* Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 7 EPA-HQ-RCRA-2009-0315-0003 (Mar. 6, 2009).

178 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 7, EPA-HQ-RCRA-2009-0315-0003 (Mar. 6, 2009) (citing Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste, EPA-HQ-RCRA-2002-0031-0602 (Sept. 25, 2008)).

179 *Id.* at 12.

tons per year could be recycled.[180] Further, the Proponents believe that the exclusion for middlemen will enable recycling among small and medium-sized businesses.[181] Since small and medium-sized businesses do not produce enough secondary material to work directly with a recycling facility, the ability to work with middlemen to aggregate the materials will allow small and medium-sized companies to utilize the exclusion and recycle their secondary materials.[182] Therefore, the Proponents disagree with the Opponents that the rule is not successful in producing environmental benefits.

(3) Economic Benefits

Opponents — The next disagreement is whether the economic benefits are sufficient. The Opponents believe that the economic benefits of the rule are small and will accrue only to the deregulated industries.[183] The Opponents note that the economic benefit, not accounting for costs of health and environmental damage, is estimated by the EPA to be $95 million per year for up to 5,600 companies, but possibly as low as $19 million.[184] The Opponents are also concerned that jobs will be lost by a decreased need for licensed professionals handling hazardous waste recycling.[185] In sum, on the issue of economic benefits, the Opponents believe that some business costs will be decreased, but the overall cost in terms of health and potential environmental damage for the negligible return is not worth that small savings.

Proponents — The Proponents disagree with the Opponents' view of the economic impact. The Proponents believe that the rule promotes recycling by removing regulatory barriers and by providing cost savings that are "critical in today's economy."[186] The Proponents believe that an economic benefit of approximately $95 million per year is "not insignificant."[187] Moreover, the Proponents reference the EPA's own report that indicates that the economic impact could be up to $333 million per year.[188] The Proponents disagree with the potential for job losses and point to the comments of the Environmental Technology Council, the national trade association representing firms that comprise the commercial hazardous waste recycling industry, which "over-

180 *Id.* at 13 (citing Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste, EPA-HQ-RCRA-2002-0031-0602 (Sept. 25, 2008)).

181 Request to Affirm "Revisions to Definition of Solid Waste" at 2, EPA-HQ-RCRA-2009-0315-0007 (Apr. 23, 2009).

182 *Id.*

183 Petition for Reconsideration at 5, EPA-HQ-RCRA-2009-0315-0002 (Jan. 29, 2009).

184 *Id.* (citing Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste, EPA-HQ-RCRA-2002-0031-0602 (Sept. 25, 2008)).

185 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 5, EPA-HQ-RCRA-2009-0315-0003 (Mar. 6, 2009).

186 Request to Affirm "Revisions to Definition of Solid Waste" at 1, EPA-HQ-RCRA-2009-0315-0007 (Apr. 23, 2009).

187 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 13, EPA-HQ-RCRA-2009-0315-0003 (Mar. 6, 2009).

188 *Id.*

whelmingly supported" the promulgation of the rule.[189] The Proponents state that the economic and environmental benefits are "driven in large measure by reduced regulatory transactional costs, *viz.*, the reduced monetary and related burdens associated with hazardous waste manifesting and transportation requirements, reporting and recordkeeping obligations, and status as a large quantity generator."[190]

Summary of First Issue — While the Opponents believe the economic impacts are minimal and are a benefit only to industry, not surprisingly, the Proponents believe the economic benefits to be an important aspect of the rule. Overall, the Opponents contend that the rule increases the risks to public health and the environment, with negligible return, while the Proponents believe that the rule provides sufficient controls and significant benefits

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B. Administrative Procedure Act Compliance

The second reason for the request for reconsideration and repeal is that the rule is unlawful under the Administrative Procedure Act (APA).[191] The Opponents conclude this for two reasons:

- "[The] EPA's adoption of the [r]ule was arbitrary and capricious and otherwise not in accordance with law because several terms essential to the [r]ule are so vague as to deny regulators, regulated entities, and the public an intelligible standard for compliance and enforcement efforts."[192]

- "[W]ithout support in the administrative record, the EPA arbitrarily and capriciously concluded that the DSW Rule carried no potential for adverse environmental impacts, including for the low-income and minority communities disproportionately located near facilities deregulated by the [r]ule."[193]

The Opponents' first reason is based on the lack of a definition for the terms "contained" and "significant release." The Opponents' second reason is based on the EPA's determination that the rule would not have any environmental impact. On the other hand, the Proponents disagree that the adoption was arbitrary and capricious and otherwise not in accordance with the law, and that the EPA did not have support for its conclusions. The Proponents believe the rule to be lawful.

(1) "Contained" and "Significant Release" Are Undefined

Opponents — By not defining "contained" and "significant release," the Opponents contend that the rule is "arbitrary and capricious, an abuse of discretion, and not in

189 *Id.* at 13-14.

190 Follow-Up From the March 26th Meeting With Industry-Respondents to Discuss Sierra Club's Petition for Reconsideration of the Definition of Solid Waste Rule at 2, EPA-HQ-RCRA-2009-0315-0004 (Apr. 15, 2009).

191 Petition for Reconsideration at 6, EPA-HQ-RCRA-2009-0315-0002 (Jan. 29, 2009).

192 *Id.*

193 *Id.*

accordance with the law."[194] The Opponents believe that the provisions of the rule excluding certain recycled hazardous secondary materials from the definition of "solid waste" are contingent on those materials being "contained."[195] The Opponents state that while the EPA responded to comments by clarifying the meaning of control, the description is insufficient.[196] The Opponents additionally contend that a "significant release," which the preamble indicates will result in materials being considered a hazardous waste, is not defined and is located only in the preamble.[197] The Opponents contend that without any basis to determine if materials are contained, or have been significantly released, companies do not have any basis to know or determine their compliance status, or inspectors cannot make enforcement determinations.[198] Therefore, the Opponents conclude that the rule is so vague" that it fails to constrain regulatory decision-making, is arbitrary and capricious, an abuse of agency discretion, and otherwise a violation of the law."[199]

Proponents — The Proponents disagree and point to the guidance provided in the preamble for "contained" contending that it is sufficient and lawful.[200] The Proponents argue that the EPA "is not required to define every operative term in a regulation. EPA is merely required to conduct reasoned rulemaking in light of the evidence in the record."[201] The Proponents point to language in the "controlling case" providing that:

> Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of an agency expertise.[202]

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194 *Id.*

195 *Id.* (citing 40 C.F.R. §§ 261.2(a)(2)(ii), 261.4(a)(23)(i), 261.4(a)(24)(v)(A), and (a)(24)(vi)(D) (2009)).

196 *Id.* at 6-7; Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,748 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270).

197 Petition for Reconsideration at 7, EPA-HQ-RCRA-2009-0315-0002 (Jan. 29, 2009); 73 Fed. Reg. 64,781 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270).

198 Petition for Reconsideration at 7, EPA-HQ-RCRA-2009-0315-0002 (Jan. 29, 2009).

199 *Id.* (citing Atlas Copco, Inc. v. EPA, 642 F.2d 458, 465 (D.C. Cir. 1979); South Terminal Corp. v. EPA, 504 F.2d 646, 670 (1st Cir. 1974)).

200 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 14, EPA-HQ-RCRA-2009-0315-0003 (Mar. 6, 2009); Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste", EPA-HQ-RCRA-2009-0315 (Apr. 21, 2009).

201 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 14, Industry-Respondents, EPA-HQ-RCRA-2009-0315-0003 (Mar. 6, 2009).

202 Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983); *see* Int'l Ladies' Garment Workers' Union v. Donovan, 722 F.2d 795, 814 (D.C. Cir. 1983); U.S. Telecom Ass'n v. FCC, 400 F.3d 29, 38 (D.C. Cir. 2005) (an agency regulation need not ad-

In the case of the DSW Rule, the Proponents contend that that the use of "contained" addresses and responds to concerns about mismanagement and abandonment identified in the damage cases. Consequently, they conclude that the use of the term is appropriate under the "purposes of RCRA as set forth by Congress and judicial precedent."[203] Additionally, this treatment is consistent with past agency actions regarding 40 C.F.R. § 261.4, *Exclusions*, under which the EPA often imposes containment requirements while only generally defining what containment should mean.[204] The Proponents further contend that it would be impractical if not impossible for the EPA to define "contained" to address every type of containment required for each secondary material stream at all facilities that the rule affects.[205] With the existing performance standards and the approach outlined in the DSW Rule, the Proponents believe that the EPA "delineated an objective, workable concept of 'contained'" that will allow facilities and inspectors to determine whether a material is contained.[206] Therefore, the Proponents contend that the EPA's treatment of "contained" is lawful and should be upheld.

The Proponents also take the position that the guidance in the preamble for "significant release" is sufficient.[207] As with "contained", it is impossible for the Agency to define "significant release" to address every scenario.[208] The Proponents believe that courts construing RCRA or the APA do not require agencies to define all operative terms.[209] The Proponents contend that the EPA's treatment of "significant release" is lawful and should be upheld.

(2) EPA Determined That the DSW Rule Would Not Have Any Environmental Impact

Opponents — Another reason the Opponents contend that the rule is unlawful is because they believe the administrative record does not support the EPA's determination that the DSW Rule would not have an environmental impact.[210] The Opponents contend that the EPA bases its determination on three unsupported assumptions:

- an undefined 'containment' standard will be as environmentally protective as

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dress every conceivable question (citing Shalala v. Guernsey Mem'l Hosp., 512 U.S. 87, 96 (1995))).

203 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 14, Industry-Respondents, EPA-HQ-RCRA-2009-0315-0003 (Mar. 6, 2009).

204 *Id.*

205 *Id.* at 15.

206 *Id.*; Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 4, EPA-HQ-RCRA-2009-0315-0006 (Apr. 21, 2009).

207 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 4, National Mining Association, EPA-HQ-RCRA-2009-0315 (Apr. 21, 2009); Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 14, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

208 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 15, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

209 *Id.* at 15-16.

210 Petition for Reconsideration at 7, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

detailed permit requirements, such as those set forth in RCRA Part B;
- a self-regulatory regime will be as effective in preventing damage as agency oversight and enforcement proceedings; and
- the threat of liability under RCRA or CERCLA [Comprehensive Environmental Response, Compensation, and Liability Act] will be enough to deter improper management of hazardous secondary materials, even though that threat was insufficient under the more rigorous regime that the [r]ule replaced.[211]

The Opponents conclude that because the EPA did not offer record evidence defending these assumptions "which defy common sense and years of experience," their "adoption of the [r]ule was arbitrary and unlawful."[212]

Additionally, the Opponents complain that the EPA purported "to justify its conclusion that the deregulation of 3 billion pounds of hazardous secondary materials poses no environmental threat on 'its assessment of potential countervailing risks and its determination 'that the conditions [of the [r]ule] address those risks'."[213] This assessment was based on a "screening" risk analysis that, according to the Opponents, was inappropriate as it was not a statistical or engineering model, and the EPA admitted it was a "relatively low level-of-effort."[214] The EPA's conclusion that the rule does not pose any actual risk of environmental harm as long as a provision of the [r]ule potentially addresses an environmental risk in any manner, the Opponents contend was a "simplistic analysis" that was insufficient against the record.[215] Further, the Agency failed to give a "reasonable explanation" why such damage would not be repeated at the same or greater frequency under the revised rule.[216]

The Opponents also assert that the EPA's finding of "no net impact" was used to justify avoiding the analysis required by Executive Order 12,898.[217] The Order requires each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minorities and low-income populations."[218] However, the Opponents contend that the EPA avoided the analysis by conclusively asserting that the rule could not cause any disproportionate impacts because the rule would not cause any environmental impact.[219] The Opponents believe that the record contradicts the EPA's conclusion because the

211 *Id.* at 7-8.

212 *Id.* at 8 (citing Natural Res. Def. Council v. Herrington, 768 F.2d 1355, 1421 (D.C. Cir. 1985)).

213 Petition for Reconsideration at 8, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (citing Revisions to the Definition of Solid Waste, 40 C.F.R. § 260-61, 270 (2008)).

214 Petition for Reconsideration at 8, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

215 *Id.*

216 *Id.*

217 Petition for Reconsideration at 8, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (citing Revisions to the Definition of Solid Waste, 40 C.F.R. pts. 260-61, 270 (2008)); Federal Actions to Address Environmental Justice in Minority Populations, 59 Fed. Reg. 7,629 (Feb. 16, 1994).

218 *Id.*

219 *Id.*

2007 Assessment indicates that environmental damage is likely to increase at facilities recycling hazardous secondary materials because of the rule, including more than 100 Superfund sites because industrial facilities and Superfund sites are located disproportionately in low-income and minority neighborhoods.[220] The Opponents believe that because the EPA failed to determine the nature and extent of the impact and ensure the rule will not disproportionately impact any segment of the population, it violated Executive Order 12,898.[221] Therefore, the Opponents believe the adoption of the rule was unlawful.

Proponents — The Proponents disagree with the Sierra Club's assessment of the studies. They note that the approach "sought to examine the best industry practices as well as determine the types of sites where hazardous secondary materials recycling had resulted in environmental damage."[222] The Proponents state that the three-year study resulted in a determination that the damages were overwhelmingly reducible to three causes: (1) mismanagement; (2) improper disposal; and (3) abandonment.[223] They state that the study also produced information on how to prevent harm to the environment.[224] The Proponents believe that a more exhaustive study was not necessary for the rulemaking, and that the study was careful, comprehensive, and tailored to the needs of the rule.[225]

The Proponents disagree that the screening analysis was inappropriate or unlawful.[226] They state that the assessment was the only means that the EPA had of assessing the impact of the rule with the variety of industries, facilities, and operations affected.[227] Additionally, the screening-level assessment "is a recognized and accepted method of assessing a rule's impact where elaborate statistical or engineering models would be impractical or impossible" and "was conducted in accordance with EPA's Information and Data Quality Guidelines, which, in turn, are in accordance with the Office of Management and Budget's ("OMB") government-wide policy regarding information dissemination to the public."[228] The Proponents contend that the conditions of the

220 *Id.* at 9 (citing Robert D. Bullard, Ph.D. et al., *Toxic Wastes and Race at Twenty, 1987-2007, A Report Prepared for the United Church of Christ and Witness Ministries* (2007), *available* at http://www.ejrc.cau.edu/TWART-light.pdf); Letter to EPA, at 1, Earthjustice, et al., EPA-HQ-RCRA-2009-0315 (Apr. 20, 2009).

221 Petition for Reconsideration at 9, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); Letter to EPA, *supra* note 143, at 2.

222 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 8, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

223 *Id.*

224 *Id.*

225 *Id.*

226 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 16, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

227 *Id.*

228 *Id.* (citing National Research Council, *Science and Judgment in Risk Assessment* (Nat'l Acad. Press, 1994); *see* EPA, EPA/260R-02-008, *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Disseminated by the Environmental Protection Agency* (Oct. 2002), *available at* http://www.epa.gov/quality/informationguidelines/documents/EPA_InfoQualityGuidelines.pdf; Guidelines for Ensuring and Maximizing the Quality, Ob-

exclusions in the rule were designed and targeted to prevent the identified risks."[229] Industry believes the approach to be lawful and appropriate for the rulemaking, resulting in a proper conclusion that "the [r]ule poses no environmental threat."[230]

The Proponents also contend that the finding of "no net impact" was proper. They contend that the EPA appropriately concluded that the rule poses no environmental threat, and that the EPA was "justified in concluding that the rule has no net impact for the purposes of Executive Order 12,898."[231]

Finally, The Proponents also asserted that Sierra Club does not have any standing to argue non-compliance with Executive Order 12,898 because the order "expressly precludes a private right of action based on alleged noncompliance with the Order."[232]

Summary of Second Issue — The Opponents believe the rule is unlawful under the APA due to both the absence of definitions for "contained" and "significant release," and because they believe the EPA inappropriately concluded that the DSW Rule would not have an environmental impact. However, the Proponents contend that the absence of definitions for "contained" and "significant release" does not result in a rule that is unacceptably vague or unenforceable, and that the EPA's conclusion that the DSW Rule would not have an environmental impact was based on information obtained through proper studies. Not surprisingly, the Proponents disagree with the Opponents that the rule is unlawful under APA.

c. Additional Issues

The Parties identified other issues in addition to the two categories discussed. These issues include:

- Reasoned balance of existing rule. In their response, the Proponents supported the DSW rule as adopted as a "reasoned balance" between providing regulatory relief to encourage resource conservation and recycling and the need to protect public health.[233] On the other hand, the Proponents also contended that the rule exceeds the EPA's authority by adopting conditions for the generator-controlled and transfer-based exclusions, thereby improperly asserting authority over secondary materials that are not discarded, contrary

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jectivity, Utility, and Integrity of Information Disseminated by Federal Agencies; Republication, 67 Fed. Reg. 8,452 (Feb. 22, 2002)).

229 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 16-17, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

230 *Id.* at 17.

231 *Id.*

232 *Id.* (citing Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 Fed. Reg. 7,629, 7,629 (Feb. 16, 1994); and Kuhl v. Hampton, 451 F.2d 340, 342 (8th Cir. 1971)).

233 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 4, National Mining Association, EPA-HQ-RCRA-2009-0315 (Apr. 21, 2009).

to court decisions.[234] The Proponents caveat that their support for the current rule would be withdrawn if the EPA reconsiders the final rule, particularly if it adds standards regarding "containment" and "significant release."[235]

- Rulemaking timing. The Opponents assert that the EPA rushed to complete the rule before the administration changed.[236] The Proponents disagree, citing the litigation and rulemaking history.[237] The Proponents contend that the parties have been engaged in developing this rule to address legitimately reclaimed materials for over fifteen years.[238]
- Consistency with the intent of RCRA. The Opponents believe that exempting 1.5 million tons of hazardous waste from regulation is contrary to a primary RCRA objective to "promote the protection of health and the environment and to conserve resources by adopting *preventative* measures 'requiring that hazardous waste be properly managed in the first instance thereby reducing the need for corrective action at a future date.'"[239] They also believe that allowing the industry to self-regulate is contrary to RCRA.[240] However, the Proponents believe that the rule meets all of RCRA's objectives, including the recovery, recycling, and reuse of valuable resources, and discouraging disposal, while protecting public health and the environment."[241]

D. Next Steps

The EPA held a Public Meeting on June 30, 2009, to discuss possible revisions to the rule. By and large each side reiterated their prior positions. The EPA stated in its May 27, 2009 *Federal Register* meeting notice that it "does not plan to repeal the rule in whole or stay its implementation"[242] and repeated that predisposition at the outset of the public meeting. Instead, the EPA has identified areas for discussion and possible revision that address issues directly discussed in the Petition for Review as well as related issues that could result in strengthening or clarifying rule requirements. The topics for discussion and possible revision are:

- whether the term "contained," which is an undefined term that is part of the

234 *Id.* at 2-4 (citing Am. Mining Cong. v. EPA, 824 F.2d 1177 (D.C. Cir. 1987); Ass'n of Battery Recyclers v. EPA, 208 F.3d 1047 (D.C. Cir. 2000)).

235 *Id.* at 5.

236 Petition for Reconsideration at 1, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); Letter to EPA, *supra* note 143, at 1.

237 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 2-4, National Mining Association, EPA-HQ-RCRA-2009-0315 (Apr. 21, 2009); Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 7-8, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

238 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 7, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

239 Petition for Reconsideration at 2, Sierra Club, EPA-HQ-RCRA-2009-0315-0002 (Jan. 29, 2009).

240 *Id.*

241 Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 6, Industry-Respondents, EPA-HQ-RCRA-2009-0315-0003 (Mar. 6, 2009).

242 Definition of Solid Waste Public Meeting, 74 Fed. Reg. 25200, 25200 (May 27, 2009).

requirements of the exclusions, should be further clarified or defined;
- whether the criteria that materials be legitimately recycled that is required for materials to qualify for the new exclusions should apply to all recycled materials;
- whether the provisions to determine whether material is legitimately recycled, which contains two mandatory criteria and two criteria that need only be considered should be amended so that that all four criteria are mandatory;
- whether the requirement that a facility notify the EPA that it will utilize an exclusion should be a condition, that if not met, would mean that the exclusion did not apply, rather than a requirement that, if not met, would only be a violation of notification regulations; and
- whether the transfer-based exclusion should be limited or repealed.[243]

It should be noted that regardless of whether the finalization of the rulemaking was rushed through at the end of the Bush administration, the review is being done under the Obama administration that has already set forth criteria the EPA must follow in all rulemakings. Those are: (1) science must be the backbone for EPA programs; (2) the EPA must follow the rule of law; and (3) the EPA's actions must be transparent.[244] The EPA has indicated that the third criteria must be conducted with "special pains to connect with those who have been historically underrepresented in the EPA decision making."[245] Based on the claims that the Opponents have set forth regarding environmental harms and the impact on low-income communities, these criteria may make a difference in the outcome of the challenge.

After reviewing all comments, the EPA will make a tentative decision on the Petition as required by 40 CFR § 260.20(c). The EPA will publish the tentative decision in the *Federal Register* for public comment. After evaluating all public comments, the EPA will publish its final decision in the *Federal Register*.

2. Pending Petitions for Review

Two parties filed a Petition for Review with the United States Court of Appeals for the D.C. Circuit in early 2009.[246] The American Petroleum Institute (API) filed on January 27, 2009, and the Sierra Club filed on January 28, 2009.[247] The petitions seek relief under 5 U.S.C. § 706, which provides that the court shall hold unlawful and set aside an agency action if it is found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law...."[248] On March 3, 2009, a Clerk Order

243 74 Fed. Reg. at 25202-04.

244 Spring 2009 Regulatory Agenda, 74 Fed. Reg. 21991, 21993 (May 11, 2009).

245 *Id.*

246 Petition for Reconsideration, Sierra Club, EPA-HQ-RCRA-2009-0315-0002 (Jan. 29, 2009); Petition for Review, Sierra Club v. EPA, No. 09-1041 (D.C. Cir. Jan. 28, 2009); Petition for Review, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Jan. 27, 2009). (Petitions filed pursuant to RCRA § 7006(a) (42 U.S.C. § 6976(a)); 5 U.S.C.A. §§ 701-06 (West 2007); Fed. R. App. P. 15(a)).

247 Petition for Review, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Jan. 27, 2009); Petition for Review, Sierra Club v. EPA, No. 09-1041 (D.C. Cir. Jan. 28, 2009).

248 5 U.S.C.A. § 706(2)(A) (West 2007).

was issued consolidating the cases, and holding them in abeyance pending further order of the court.[249] The order directed parties "to file motions to govern further proceedings on or before May 4, 2009." The API is challenging the rule for entirely different reasons than the Sierra Club, as indicated in its Statement of Issues. The API challenge is based on the rule's treatment of petroleum refinery catalysts as solid waste. The API preliminarily raises two issues:[250]

- whether the EPA's "assertion of jurisdiction" under RCRA "over used petroleum refinery catalysts that are not discarded, but are instead legitimately recycled, was arbitrary or capricious, in excess of statutory authority, or otherwise not in accordance with the law;" and
- whether the EPA's "decision not to exclude from the regulatory definition of 'solid waste' used petroleum refinery catalysts that are not discarded, but instead are legitimately recycled, was arbitrary or capricious, in excess of statutory authority, or otherwise not in accordance with the law."[251]

The API's challenge appears to be addressing specific language under the transfer-based and generator-controlled exclusions that specify that materials qualifying for the exemption cannot meet the listing description for K171 or K172 in 40 C.F.R. § 261.32.[252]

The Sierra Club's reasoning for its Petition for Review was amply discussed in its Petition for Reconsideration. [253] However, since its Petition, the Sierra Club and the EPA reached a settlement. On September 10, 2010, both parties moved the D.C. Circuit to sever the Sierra Club's case from the API petition and hold it in abeyance until the terms of the settlement are satisfied.[254] The settlement provides that the EPA shall initiate a Notice of Proposed Rulemaking to address the Sierra Club's concerns raised in the 2009 public meeting no later than June 11, 2011. The settlement also requires a final administrative action on the Notice of Proposed Rulemaking by December 31, 2012. The rulemaking is expected to address the same exclusions and potential environmental hazards the Sierra Club complained of in June 2009. If the rulemaking is not satisfactory to the Sierra Club after the time expires, the Sierra Club reserved its right to petition the D.C. Court to vacate the severance/abeyance order and continue the action.

3. Status of State Implementation

States, such as Texas, approved to administer RCRA are required to adopt definitions that are at least as strict as the EPA definitions. Because the revised rule relaxes requirements, states or territories authorized to administer RCRA may decide whether

249 Order Consolidating Cases, No. 09-1038 (Mar. 3, 2009).

250 Statement of Issues to be Raised at 1, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Feb. 26, 2009).

251 *Id.* at 1-2.

252 40 C.F.R. § 261.2(a)(2)(ii) (2009); 40 C.F.R. § 261.4(a)(23)-(24) (2009).

253 Petition for Reconsideration at 9, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

254 Motion to Sever and Hold Case in Abatement, Sierra Club, No. 09-1038 (Sept. 10, 2010) *available at* http://www.epa.gov/osw/hazard/dsw/sierraclubdsw.pdf.

they will adopt the new provisions.[255] Texas is still revising its definition of "solid waste" consistent with previous EPA rulemakings. Any changes to the definition based on the DSW Rule effective December 29, 2008, will not be addressed until after the current rulemaking is completed.

E. Conclusion

The revisions to the DSW Rule increase the amount of recycled materials excluded from regulations under RCRA Subtitle C. These conditions provide safeguards, but whether the safeguards are sufficient or excessive is a matter of debate. Affected entities should be aware of the adopted rule and its provisions that have been adopted by the EPA and may be adopted in the states authorized to administer RCRA provisions. However, due to the legal challenges and uncertainty surrounding the rule, the ultimate requirements of the rule are yet to be finally determined. In the meantime, the DSW final rule remains in effect, except in those cases, such as Texas, which have not yet adopted it.

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255 Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,753 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270).

Appendix A – Timeline and Highlights[256]

The following timeline and highlights of rulemakings and lawsuits in the history of the DSW Rule is provided for reference purposes.

1976 – *Resource Conservation and Recovery Act* (RCRA).[257]

1980 – *Hazardous Waste Management System: Identification and Listing of Hazardous Waste* (Interim Final Rule). The adopted rule largely deferred the issue of recycled materials. Recycled secondary materials were considered waste.[258]

1985 – *Hazardous Waste Management System; Definition of Solid Waste* (Final Rule) (Proposed 1983).[259] The rule included clarification of EPA's jurisdiction over hazardous waste recycling and established a regulatory regime for recycling activities under EPA jurisdiction.[260]

1987 – *American Mining Congress v. EPA* ("AMC I").[261] This suit challenged reuse and recycle rules applied to inprocess secondary materials.[262] The court held that "Congress clearly and unambiguously expressed its intent that 'solid waste' (and therefore EPA's regulatory authority) be limited to materials that are 'discarded' by virtue of being disposed of, abandoned, or thrown away," and that "EPA has acted in contravention of Congress' intent."[263]

1990 – *American Petroleum Institute v. EPA ("API").*[264] This suit challenged the EPA rule.[265] The EPA had determined that "high zinc" (15%+ zinc composition) K061 had to be treated with high temperature metals recovery, but that the EPA did not have authority once it reached the metal reclamation facility because it was no longer "discarded" and therefore no longer a "solid waste."[266] The court remanded, finding that EPA "failed to give a reasoned explanation for its construction of the RCRA" and that EPA mistakenly construed the case law.[267]

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256 *See* Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at Appendix A, National Mining Association, EPA-HQ-RCRA-2009-0315 (Apr. 21, 2009).

257 Resource Conservation and Recovery Act of 1976, 42 U.S.C.A. § 6901 et seq. (West 2003).

258 Hazardous Management System: Identification and Listing of Hazardous Waste, 45 Fed. Reg. 33084 (May 19, 1980) (to be codified at 40 C.F.R. pt. 261).

259 Hazardous Waste Management System; Definition of Solid Waste, 50 Fed. Reg. 614 (Jan. 4, 1985) (to be codified at 40 C.F.R. pts 260-61, 264-66); Hazardous Waste Management System: General; Identification and Listing of Hazardous Waste; Standards, 48 Fed. Reg. 14,472 (Apr. 4, 1983) (to be codified at 40 C.F.R. pts. 260-61, 264-66).

260 Hazardous Waste Management System; Definition of Solid Waste, 50 Fed. Reg. at 614 (Jan. 4, 1985).

261 Am. Mining Cong. v. EPA, 824 F.2d 1177 (D.C. Cir. 1987).

262 *See id.* at 1180.

263 *Id.*

264 Am. Petroleum Inst. v. EPA, 906 F.2d 729 (D.C. Cir. 1990).

265 *See id.* at 732; *id.* at 734.

266 *Id.* at 740.

267 *Id.* at 739.

1990 – *American Mining Congress v. EPA ("AMC II").*[268] This suit was a challenge to the rule following the relisting of certain wastes as hazardous that had previously been delisted in response to a congressional enactment.[269] The EPA had concluded that because the sludges were "the product of wastewater and [were] stored in impoundments that threaten harm to the health and environs of those living nearby" the materials were "discarded."[270] The court determined the agency's interpretation of "discarded" to be "reasonable and consistent with the statutory purposes of the RCRA."[271] However, it failed "to articulate a rational connection between the data on which it purportedly relied and its decision to reject the petitioners' admittedly significant challenges."[272] The court remanded for fuller explanation."[273]

1998 – *Land Disposal Restrictions Phase IV – Final Rule.*[274] The rule included special criteria to specify when secondary materials within the mineral processing industry would and would not be considered solid waste.[275]

2000 – *Association of Battery Recyclers v. EPA ("ABR").*[276] This suit was a challenge to the EPA Phase IV rule and included a challenge to the definition of "solid waste" regarding how materials "'generated and reclaimed within the primary mineral processing industry' are stored."[277] The court stated that the point of *AMC II* and *API* was that "once material qualifies as 'solid waste,' something derived from it retains that designation even if it might be reclaimed and reused at some future time."[278] However, "the Phase IV Rule seeks to regulate materials that are not a by-product of solid waste, but a direct by[-]product of industrial processes."[279] The court stated that at least some of the secondary material EPA sought to regulate as solid waste was destined for reuse as part of a continuous industrial process, not abandoned or thrown away.[280] The court ordered the EPA to define "solid waste" in accordance with the opinion, and set aside a parenthetical that purportedly expanded EPA regulation of mineral processing secondary materials.[281]

2002 – *Hazardous Waste Management System; Definition of Solid Waste; Toxicity Characteristic* (Final Rule).[282] The adopted rule was an EPA response to ABR. Changes included deletion of language that classified "mineral processing characteristic sludges

268 Am. Mining Cong. v. EPA, 907 F.2d 1179 (D.C. Cir. 1990).
269 *See id.* at 1181-83.
270 *Id.* at 1186.
271 *Id.* at 1187.
272 *Id.* at 1192.
273 *Id.* at 1192.
274 Land Disposal Restrictions Phase IV, 63 Fed. Reg. 28,555 (May 26, 1998) (to be codified at 40 C.F.R. pts 148, 261, 266, 268, and 271).
275 *Id.* at 28,636-38
276 Ass'n of Battery Recyclers v. EPA, 208 F.3d 1047 (D.C. Cir. 2000).
277 *Id.* at 1050.
278 *Id.* at 1056.
279 *Id.*
280 Ass'n of Battery Recyclers v. EPA, 208 F.3d 1047, 1056 (D.C. Cir. 2000) (citing Am. Mining Cong. v. EPA, 907 F.2d 1179, 1193 (D.C. Cir. 1990)).
281 *Id.* at 1060.
282 Hazardous Waste Management System; Definition of Solid Waste; Toxicity Characteristic, 67 Fed. Reg. 11251 (Mar. 13, 2002) (to be codified at 40 C.F.R. pt. 261).

and by-products being reclaimed as solid wastes."[283] In the rulemaking, the EPA announced plans for a solid waste rule.[284]

2007 – *Safe Food & Fertilizer v. EPA*.[285] The suit was a challenge to the EPA rule that specified that RCRA Subtitle C did not apply to recycled materials used to make zinc fertilizers, or to the resulting fertilizers themselves, subject to certain conditions.[286] One way of making zinc fertilizers is through recycled by-products of certain industrial processes.[287] The EPA had determined that if the materials met certain conditions, they were not "discarded" under RCRA and therefore did not constitute "solid waste."[288] Petitioners' asserted that the materials in question were "discarded" even though they were recycled, claiming that under the cases, "recycled material destined for immediate reuse within an ongoing industrial process is never considered 'discarded,' whereas material transferred to another firm or industry for subsequent recycling must always be so viewed."[289] The court disagreed with this interpretation of the cases, stating:

> We have held that the term "discarded" cannot encompass materials that "are destined for beneficial reuse or recycling in a continuous process by the generating industry itself." *Am. Mining Cong. v. EPA ("AMC I")*, 824 F.2d 1177, 1186 (D.C. Cir. 1987); *see* also *Ass'n of Battery Recyclers, Inc. v. EPA*, 208 F.3d 1047, 1056 (D.C. Cir. 2000). We have also held that materials destined for future recycling by another industry *may* be considered "discarded"; the statutory definition does not preclude application of RCRA to such materials if they can reasonably be considered part of the waste disposal problem. *Am. Petroleum Inst. v. EPA*, 906 F.2d 729, 740-41 (D.C. Cir. 1990); *Am. Mining Cong. v. EPA ("AMC" II")* 907 F.2d 1179, 1186-87 (D.C. Cir. 1990). But we have never said that RCRA compels the conclusion that material destined for recycling in another industry is necessarily "discarded." Although ordinary language seems inconsistent with treating immediate reuse within an industry's ongoing industrial process as a "discard," see *AMC I*, 824 F.2d at 1185, the converse is not true.[290]

The court did not find that the statutory text precluded EPA's reading, and determined that the EPA's reasons for determining the materials to be discarded were reasonable and consistent with the statutory purpose.[291] The court remanded on the narrow issue of the EPA's selection of an exemption level for chromium, and affirmed in all other respects, denying the petition for review.[292]

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283 *Id.*
284 *Id.*
285 Safe Food & Fertilizer v. EPA, 350 F.3d 1263 (D.C. Cir. 2003).
286 *Id.* at 1265.
287 *Id.*
288 *Id.*
289 *Id.* at 1268.
290 *Id.*
291 *Id.* at 1269.
292 *Id.* at 1265; *Id.* at 1272.

2008 – *Definition of Solid Waste Final Rule*[293] (Originally proposed 2003, supplemental proposal 2007.[294])

293 Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270).

294 Revisions to the Definition Solid Waste, 72 Fed. Reg. 14,172 (Mar. 26, 2007) (to be codified at 40 C.F.R. pts. 260-61); Revisions to the Definition of Solid Waste, 68 Fed. Reg. 61,558 (Oct. 28, 2003) (to be codified at 40 C.F.R. pt. 261).

Appendix B – Group Filings

Earthjustice, et al.: Signatories were Earthjustice; Clean Water Action; Environmental Defense Fund; Natural Resource Defense Council; Greenpeace; Breast Cancer Fund; American Nurses Association; Environmental Working Group/EWG Action Fund; Environment America; League of Conservation Voters; Center for International Environmental Law; Worksafe; New Jersey Environmental Justice Alliance; Ironbound Community Corp; Sciencecorps; Environmental Health Fund; Be Safe Campaign; Alternatives for Community & Environment; Natural Resources Council of Maine; Indiana Toxics Action; Citizens for a Clean Environment; and Parents Against Lindane.

Industry-Respondents: Kelley Drye & Warren LLP filed on behalf of the Metal Industries Recycling Coalition, the American Chemistry Council, the Alliance of Automobile Manufacturers, the American Coke & Coal Chemicals Institute; the National Paint and Coatings Association, the Treated Wood Council, the American Forest and Paper Association; and the Synthetic Organic Chemical Manufacturers Association.

Environmental Issues in Bankruptcy

by Mary J. Koks and Tim Million

I. INTRODUCTION

Congress enacted the current Bankruptcy Code, Sections 101 through 1502 of Title Eleven of the United States Code (as amended, the "Bankruptcy Code"), in 1978, and it took effect late in 1979. Many important federal environmental statutes were enacted around the same time, *e.g.,* Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in 1980. Thus, Congress did not fully consider environmental liability schemes when it created the bankruptcy code. Many of the environmental liabilities are new with the enactment of these statutory provisions. These liabilities do not fit well into the bankruptcy framework, thus causing confusion and conflicts. Environmental statutes create liabilities that bankruptcy laws will discharge. However, some obligations that environmental laws create directly conflict with the bankruptcy policy of a "fresh start" for the debtors. For instance, the environmental concept of obligations does not necessarily fit into the Bankruptcy Code's definition of a "claim". An environmental liability can either be an obligation to remediate property under a consent order or injunction, which may not give rise to a claim, or an obligation to pay a third party or the government for remediation already conducted, which can give rise to a "claim". Also, it can be difficult to properly assess when an environmental claim "arises," which directly impacts whether it will be addressed in the Debtor's plan of reorganization or whether the Debtor will have post-petition liability regardless of the bankruptcy.

The "fresh start" concept requires that an individual debtor be discharged of those debts in which insufficient assets exist to pay all claims in a Chapter 7,[1] and insufficient assets and income exist to pay debts through a plan of reorganization in a Chapter 13.[2] The "fresh start" concept for corporate entities allows a company, through a Chapter 11, to be rehabilitated by discharging certain debts and paying out certain others in a plan of reorganization through "classification" of claims into different

1 U.S. Bankruptcy Code, 11 U.S.C. §§ 701-84 (2006).
2 11 U.S.C. §§ 1301-30.

classes, each of which has a priority ranking system vis-à-vis other claims.[3] For instance, "administrative claims," which are those "actual and necessary" to preserve the estate, include current operating expenses of the Debtor, and are provided with the highest priority in payment.[4] Secured Creditors are provided payments per the value of their collateral.[5] Unsecured Creditors are provided with a percentage payment of the full claim.[6] Finally, Equity Creditors are provided with some new reduced value to their equity.[7] The rationale is to provide equality to classes of creditors such that each creditor in a class is treated equally or on a pro rata basis. The Bankruptcy Code also seeks to save costs and expenses in addressing a multitude of creditors and to maximize the size of the estate for the benefit of all creditors. It is necessary to determine into which of these classes an environmental obligation will be placed if it is a true bankruptcy "claim." It is also necessary to determine if the environmental obligation might be considered a post-petition obligation that is outside the bankruptcy, and which the bankruptcy does not affect.

The primary purpose of environmental statutes, on the other hand, is to provide vehicles for remediation of contaminated property by holding a broad group of entities and individuals responsible for the remediation – including, in some instances, joint and several liability. The primary statute under which such liability is customarily assessed is the Comprehensive Environmental Response, Compensation & Liability Act (CERCLA), which is for abandoned properties, or those in which the owner cannot afford to remediate the property.[8] The responsibility for remediation then, often falls to those parties who: (1) arranged to have hazardous substances disposed of; (2) were generators of the waste; (3) were transporters of the waste to the site; (4) owned the site at the time of "disposal"; and (5) were operators of the site at the time of "disposal".[9] Additionally, this liability can be "joint and several".[10] Liability can also be assessed under a number of other environmental statutes including: the Resource Conservation and Recovery Act (RCRA), which is designed for the reduction of the manufacture or generation of hazardous waste from existing facilities and provides a comprehensive scheme for disposal of hazardous substances;[11] the Clean Water Act (CWA), which sets effluent limitations for different types of pollution sources;[12] and the Clean Air Act (CAA), which sets the ambient air quality standards that must be achieved by each point source for specified pollutants.[13] Other federal statutes impose liability for cleanup of contaminated property, as well as a variety of comparable state statutes and common law liability impose liability for property damage.

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3 11 U.S.C. §§ 1101-74.

4 David G. Epstein, Steve H. Nickles & James J. White, Bankruptcy 463 (1993), *reprinted in* 1-3 Epstein, Nickles & White, Bankruptcy, Practitioner Treatise Series (1992).

5 *See id.* at 677.

6 *See id.* at 11.

7 *See id.* at 840.

8 42 U.S.C. §§ 9601-75 (2006).

9 42 U.S.C. § 9607(a).

10 *See* 42 U.S.C. § 9607(c)(2).

11 42 U.S.C. §§ 6901-92.

12 33 U.S.C. §§ 1251-87.

13 42 U.S.C. §§7401-71.

This article will provide an analysis of how the two bodies of law mesh to allow environmental liabilities to be handled in the bankruptcy context.

II. When is an Environmental Obligation a "Claim" and When Does It "Arise"

A. What are environmental "claims" under bankruptcy law

Whether an environmental obligation is a "claim" against the bankruptcy estate determines the manner in which it will be treated under a plan of reorganization in a Chapter 11 or Chapter 13 case (or scheduled as a claim to be paid out of assets of the estate in a Chapter 7 liquidation case). Treatment as a "claim" is not necessarily the best result, because if it is treated as an unsecured claim (thus, lower in the priority scale), the likelihood that it will be paid in full is normally very remote. If it is treated as an administrative claim, then it is more likely to be paid in full. However, if the obligation is not a "claim" as that term is defined under bankruptcy law, then the bankruptcy may not affect it at all, and it may survive the bankruptcy to be a continuing obligation of the estate, should the estate continue to exist.

Whether an obligation is a "claim" has two important consequences. First, the holder of a claim is entitled only to the distribution of assets of the estate. Second, the Debtor is entitled only to the discharge of its "debts," which the Bankruptcy Code defines as "liability on a claim."[14] .Thus, if an obligation is not a "claim," it is not a "debt" and is not discharged in bankruptcy. So, the Debtor's liability continues on this "non-claim" obligation. Whether this distinction would result in an increased ability to recover for the environmental obligations strictly depends on the type of bankruptcy case involved. For instance, if it is a Chapter 7 liquidation case of a corporation or other entity, the entity will not survive the bankruptcy, and the obligation will not be paid because the entity will not survive to pay it. Thus, the government or the potentially responsible parties (PRPs) making the claim should attempt to argue that it is a "claim" or run the risk of no recovery. However, if it is the Chapter 7 bankruptcy of an individual, then bankruptcy will discharge only past debts, and the environmental obligation will continue to exist and continue to be an obligation of the individual after the bankruptcy. Similarly, if it is a Chapter 11 reorganization of a corporation or Chapter 13 reorganization of an individual, the obligation will continue to be an obligation of the Debtor despite the bankruptcy and outside of the plan of reorganization. In which case, the government would want to argue that an environmental obligation is not a "claim."

Under bankruptcy law, a "claim" is defined as the:

> (A) right to payment, whether or not such right is reduced to judgment, liquidated, unliquidated, fixed, contingent, matured, unmatured, disputed, undisputed, legal, equitable, secured, or unsecured; or
>
> (B) right to an equitable remedy for breach of performance if such breach gives rise to a right to payment, whether or not such right to an equitable remedy is

14 11 U.S.C. §101(12) (2006).

reduced to judgment fixed, contingent, matured, unmatured, disputed, undisputed, secured, or unsecured.[15]

A creditor is an entity "that has a claim against the Debtor at the time of or before the order for relief concerning" the Debtor is entered.[16] In a Chapter 11 or 13 case, all debts arising pre-confirmation of the plan of reorganization are included in the bankruptcy.[17] Thus, two criteria must be met before an obligation will be treated as a claim. It must be a "debt" of the Debtor, and it must have existed prior to the filing of the case in a Chapter 7 case or prior to the confirmation of a plan in a Chapter 11 or 13 case.

1. Claims and equitable remedies v. governmental police power

Two separate sections of the Bankruptcy Code must be construed to determine whether many environmental obligations fall into the category of a "claim," or are instead the subject of governmental enforcement powers under orders or injunctions, and are thus non-dischargeable. The Bankruptcy Code defines a "claim" as not only a simple "right to payment," but also a "right to an equitable remedy for breach of performance if such breach gives rise to a right to payment."[18] Thus, if money is an available alternate remedy for performance of the equitable obligation, that obligation is a "claim" under Section 101(5)(B) of the Bankruptcy Code.

Alternatively, governmental entities have the right, despite a bankruptcy filing, to commence or continue actions to enforce their police or regulatory powers and to enforce nonmonetary judgments in pursuit of those powers.[19] Legislative history reveals that these exceptions are to be construed narrowly to permit the government to pursue matters affecting public health and safety, such as environmental pollution, but are not intended to apply when the governmental unit is pursuing purely monetary interests.[20] As will be discussed below, whether an environmental obligation gives "rise to a right to payment" or is an equitable remedy for breach of performance giving rise to a "right of payment," or alternatively, is an action covered by the enforcement of governmental police powers, and therefore, is neither a "claim" nor dischargeable, is one of the most contentious areas of litigation for environmental obligations.

The three basic environmental obligations faced by a Debtor are the obligation to: (1) pay money to the government or to a PRP for investigating and cleaning up a contaminated site usually under CERCLA or a similar state statute; (2) remediate a

15 11 U.S.C. § 101(5) (2006).

16 11 U.S.C. §101(10)(A). In a voluntary bankruptcy case, the order for relief is entered when the Debtor's bankruptcy petition is filed. In an involuntary case, in which creditors place a Debtor in bankruptcy, it is when the Court signs the "order for relief" determining that the creditors have met their burden of proof and the entity is one that is eligible for bankruptcy.

17 11 U.S.C. §1141(d).

18 11 U.S.C. § 101(5).

19 11 U.S.C. § 362(b)(4).

20 11 U.S.C.A. § 362(b)(4) (West 2010). (Annotations to § 362(b)(4) indicate that this section is to be given a narrow construction and does not apply to governmental actions to protect a pecuniary interest).

site pursuant to an EPA or state order; or (3) cease and desist the release of hazardous substances at a site pursuant to an injunctive order.

a. Claims for remediation already conducted

The simplest of scenarios is when the government (or PRP) has already conducted the remediation and (presuming that remediation occurred prior to the filing of the petition – or "arose" prior to the bankruptcy) the Debtors only remaining obligation is to pay money to the government. This obligation is a "right to payment" and falls squarely within the definition of a "claim."[21] The government (or PRP) is a creditor because the claim arose pre-petition (see below for a discussion of when claims "arise"). Thus, any right to payment would be covered in the Debtor's plan of reorganization as an unsecured claim, or would stand to be paid as an unsecured creditor in a Chapter 7 liquidation.

b. Injunctions prohibiting further contamination

Equally straightforward are injunctions pursuant to orders or judgments instructing the Debtor to cease activities that are giving rise to a release or threat of release of a hazardous substance. The order is not a "right to payment," and is not dischargeable because it is not a "claim" or "debt".[22] Such an order does not contemplate any "right of payment" that the Debtor can pay with money, and thus, money cannot be substituted for the action that the order requires of the Debtor.[23]

c. The obligation to perform a remediation

Much more difficult are the obligations that the government imposes on a Debtor to remediate a site. These obligations must be broken down into several sub-categories depending on the fact situation.

(1) When the Debtor owns the Site

If the Debtor owns the property that is contaminated by hazardous substances, and if that contamination has not been addressed pre-petition, the cases are clear that the post-petition obligation is the responsibility of the Debtor, as the "owner" or "operator" of the property (under CERCLA) to remediate the continuing release or threat of release of hazardous substances.[24] While the Debtor may have claims against other operators, generators, or arrangers for contribution, the Debtor will nonetheless be liable outside (or after) the bankruptcy for cleanup responsibilities and this obligation will not be discharged.

(2) Remediation under the CWA, CAA, RCRA, and comparable state statutes for which a "right of payment" does not exist

Certain environmental statutes, including the CWA, the CAA, RCRA, and comparable state statutes provide only an "enforcement" component under which the government requires the Debtor to take actions to stop continuing pollution or to

21 11 U.S.C. § 101(5)(A) (2006).
22 *Id.*
23 11 U.S.C. § 101(5).
24 *See* Matter of CMC Heartland Partners, 966 F.2d 1143 (7th Cir. 1992).

remediate existing pollution. These statutes do not have any alternate provision to allow the government to clean up the property and seek cost recovery. Thus, the government is not seeking "payment," and, does not have any "claim" against the Debtor due to these enforcement actions. Further, the fact that the Debtor might have to spend money or pay someone to carry out the cleanup in order to comply with the Order is not the same as the government having a "right to payment" thereby making the obligation a "claim."

In *U.S. v. Hubler,* the government, under the Surface Mining Control and Reclamation Act, sought to enforce a reclamation order requiring the Debtors, a partnership and its individual partners, to reclaim and restore mining lands.[25] The Debtors claimed that their obligations to restore the lands were effectively discharged in bankruptcy.[26] The Court held that the obligation was not a claim because, under the statute, the government did not have any right to demand payment from the Debtors, but could only compel them to comply with the Order to restore the lands.[27] Thus, the obligation was not discharged in bankruptcy.[28]

Therefore, Congress has dictated that when non-bankruptcy law provides an equitable remedy for performance and does not recognize any alternative right to payment for a breach of performance, the equitable remedy survives the bankruptcy.[29]

In a similar case, *Torwico Electronics, Inc. v New Jersey Department of Environmental Protection,* Torwico leased a site in New Jersey on which it operated a manufacturing facility.[30] Torwico later moved from this location, and eventually, filed for bankruptcy protection.[31] It listed the New Jersey Department of Environmental Protection (NJDEP) as a creditor, but the NJDEP did not file a claim.[32] Subsequently, the NJDEP assessed a fine and issued an Administrative Order demanding that the Debtor remediate the property.[33] The Order specifically stated that the obligations that it imposed were not debts or damage claims that could be discharged in bankruptcy.[34] The court found that the NJDEP did not seek money nor did it have a right to payment under the state statute pursuant to which the Order was issued.[35] The Debtor had an ongoing responsibility for the wastes for which it was responsible and had an obligation to remediate, despite the bankruptcy.[36]

More recently, a Debtor, Mark IV Industries, Inc., had remediated certain settling ponds, septic tanks, and leach fields twenty years previously, but groundwater under

25 U.S. v. Hubler, 117 B.R. 160 (W.D. Pa.1990), *aff'd*, 928 F.2d 1131 (3d Cir. 1991).
26 *Id.* at 163.
27 *Id.* at 164-65.
28 *Id.* at 165.
29 *In re* Udell, 18 F.3d 403, 406-10 (7th Cir. 1994); AM Int'l, Inc. v Datacard Corp., 106 F.3d 1342, 1348 (7th Cir. 1997) (a right to a RCRA injunction does not fall within the Code's definition of a dischargeable "claim").
30 Torwico Electronics, Inc. v. New Jersey Department of Environmental Protection (*In re* Torwico Electronics Inc.), 8 F.3d 146 (3d Cir. 1993).
31 *Id.* at 147.
32 *Id.*
33 *Id.* at 147-48.
34 *Id.* at 148.
35 *Id.* at 150.
36 *Id.* at 151.

its property nonetheless, remained at levels that exceeded acceptable federal and state water quality standards.[37] The New Mexico Environmental Department sought to enforce remediation under the New Mexico Water Quality Act. That Act did not provide any provision for the state to remediate the property and then recover response costs for the remediation. In other words, the statute did not have an alternative monetary remedy for the breach of the cleanup order. The bankruptcy court held that it did not matter that the State could have proceeded under other state statutes that did have an alternative right to recover costs for the remediation, since the State chose to seek enforcement under a statute that did not provide that right, and thus the claim was not dischargeable. "... [T]he focus is the statute under which it elected to proceed. If that statute does not provide NMED with the option to cleanup the contamination and recover the costs, Mark IV's equitable obligation to cleanup the contamination is not a 'claim' that was discharged by the confirmation order."[38]

The only U.S. Supreme Court case to address the issue regarding statutes that provide only enforcement rights to require a Debtor to remediate property reached a different result, but based on very specific facts. In *Ohio v. Kovacs*, the State of Ohio had ordered the individual Debtor to clean up a site that the Debtor and his corporation had contaminated.[39] When the Debtor refused to perform the cleanup, the State pursued the appointment of a receiver under a general state statute providing that right.[40] The state court appointed a receiver who took control of the Debtor's assets including the contaminated property.[41] Thus, the Debtor could no longer comply with the Order.[42] The Supreme Court held that by the State's appointment of a receiver, the cleanup order had effectively been transformed into an obligation to pay money.[43] Thus, an equitable obligation is not transformed into a right of payment of money unless the Debtor is unable to conduct the remediation, and payment of money is the only alternative. The Court was careful to say that it was not deciding what the result would have been had the receiver not actually been appointed and the State had sought only enforcement of its order.[44]

(3) Remediation when the statute gives alternate rights to compensation or to order remediation – CERCLA

More complicated still are the statutes that give an enforcement right and an alternate right to payment for remedial costs – like CERCLA. Under CERCLA, and many comparable state statutes, the government has the right to enforce remedial actions or in the alternative, to clean up the property and seek cost recovery from responsible parties.[45] The clean-up order requiring remediation fits the definition of police power, and the demand for cost recovery fits the definition of a "claim."

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37 *In re* Mark IV Industries Inc., 2010 WL 4225949 (Brk SD N.Y. Oct. 2010)
38 *Id.*
39 Ohio v. Kovacs, 469 U.S. 274 (1985).
40 *Id.* at 275.
41 *Id.* at 276.
42 *Id.* at 282-83.
43 *Id.* at 283.
44 *Id.* at 284.
45 42 U.S.C. §§ 9604(a)(1), 9607(a) and 9606.

Some courts have held that the very nature of the statute giving an alternate right to enforce remediation or to recover costs of the government remediation means that the statute gives rise to a "claim" regardless of which alternative the government chooses. In *In re Goodwin,* the bankruptcy court held that when the state statute gave the government the option of ordering a person to clean up or alternatively allowed the government to clean up the property, the obligation was a "claim" regardless of which option the government chose.[46] The court held that the clean-up remedy was squarely within the Bankruptcy Code definition of a "claim" in light of the alternative right to seek money.[47]

Other courts, however, look to which alternative the government has actually chosen to determine whether the obligation is a "claim" or a continuing obligation of the Debtor, and thus not dischargeable. Specifically, the Third, Fourth and Fifth Circuits have all found that governmental actions to enforce compliance with environmental requirements did not amount to "enforcement of a . . . money judgment" within the meaning of the statute, despite an alternative right to payment even if compliance would require the expenditure of money.[48] Additionally, in the Fifth Circuit, in a non-bankruptcy context, the appeals court held that the ability to select damages in lieu of an equitable remedy does not make the equitable obligation a "claim" when the claimant has pursued only the equitable remedy.[49]

In *In re Chateaugay Corporation,* the Debtor was potentially responsible for the cleanup of a number of sites around the country.[50] The Debtor's position was that its bankruptcy discharged all environmental liabilities. The government brought a declaratory judgment action to establish that the post-petition remediation was not dischargeable as they were not pre-petition claims.[51] The Second Circuit did not discuss the distinction in the statute concerning those obligations for which the government has an alternative right to seek payment of money and those that do not.[52] Instead, the court interjected a requirement not found in the statute: that the cleanup injunction found in the Order is a claim only if "ongoing pollution" is not occurring (presumably inferring the existence of solid but not hazardous wastes) irrespective of the ability to seek money instead of enforcing cleanup.[53] The court held that the future obligations were not claims, and thus, the government's orders were enforceable if the cleanup will end or prevent "future pollution" (inferring cleanup of hazardous waste).[54] Thus, the ultimate result was that the although the EPA has the right to cleanup and to seek

46 *In re* Goodwin, 163 B.R. 825, 831 (Bankr. D. Idaho 1993).
47 *Id.*
48 Safety Kleen, Inc. v. Wyche, 274 F.3d 846, 864 (4th Cir. 2001); Penn Terra, Ltd. v. Department of Environmental Resources, 733 F.2d 267, 278 (3d Cir. 1984); *Commonwealth Oil Refining Co.*, 805 F.2d at 1186-87.
49 Sheerin v. Davis, 3 F.3d 113, 116 (5th Cir. 1993).
50 *In re* Chateaugay Corp., 944 F.2d 997, 999 (2d Cir. 1991).
51 *Id.* at 1000.
52 *Id.* at 1008.
53 *Id.*
54 *Id.* at 1004.

recovery, if the EPA does not perform the cleanup and instead requires the Debtor to clean up the "continuing pollution," then this debt is not dischargeable.[55]

Other courts have applied what is known as the "practical effects" test to determine whether an environmental obligation is a "claim". Specifically, the case of *United States v. Whizco, Inc.* involved a coal mine reclamation order and corresponding injunction that the government obtained against an individual after a bankruptcy trustee took all of his assets and after his debts had been discharged in a Chapter 7 proceeding.[56] The Sixth Circuit determined that the injunction would have required the Debtor to hire others to perform work for him because he had surrendered all his mining equipment and his coal leases in the course of his bankruptcy proceeding, and he was 63 years old and incapable of conducting the work on his own.[57] Under these facts, the court ruled that the injunction was a dischargeable "claim" to the extent that fulfilling his obligation to reclaim the site would force the Debtor to spend money.[58] To lessen the stretch necessary to come to this conclusion, the court attempted to soften the result by saying: "To the extent that the defendant can comply with the . . . orders without spending money, his bankruptcy did not discharge his obligation to comply with the orders . . . . The defendant may, in the future, own equipment which would permit him to personally reclaim some portion of the site." [59] *Whizco* has not been followed by any subsequent reported Court of Appeals decision.

The *Whizco* result was specifically rejected in the Fifth Circuit in the case of *Commonwealth Oil Refining Co.* [60] In that matter the EPA sought to enforce a RCRA provision over the operations of a refinery.[61] The refinery had filed for bankruptcy and argued that compliance with the permit process would require it to spend money, and thus, be an action to enforce a money judgment.[62] The Fifth Circuit disagreed with this analysis and stated that the necessity to expend funds:

> cannot be the test for determining whether a governmental unit seeks to enforce a money judgment, such that its enforcement actions fall within the §362(b)(5) "exception to the exception" to the automatic stay...the EPA's administrative action is not, in form or in substance, an action to enforce a money judgment proscribed by §362(b)(5). The action is one to compel compliance with federal and state environmental laws.[63]

Because compliance with injunctive obligations will almost always cost money, an improper focus on compliance expenditures would negate the statute's "if" qualifier and make most injunctions subject to discharge.[64] Thus the "practical effect" test vio-

55 *Id.* at 1007.
56 United States v. Whizco, Inc., 841 F.2d 147 (6th Cir. 1998).
57 *Id.* at 149.
58 *Id.* at 150.
59 *Id.* at 151.
60 *Commonwealth Oil Refining Co.*, 805 F.2d at 1187.
61 *Id.* at 1179.
62 *Id.* at 1182.
63 *Id.* at 1186-87.
64 *Id.* at 1187.

lates the "cardinal principal of statutory construction . . . that, if it can be prevented, no clause, sentence or word shall be superfluous, void or insignificant."[65]

(4) Posting financial assurance – does not give rise to a "claim"

In many industrial operations or in conjunction with administrative orders to remediate contaminated properties, the owner, operator, arranger, or generator is required to post financial assurance to establish that sufficient funds will be available to ensure compliance with environmental obligations or the terms of the order. This situation was the case in *In re Industrial Salvage, Inc.*[66] In this case, an order was issued to close three landfills belonging to the Debtor.[67] The Debtor argued that because it had to post financial assurance, the state could recover the money from the fund and thus, the obligation was a "claim."[68] The bankruptcy court held that the requirement of providing financial assurance did not transform the closure obligation into a "right of payment" that would fit within the definition of a "claim."[69] Further, since the Debtor continued to own the property post-petition, the obligation to remediate the property became a post-petition, non-dischargeable debt.[70]

B. When Do the "Claims" Arise?

The first issue in a bankruptcy context is to determine whether the environmental obligation is a "claim". If it is not a claim, then when it arose is meaningless. However, the determination of whether it is a claim is often blurred by the determination of when the claim arose. In large part, the strategic decision whether to argue that the claim arose pre- or post- petition (or post-confirmation in a Chapter 11 case) depends on whether the claimant believes that the recovery will be greater under the plan of reorganization or will have a greater recovery as a post-petition administrative claim or as a claim outside the bankruptcy – thus payable in full and not subject to the limitations that might exist under the plan of reorganization.

It can sometimes be difficult to determine when the environmental obligations arose. The easier situations are when the obligation fully accrued at the time of the filing of the bankruptcy, *i.e.*, when the government fully remediated a site and is looking for payment under cost recovery. Those obligations are clearly "claims" that arose pre–petition and would be payable through the bankruptcy, and thus, subject to discharge. Pollution that occurs post-petition, *i.e.*, after the plan of reorganization is confirmed, is also easily determined to be a post-petition obligation not subject to the bankruptcy, and thus, fully payable.

Somewhat more complicated are situations when the pollution occurred pre-petition, but continues to be an imminent and substantial endangerment to health and the environment post-petition. More specifically, in cases when the Debtor is the actual owner of the property, the obligation to remediate falls to the Debtor as the owner of the property post-petition. The obligation of a Debtor to remediate its prop-

65 TRW Inc. v. Andrews, 534 U.S. 19, 31 (2001).
66 *In re* Industrial Salvage, Inc., 196 B.R. 784 (Bankr. S.D. Ill. 1996).
67 *Id.* at 785.
68 *Id.*
69 *Id.* at 788.
70 *Id.* at 788-89.

erty arises in the context of CERCLA law when the "owner" of property has liability for remediation.[71] However, some courts have held that if pollution is not ongoing post-petition, it may not be a continuing obligation of the Debtor and may be subject to discharge in bankruptcy.[72]

More complicated still, are cases when the Debtor was responsible for pre-petition contamination at a property that it does not own. In these cases, the relationship between the Debtor and the government becomes important in determining when the claim "arose." If the government knew or had the possibility of knowing of the harm that may result from the existing contamination, the court may hold that it is a "claim" that arose pre-petition and thus dischargeable. If the government could not have known that the Debtor may have liability for contamination at a particular site, then the court may hold that it was not a claim that arose pre-petition.

Additional factors that various courts have considered in relation to when a claim "arises" include: (1) when the Debtor did the action that resulted in pollution; (2) when the cause of action accrued under federal or state law as to the government or third party; (3) when the government incurred the remediation costs; (4) whether the government knew of the environmental obligations of the Debtor at a site; and (5) whether the government had a significant relationship with the Debtor that would have resulted in the government being aware that a claim could potentially exist.

1. Conduct Test

The claim arises when the acts of the Debtor first occurs. Courts that follow this approach hold that a claim for response costs under CERCLA is "a dischargeable prepetition claim when a release or threat of release of hazardous wastes has occurred pre-petition".[73] In *In re Tutu Wells Contamination Litigation,* the court refused to hold that the cleanup obligation was discharged since the conduct giving rise to the contamination was conducted post-petition.[74] Alternatively, in *In re Piece Coal and Construction Inc,*[75] the district court held that the state's claim against a Chapter 7 debtor for cleanup costs of hazardous waste located on the property of the Debtor's corporation arose prepetition because the "conduct" of the Debtor occurred prepetition, and the claim did not occur when the right of payment occurred, or when the plaintiff incurred the costs of the remedation.

2. Accrual Test

The claim does not arise until all of the acts on which the cause of action is based have occurred. The federal district court in *United States v. Union Scrap Iron & Metal* stated that "a claim only exists when the pre-bankruptcy relationship between the Debtor and third party contained all the elements necessary to give rise to a legal obligation under the relevant substantive non-bankruptcy law."[76] Since CERCLA requires

71 42 U.S.C. § 9607(a)(1) (2006); *In re* Conseco Life Ins. Co. Cost of Ins Litigation, 2005 WL2203150 (C.D. Cal. 2005); *Matter of CMC Heartland Partners*, 966 F.2d 1143.

72 *In re* Chateaugay Corp., 944 F.2d 997, 1008 (2d Cir. 1991).

73 *In re* New York Trap Rock Corp., 153 B.R. 642, 645 (Bankr. S.D.N.Y. 1993).

74 *In re* Tutu Wells Contamination Litigation, 846 F.Supp. 1243, 1279 (D.V.I. 1993).

75 *In re* Pierce Coal & Constr., Incl, 65 BR. 521 (N.D.W.Va. 1986).

76 United States v. Union Scrap Iron & Metal, 123 B.R. 831, 835 (D. Minn. 1990).

that the government actually incur costs before it can bring a cost recovery action, then when the government first incurs costs post-petition, the claim is a post-petition claim. However, the cases that do not agree with this test base their disagreement on the basis that the government's obligation need not be ripe so long as all of the acts giving rise to CERCLA liabilities have occurred.[77] In such a case, the claim would be a contingent claim, but a claim nonetheless.

3. The Prepetition Relationship Test

The Debtor's conduct gives rise to a claim only if a relationship was established between the Debtor and the creditor before the bankruptcy is filed (or plan is confirmed). Related to this principle of this test is the concept that a claim does not arise until the claimant has some knowledge or notice of the claim. The Seventh Circuit in *In re Chicago, Milwaukee, St. Paul & Pacific R. Co.*, outlined the information necessary to raise sufficient notice of a claim:

> When a potential CERCLA claimant can tie the bankruptcy debtor to a known release of a hazardous substance which the potential claimant knows will lead to CERCLA response costs, and when this potential claimant has, in fact, conducted tests with regard to this contamination problem, then the potential claimant has, at least, a contingent CERCLA claim under section 77.[78]

Thus, the government or a PRP attempting to determine whether it has a claim in a bankruptcy, must look to both the nature of the obligation as a "claim" and when the claim "arose" in order to properly assess its position.

III. Trustee Obligations Regarding Contamination

Section 959(b) of Title 28 of the United States Code, provides that "a trustee . . . appointed in any case pending in any court of the United States, including a debtor-in-possession, shall manage and operate the property in his possession as such trustee . . . according to the requirements of the valid laws of the State in which such property is situated, in the same manner that the owner or possessor thereof would be bound to do if in possession thereof."[79] While Section 959(b) only specifically mentions state laws, courts have generally interpreted the section to require trustees to also comply with all applicable law.[80] Thus, trustees must comply with all valid local, state, and federal laws.

A split of authority exists as to whether Section 959(b) applies in all bankruptcy cases or rather to just those cases in which the trustee (or debtor-in-possession) is operating as opposed to merely liquidating.[81] The majority position is that Section

77 *In re* National Gypsum Co., 139 B.R. 397, 405 (N.D. Tex. 1992).

78 *In re* Chicago Milwalkee, St. Paul & Pacific R. Co., 974 F.2d 775, 786 (7th Cir. 1992).

79 28 U.S.C § 959(b) (2006).

80 Ahern, Lawrence R. III & Darlene T. Marsh, Environmental Obligations in Bankruptcy § 8:36 (Scott M. Ratcliffe & Elaine Keller-Petryk eds., 2009).

81 *Id.* at § 8:37.

959 applies in both operating and liquidating bankruptcy cases.[82] While the minority position maintains that Section 959(b) does not apply in liquidation proceedings.[83] Accordingly, a trustee will have an obligation to comply with all local, state, and federal laws in those cases in which the Debtor is operating, but in liquidation cases the trustee's obligations will depend on the state of the law within the jurisdiction in which the case is pending.

IV. SALES OF CONTAMINATED PROPERTY PURSUANT TO SECTION 363 OF THE BANKRUPTCY CODE

Pursuant to Section 363 of the Bankruptcy Code, a trustee or debtor-in-possession may use, sell, or lease property of the bankruptcy estate in the ordinary course of the Debtor's business.[84] Moreover, Section 363(f) allows a trustee or debtor-in-possession, under certain conditions, to sell estate property free and clear of all liens, claims, and encumbrances.[85] Sales pursuant to Section 363(f) are conditioned, *inter alia*, upon either the consent of secured parties or the sale price being greater than the value of all liens on the property.[86]

Section 363(f)(1) provides that a trustee may sell property free and clear of all interests if "applicable non-bankruptcy law permits sale of such property free and clear of such interests."[87] Thus, even in those instances in which a secured creditor consents to the sale of contaminated property, questions may arise as to whether such a sale is permissible under applicable environmental laws.

A. COURT APPROVED SALES OF CONTAMINATED PROPERTY

While the Third Circuit Court of Appeals later determined the decision to be moot and vacated it, the bankruptcy court in *In re Heldor Indus., Inc.* allowed the Debtor to sell contaminated property without complying with the New Jersey's environmental laws due in large part to the fact that the State of New Jersey failed to lodge a timely objection to the sale.[88]

In *Heldor*, the Debtor first proposed to sell contaminated property for less than it owed to the secured creditor and pursuant to the sales contract, comply with all environmental laws.[89] The secured creditor objected to the proposed sale, but later withdrew its objection when the sale terms were altered to remove the Debtor's obliga-

82 *See In re* Wall Tube & Metal Prods. Co., 831 F.2d 118 (6th Cir. 1987); *In re* Grace Coal Co., Inc., 155 B.R. 5 (Bankr. E.D. Ky. 1993); *In re* Stevens, 68 B.R. 774 (D. Me. 1987); *In re* Microfab, Inc., 105 B.R. 161 (Bankr. D. Mass. 1989).

83 *See In Re* N.P. Mining Co., Inc. 963 F.2d 1449 (11th Cir. 1992); *In re* Catamount Dyers, Inc., 50 B.R. 790 (Bankr. D. Vt. 1985).

84 11 U.S.C. § 363 (2006).

85 11 U.S.C. § 363(f).

86 AHERN & MARSH, *supra* note 80, at § 9:42.

87 11 U.S.C. § 363(f)(1) (2006).

88 *In re* Heldor Indus., Inc., 131 B.R. 578 (Bankr. D. N.J. 1991), order vacated, 982 F.2d 702 (3rd Cir. 1993).

89 *Id.* at 581.

tion to comply with all environmental laws.[90] The bankruptcy court issued an order approving the sale and the proceeds of the sale were placed into escrow until a settlement agreement, allocating those proceeds, was approved.[91] Once the settlement agreement was presented to the court, the court issued a show cause order as to why the settlement should not be approved.[92] The New Jersey Department of Environmental Protection filed an objection to the settlement because the sale did not require the Debtor to comply with state environmental law.[93] Thus, the issue before the court was whether it could approve the settlement without requiring compliance with state environmental law.

Rejecting New Jersey's argument that despite its failure to object to the sale the court could still avoid the sale due to the failure to comply with state environmental law, the court held that New Jersey was given proper notice of the sale, the State failed to timely object, and thus, the order approving the sale was final and binding.[94] Citing concern for the finality of orders addressing the sale of estate property, the court further held that state environmental law could not change the result of the order approving the sale, that such an attack was barred by *res judicata*, and that applying state law to avoid the sale after the court approved the sale would violate the supremacy clause of the United States Constitution.[95]

B. Section 363(f)(1) and Environmental Law Restrictions on Transfers

As discussed above, Section 363(f)(1) provides that a trustee may sell property free and clear of interest so long as the transfer is not prohibited by applicable non-bankruptcy law.[96] In *In re Pintlar Corporation*, the Debtor attempted to convey contaminated property to some of its environmental creditors, one of which was the Environmental Protection Agency.[97] Due to restrictions under CERCLA, which prevented the EPA from taking property subject to certain interests, Section 363(f)(1) became an impediment to the transfer of the property free and clear pursuant to section 363(f).[98]

In *Pintlar*, the Debtor's predecessor had granted certain mining companies a release of liability related to dumping activities and an easement to continue those activities.[99] The release and easement prevented the EPA, due to CERCLA, from taking title to the property.[100] The EPA was successful in arguing to the court that the release did not run with the land, but rather was personal in nature and thus, did not violate

90 *Id.*
91 *Id.* at 582.
92 *Id.* at 583.
93 *Id.*
94 *In re* Heldor Indus., Inc., 131 B.R. 578 (Bankr. D. N.J. 1991), order vacated, 982 F.2d 702 (3rd Cir. 1993).
95 *Id.* at 584-85.
96 11 U.S.C. 363(f)(1) (2006).
97 *In re* Pintlar Corp. 187 B.R. 680 (Bankr. D. Idaho 1995).
98 *Id.* at 681-82.
99 *Id.* at 682.
100 *Id.*

CERCLA.[101] However, despite the court's recognition that the easement ran afoul of current environmental laws, and therefore, was a "worthless property right," it held that environmental law would not allow the transfer free and clear of the easement.[102] Thus, the court had the authority to approve the sale free and clear of the release but not free and clear of the easements.

1. Do Purchasers take Property Free and Clear of Environmental Obligations Under Section 363(f) Sales?

Whether a buyer can purchase property pursuant to a Section 363(f) sale, free and clear of environmental obligations has received consideration by both commentators and courts.[103] In *Ninth Avenue Remedial Group v. Allis-Chalmers Corporation*, the federal district court determined that a purchaser taking property pursuant to a Section 363(f) sale did not acquire the property free of claims that were not subject to the bankruptcy process.[104] The court explained that *claims not subject to the bankruptcy process* meant "future claims that did not arise until after the bankruptcy proceeding."[105] Thus, under the *Allis-Chalmers, Corp.* holding, a sale pursuant to Section 363(f) can be free and clear of those environmental claims against a Debtor that arose prior to the completion of the bankruptcy proceeding. However, this obligation is separate from the obligation of an owner of property under CERCLA to remediate its own property – this obligation is a separate in *personam* liability.[106]

While not decided in the context of an environmental bankruptcy case, courts have held that a sale pursuant to Section 363(f) is not intended to extinguish *in personam* liabilities.[107] However, in another non-environmental case, the Fourth Circuit Court of Appeals held that a Debtor could sell its assets free and clear of its obligations, pursuant to federal law, to make future contributions to the retirement plans for coal miners.[108] However, the court did recognize that a split of authority exists among the courts to have decided this issue.[109]

V. Abandonment of Contaminated Property

Section 544 of the Bankruptcy Code allows a trustee or debtor-in-possession to "abandon any property of the estate that is burdensome to the estate or that is of

101 *Id.*
102 *Id.*
103 AHERN & MARSH, *supra* note 80, at § 9:43.
104 Ninth Ave. Remedial Group v. Allis-Chalmers Corp., 195 B.R. 716 (N.D. Ind. 1996).
105 *Id.* at 732.
106 42 U.S.C. §§ 9604(a)(1), 9607(a) and 9606 (2006).
107 Fairchild Aircraft Corp. v. Cambell (*In re* Fairchild Aircraft Corp.), 184 B.R. 910, 917-18 (Bankr. W.D. Tex. 1995), decision vacated on other grounds, 220 B.R. 909 (Bankr. W.D. Tex. 1998) (holding that purchase of the assets of the debtor airplane manufacturer could not be free and clear of claims of parties who were or would be injured by plane crashes post-petition and post-confirmation).
108 *See* United Mine Workers of America v. Leckie Smokeless Coal Co., *(In re* Leckie Smokeless Coal Co.), 99 F.3d 573 (4th Cir. 1996) (in reaching its holding, the court reasoned, *inter alia*, that the obligations were based upon the debtor's pre-petition actions).
109 *Id.* at 581-82.

inconsequential value and benefit to the estate."[110] In the case of real property, this power is commonly exercised to rid the estate of property whose value is outweighed by mortgages or other liens.[111] However, difficult questions arise when the property the trustee wants to abandon is contaminated. Allowing abandonment of the site to free the estate of a burdensome asset creates a potential conflict with the general duty placed on the trustee to "manage and operate" the estate property "according to the requirements of the valid laws of the State in which such property is situated, in the same manner that the owner or possessor thereof would be bound to do if in possession thereof."[112] In an effort to maximize the benefit to the estate (and in turn, the creditors), can a trustee abandon burdensome contaminated property without running afoul of the duty to operate the property within the bounds of state environmental laws?

A. The *Midlantic* Decision

The Supreme Court addressed the ability of a trustee to abandon contaminated property in the *Midlantic case*.[113] The States of New York and New Jersey discovered that a waste oil processor with a facility in each state had accepted hundreds of thousands of gallons of oil contaminated with PCBs.[114] When unable to sell the New York facility, the trustee gave notice of his intent to abandon the property.[115] All parties to the processor's bankruptcy agreed that the New York site was burdensome within the meaning of Section 554, but State of New York objected to the trustee's abandonment plan, arguing that the proposed abandonment posed a risk to the public's health and safety.[116] The trustee also later moved to abandon the personal property at the New Jersey site, primarily consisting of the PCB contaminated oil.[117]

In a 5-4 decision, the Court found support for restricting the trustee's power to abandon in "repeated congressional emphasis on its goal of protecting the environment against toxic pollution," as evidenced by the then newly-enacted Resource Conservation and Recovery Act and the Comprehensive Environmental Response, Compensation, and Liability Act.[118] The majority held that "a trustee may not abandon property in contravention of a state statute or regulation that is reasonably designed to protect the public health or safety from identified hazards."[119] The decision went on to note that:

> This exception to the abandonment power vested in the trustee by § 554 is a narrow one. It does not encompass a speculative or indeterminate future viola-

110 11 U.S.C. § 554(a) (2006).
111 *See* Midlantic Nat'l Bank v. New Jersey Dep't Envtl. Prot., 474 U.S. 494 (1986).
112 28 U.S.C. § 959(b) (2006) (placing same requirement on debtors-in-possession as those placed upon trustees).
113 *Midlantic Nat'l*, 474 U.S. 494.
114 *Id.* at 497.
115 *Id.*
116 *Id.* at 498.
117 *Id.*
118 *Id.* at 505-06.
119 *Id.* at 507.

tion of such laws that may stem from abandonment. The abandonment power is not to be fettered by laws or regulations not reasonably calculated to protect the public health or safety from imminent and identifiable harm.[120]

B. THE *MIDLANTIC* FACTOR

Since the *Midlantic* decision, courts have utilized a number of factors when considering the abandonment of contaminated property. Such factors include:

(1) whether the court can formulate conditions to protect the public health and safety if abandonment is allowed;
(2) whether state law may be so onerous as to interfere with the bankruptcy proceeding;
(3) whether the state (of federal) statute is reasonably designed to protect the public health and safety from identified hazards, or is reasonably calculated to protect public health and safety from imminent danger and identifiable harm;
(4) whether the harm is speculative;
(5) whether the debtor has unencumbered assets from which to pay for the cleanup or other environmental obligation;
(6) whether allowing abandonment will aggravate an existing condition that is imminently dangerous; and
(7) whether there is a present or imminent threat to the public health and safety.[121]

While in some instances redundant, all of these factors were derived from the *Midlantic* opinion.[122] Although courts interpreting *Midlantic* differ on the precise extent of the exception discussed above, the developing case law tends to place the emphasis on footnote 9 and the presence or absence of "imminent and identifiable harm" in a given case.[123]

C. THE MAJORITY POSITION

The majority of courts to consider the issue have adopted a narrow interpretation of the *Midlantic* decision, allowing trustees to abandon property despite it being environmentally impacted when a showing of imminent and identifiable harm is not made or when the estate did not have any unencumbered assets available to fund compliance with environmental laws.[124] However, the various courts' interpretations of

120 *Id.* at n. 9.
121 AHERN & MARSH, *supra* note 80, at § 5:22.
122 *Id.* at § 5:23.
123 *Id.* at § 5:23.
124 *See, e.g.*, *In re* Smith-Douglas, Inc., 856 F.2d 12 (4th Cir. 1988); N.M. Env't. Dep't v. Foulston (*In re* L.F. Jennings Oil Co.), 4 F.3d 887 (10th Cir. 1993); In re Unidigital, Inc., 262 B.R. 283 (Bankr. D. Del. 2001); State of N.J. Dep't of Envtl. Prot. v. North American Prods. Acquisition Corp., 137 B.R. 8 (D.N.J. 1992); *In re* St. Lawrence Corp., 248 B.R. 734 (D.N.J. 2000); *In re* H.F. Radandt, Inc., 160 B.R. 323 (Bankr. W.D. Wis. 1993); *In re* Doyle Lumber, Inc., 137 B.R. 197 (Bankr. W.D. Va. 1992); *In re* Guterl Special Steel Corp., 316 B.R. 843 (Bankr. W.D. Pa. 2004); *In re* Shore Co., Inc., 134 B.R. 572 (Bankr. E.D. Tex. 1991); *In re* Purco, Inc., 76

Midlantic differ significantly, and therefore, result in the application of restrictions on the trustee's abandonment power in a variety of ways.

In *In re Okl. Refining Co.*, a refinery filed for Chapter 11 protection.[125] The trustee eventually ceased operations at the plant and closed down the facility.[126] The trustee cooperated with Oklahoma's environmental agencies and employed a consulting firm to prepare an environmental investigation of the site; the trustee was also in compliance with a consent agreement with state agencies, with the exception of obtaining approval of a closure plan and providing financial assurances consistent with state law. [127] If cleaned up and restored, the land would have been worth approximately $100,000. However, clean up costs were estimated to be at least $2.5 million, and the estate did not hold any unencumbered assets.[128] Noting that *Midlantic* neither addressed how a trustee was to pay for a cleanup nor reached the question of the ultimate disposition of the property, the *Oklahoma Refining* court reasoned that the Supreme Court did not intend to place a trustee in the Catch-22 of requiring strict compliance with state environmental requirements while lacking the assets to comply with them fully.[129] Rather, "*Midlantic* requires the bankruptcy court, in determining whether to permit abandonment, take state environmental laws and regulations *into consideration*."[130]

Although testimony of a long history of dumping substances onto the ground and into an adjacent creek in the years prior to environmental controls was presented, and evidence of subsurface hydrocarbon contamination reaching an underground aquifer, testimony indicated that toxic substances had not been found in nearby public water supplies and that public health and safety was not facing "immediate and menacing harm."[131] Based on these factors, the court approved the motion for abandonment, noting:

> To require strict compliance with State environmental laws under the facts of this case could create a bankruptcy in perpetuity and fetter the estate to a situation without resolve. . . . To pre-empt the administration of this estate would derogate the spirit and purpose of the bankruptcy laws requiring prompt and effectual administration within a limited time period.[132]

Similarly, a Texas bankruptcy court adopted the more narrow view of *Midlantic*, holding that the "trustee's right to abandon environmentally impacted estate property is limited only by the precondition that the trustee remediate any imminent and

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B.R. 523 (Bankr. W.D. Pa. 1987); *In re* Okla. Refining Co., 63 B.R. 562 (Bankr. W.D. Okla. 1986); *In re* Brio Refining, Inc., 86 B.R. 487 (Bankr. N.D. Tex. 1988); *In re* FCX, Inc., 96 B.R. 49 (Bankr. E.D. N.C. 1989).

125 63 B.R. 562 (Bankr. W.D. Okla. 1986).

126 *Id.* at 563.

127 *Id.*

128 *Id.* at 562-64.

129 *Id.* at 565-66.

130 *Id.* at 565 (emphasis added).

131 *Id.*

132 *Id.* at 565-66 (internal citations omitted).

identifiable danger present on the property. . . ."[133] With the defunct refinery at issue in *Shore*, the Texas Water Commission (TWC) and the EPA failed to demonstrate to the court that public health and safety faced an immediate and identifiable harm.[134] As in *Oklahoma Refining*, the bankruptcy estate lacked surplus funds to clean up the property, and in spite of the presence of cadmium, chromium, lead, unlined earthen pits, 55 gallon drums of acidic liquids, and 200,000 gallons of oil sludge, the TWC's field officer testified that nothing at the property caused imminent harm to the people around the site.[135] Accordingly, the court allowed the trustee to abandon the property.[136] Further, in reaching its holding, the *Shore* court placed "great weight" on the TWC's "tepid" history of enforcement over a long period of time prior to and during the pendency of the bankruptcy in determining that the public did not face imminent risk of harm.[137]

D. THE MINORITY POSITION

A minority of courts have taken a broader view of *Midlantic* and placed additional hurdles in front of trustees attempting to abandon environmentally compromised properties.[138] The bankruptcy court in *Peerless Plating* found that *Midlantic* created an implicit duty on the trustee to remediate by expending all of the estate's unencumbered funds even though the EPA failed to offer evidence of immediate and identifiable danger.[139] The majority of courts have adopted a narrow reading of *Midlantic* and placed great emphasis on the "narrow exception" language found in footnote nine of the opinion. While the minority position has interpreted *Midlantic* to mean that a trustee may not abandon property unless and until the property complies with all state and federal environmental regulations. Regardless of the view adopted by a particular court, the touchstone for opposing the abandonment of contaminated property is the demonstration of "imminent and identifiable" harm to the public health and safety.

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133 *In re* Shore Co., Inc., 134 B.R. 572 (Bankr. E.D. Tex. 1991). *See also In re* Doyle Lumber, Inc., 137 B.R. 197, 203 (Bankr. W.D. Va. 1992); *In re* L.F. Jennings Oil Co., 4 F.3d 887, 890 (10th Cir. 1993).

134 *In re* Shore Co., Inc., 134 B.R. at 580.

135 *Id.*. at 574; *see also In re* Smith-Douglas, Inc., 856 F.2d 12, 17 (4th Cir. 1988) (holding that the Chapter 11 trustee ould abandon fertilizer plant in absence of evidence of imminent harm, in spite of repeated violations of Illinois environmental laws, and further holding that "where the estate has unencumbered assets, the bankruptcy court should require stricter compliance with state environmental law before abandonment is permitted.").

136 *In re* Shore Co., Inc., 134 B.R. at 579.

137 *Id.* at 579.

138 *See, e.g., In re* Wall Tube & Metal Prods. Co., 831 F.2d 118, 122 (6th Cir. 1987) (opining that trustee would not be allowed to abandon property that would result in health hazard); *In re* Stevens, 68 B.R. 774, 780-781 (D. Me. 1987) (holding that abandonment would not be allowed because it would result in violation of state law and cause threat to public safety).

139 *In re* Peerless Plating Co., 70 B.R. 943 (Bankr. W.D. Mich. 1987); *see also In re* Wall Tube & Metal Prods. Co., 831 F.2d at 122 (holding that a Chapter 7 trustee was not permitted to abandon or to possess property "in continuous violation of that same law.").

VI. Environmental Claims and the Automatic Stay Under Section 362 of the Bankruptcy Code

A. The Automatic Stay

When a Debtor files a bankruptcy case it is automatically afforded certain protections from its creditors; namely those protections provided by Section 362 of the Bankruptcy Code, which is commonly referred to as the "Automatic Stay." Section 362 of the Bankruptcy Code provides, in pertinent part, that:

> (a) Except as provided in subsection (b) of this section, a petition filed under section 301, 302, or 303 of this title . . . operates as a stay, applicable to all entities, of –
>
> 1. the commencement or continuation, including the issuance of employment of process, of a judicial, administrative, or other action or proceeding against the debtor that was or could have been commenced before the commencement of the case under this title, or to recover a claim against the debtor that arose before the commencement of the case under this title;
> 2. the enforcement, against the debtor or against property of the estate, of a judgment obtained before the commencement of the case under this title;
> 3. any act to obtain possession of property of the estate or of property from the estate or to exercise control over property of the estate;
> 4. any act to create, perfect, or enforce any lien against property of the estate;
> 5. any act to create, perfect, or enforce against property of the debtor any lien to the extent that such lien secures a claim that arose before the commencement of the case under this title;
> 6. any act to collect, assess, or recover a claim against the debtor that arose before the commencement of the case under this title;[140]

Thus, the Automatic Stay prevents entities from undertaking various actions against a Debtor once its bankruptcy case has been filed.[141]

Among the many justifications routinely given to explain the Automatic Stay is that it provides debtors a breathing spell in which to get their affairs in order.[142] The Automatic Stay also serves to preserve the estate for the benefit of all creditors by preventing levy, execution, or repossession, and stopping litigation that would otherwise drain estate resources.[143] Moreover, the Automatic Stay serves to ensure that certain creditors do not gain advantages over other creditors (*i.e.*, by racing to the courthouse or enforcing judgments thereby leaving nothing for other creditors).[144] In the context

140 11 U.S.C.§ 362(a) (2006).

141 *See id.*

142 U.S. v. Nicolet, Inc., 857 F.2d 202, 207 (3d Cir. 1988); *Commonwealth Oil Refining Co., Inc.*, 805 F.2d at 1182.

143 Ahern & Marsh, *supra* note 80, at § 4:4.

144 *Id.*

of environmental cases, subsections (a)(1), (a)(2), (a)(3), (a)(4), and (a)(6) of Section 362 are the most commonly involved automatic stay provisions.[145] Subsection (a)(1) works to stay formal proceedings against a debtor, which were or could have been commenced against the debtor before it filed its bankruptcy petition.[146] Subsection (a)(2) prevents parties from enforcing judgments against the debtor, which were obtained prior to the filing of the bankruptcy case.[147] Subsection (a)(3) prevents parties, such as secured creditors, from taking actions to gain control over estate property.[148] Finally, subsection (a)(6) serves to stay any act meant to collect, establish, or recover a claim against the debtor that arose before the debtor filed its bankruptcy case.[149]

B. Exceptions to the Automatic Stay

While Section 362 of the Bankruptcy Code generally prohibits entities from taking actions against a Debtor, subsection (b) of Section 362 provides certain exceptions to the Automatic Stay thereby allowing creditors, in some instances, to continue taking certain actions against the Debtor and/or its property.[150] However, courts generally hold that exceptions to the protections afforded by the Automatic Stay are to be narrowly construed.[151]

Section 362(b) provides in pertinent part that:

> The filing of a petition under section 301, 302, or 303 of this title . . . does not operate as a stay–
>
> (1) under subsection (a) of this section, of the commencement or continuation of a criminal action or proceeding against the debtor;
>
> . . .
>
> (3) under subsection (a) of this section, of any act to perfect, or to maintain or continue the perfection of, an interest in property to the extent that the trustee's rights and powers are subject to such perfection under section 546(b) of this title or to the extent that such act is accomplished within the time period provided under section 547(e)(2)(A) of this title;
>
> . . .
>
> (4) under paragraph (1), (2), (3), or (6) of subsection (a) of this section, of the commencement or continuation of an action or proceeding by a governmental unit or any organization exercising authority under the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, opened for signature on January 13, 1993, to enforce such *governmental unit's or organization's police and regulatory power*, including the enforcement of a judgment *other than a money*

145 *Id.* at § 4:5.
146 11 U.S.C. § 362(a)(1) (2006).
147 11 U.S.C. § 362(a)(2).
148 11 U.S.C. § 362(a)(3).
149 11 U.S.C. § 362(a)(6).
150 11 U.S.C. § 362(a) and (b).
151 *See, e.g.* McMullen v. Sevigny (*In re* McMullen), 386 F.3d 320 (1st Cir. 2004); Hillis Motors, Inc. v. Hawaii Auto. Dealers' Ass'n, 997 F.2d 581, 590 (9th Cir. 1993); *In re* Goodwin, 163 B.R. 825, 827 (Bankr. D. Idaho 1993).

> *judgment*, obtained in an action or proceeding by the governmental unit to enforce such governmental unit's or organization's police or regulatory power; . . . .[152]

Thus, under subsection (b)(1), the Debtor cannot stay criminal proceedings by filing a bankruptcy petition.[153] The exception under subsection (b)(3) allows creditors, in certain instances, to perfect, maintain, or continue liens subject to the limitations set out in Sections 546(b) and 547(e)(2)(A) of the Bankruptcy Code.[154]

Subsection (b)(4), however, is unique in that it applies only to governmental units or organizations seeking to enforce their police and regulatory powers.[155] For fairly obvious reasons, this exception is commonly referred to as the "police and regulatory power exception." To determine which entities qualify as "governmental units or organizations" under subsection (b)(4), one must look to the definition of "governmental unit" under the Bankruptcy Code.

The Bankruptcy Code defines a "governmental unit" by stating that the term:

> means United States; State; Commonwealth; District; Territory; municipality; foreign state; department, agency, or instrumentality of the United States (but not a United States trustee while serving as a trustee in a case under this title), a State, a Commonwealth, a District, a Territory, a municipality, or a foreign state; or other foreign or domestic government.[156]

Thus, federal, state, and local governments as well as administrative agencies, such as the Environmental Protection Agency, and state and local environmental agencies, are included under the Bankruptcy Code's definition of "governmental unit," and therefore, are allowed to utilize the exception.[157] However, at least one court has held that private parties attempting to act on behalf of a government to enforce environmental laws are not included among those allowed to utilize the exception afforded by subsection (b)(4).[158]

To determine whether a particular action qualifies for the enforcing environmental laws under the subsection (b)(4) exception, the courts utilize two tests to determine whether the action is intended to primarily to promote the public safety and welfare.[159] The first of these tests is known as the "pecuniary purpose test." When applying the

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152 11 U.S.C. § 362(b) (emphasis added).

153 11 U.S.C. § 362(b)(1); *see also* AHERN & MARSH, *supra* note 77, at § 4:6 (noting that the exception maybe of importance to a governmental unit seeking to enforce criminal sanctions and/or seeking to pursue criminal enforcement of environmental laws).

154 11 U.S.C. § 362(b)(3) (2006).

155 11 U.S.C. § 362(b)(4); *see also Commonwealth Oil Refining Co., Inc.*, 805 F.2d 1175. (holding that under its police powers the government could continue action to force debtor to comply Resource Conservation and Recovery Act).

156 11 U.S.C. § 101(27).

157 *See, e.g.*, N.L.R.B. v. Continental Hagen Corp., 932 F.2d 828, 832 (9th Cir. 1991); City of New York v. Exxon Corp., 932 F.2d 1020, 1025 (2d Cir. 1991).

158 *See In re* B & I Realty Co., Inc., 158 B.R. 220 (Bankr. W.D. Wash. 1993).

159 *See, e.g.*, McMullen v. Sevigny (*In re* McMullen), 386 F.3d 320, 325 (1st Cir. 2004); *In re* Fitch, 123 B.R. 61, 63 (Bankr. D. Idaho 1991); City of San Francisco v. PG & E Corp., 433 F.3d 1115 (9th Cir. 2006), *cert denied*, 127 S. Ct. 208 (2006); N.L.R.B. v. Continental Hagen Corp.,

pecuniary purpose test, the court considers the totality of the circumstances to determine whether the primary purpose of the action is pecuniary in nature. *Id.* If the court ultimately determines that the action is for pecuniary purposes, then subsection (b)(4) does not apply and the action is stayed. *Id.* The second test is known as the "public policy test." Under the public policy test, a court must consider whether the action seeks to promote public policies or rather seeks to protect private rights.[160] If the action is ultimately determined to be for the purposes of effectuating public policy, as opposed to protecting private rights, then the subsection (b)(4) exception applies, and the action is not subject to the automatic stay.[161] If, however, the court determines that the action is meant to protect private rights then the exception does not apply and the action is subject to the automatic stay.[162]

Courts have generally held that governmental units are not stayed from pursing the following types of actions: (a) actions to compel ongoing compliance with environmental laws; (b) actions to fix (but not recover) damages; (c) actions to compel debtor/owners of contaminated sites to proceed with a cleanup; and (d) actions to enforce pre-petition judgments ordering cleanup.[163] Even if an action is subject to the automatic stay, parties in interest, both private and governmental, have the right to move to have the automatic stay lifted to pursue such actions against a debtor in bankruptcy.[164] Section 362(d) provides, in pertinent part, that:

> On request of a party in interest and after notice and a hearing, the court shall grant relief from the stay provided under subsection (a) of this section, such as by terminating, annulling, modifying, or conditioning such stay–
>
> (1) for cause, including the lack of adequate protection of an interest in property of such party in interest;
>
> (2) with respect to a stay of an act against property under subsection (a) of this section, if–

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932 B.R. at 833-35; *In re* FV Steel and Wire Co., 324 B.R. 701 (Bankr. E.D. Wis. 2005); Penn Terra Ltd. v. Dep't of Envtl. Services, Com. Of Pa., 733 F.2d 267 (3d Cir. 1984).

160 *See* N.L.R.B. v. Edward Cooper Painting, Inc., 804 F.2d 934, 942 (6th Cir. 1986); *Lockyer v. Mirant Corp.*, 398 F.3d 1098 (9th Cir. 2005)

161 *Id.*

162 *Id.*; *See also In re* The Fairchild Corporation 2009 WL 4546581 (D. Del. Dec 2009)

163 *See, e.g.,* U.S. v. Wheeling-Pittsburgh Steel Corp., 818 F.2d 1077 (3d. Cir. 1987); *In re* Albion Disposal, Inc., 217 B.R. 394 (W.D.N.Y. 1997); Safety-Kleen, Inc. (Pinewood) v. Wyche, 274 F.3d 846 (4th Cir. 2001) (holding that action to require debtor to comply with it financial requirements was an exercise of government's police powers and not subject to automatic stay); Graham v. State of W. Va. (*In re* War Eagle Const. Co., Inc.), 283 B.R. 193 (S.D. W. Va. 2002) (holding that action to revoke permit was permissible exercise of regulatory power that did not violate automatic stay); City of New York v. Exxon Corp., 932 F.2d 1020 (2d Cir. 1991); U.S. v. Nicolet, Inc., 857 F.2d 202 (3d Cir. 1988); Word v. Commerce Oil Co., (*In re* Commerce Oil Co.) , 847 F.2d 291 (6th Cir. 1988); U.S. v. Oil Transport Co., Inc., 172 B.R. 834 (E.D. La. 1994); U.S. v. ILCO, Inc., 48 B.R. 1016 (N.D. Ala. 1985); *In re* Madison Indus., Inc., 161 B.R. 363 (D.N.J. 1993); Penn Terra Ltd. v. Dep't of Envtl. Services, Commonwealth of Pa., 733 F.2d 267 (3d Cir. 1984); New York v. Mirant New York, Inc., 300 B.R. 174 (S.D.N.Y. 2003).

164 *See* 11 U.S.C. § 362(d) (2006).

(A) the debtor does not have equity in such property; and
(B) such property is not necessary to an effective reorganization.[165]

Courts have held that section 362(d) of the Bankruptcy Code provides the courts with great latitude with respect to granting relief from the Automatic Stay and that whether "cause" exists requires a balancing of the equities of the circumstances.[166]

VII. Environmental Liens

A. Lien Treatment Under the Bankruptcy Code

Regardless of whether they arise under federal, state, or local law, liens are typically recognized in bankruptcy proceedings.[167] Under the Bankruptcy Code, parties that hold valid liens against property of the bankruptcy estate are considered to be holders of "secured claims."[168]

Section 101(37) of the Bankruptcy Code defines a lien as a "charge against or interest in property to secure payment of a debt or performance of an obligation."[169] Further, Section 506(a)(1) of the Bankruptcy Code provides that:

> An allowed claim of a creditor secured by a lien on property in which the estate has an interest, or that is subject to setoff under section 553 of this title, is a secured claim to the extent of the value of such creditor's interest in the estate's interest in such property, or to the extent of the amount subject to setoff, as the case may be, and is an unsecured claim to the extent that the value of such creditor's interest or the amount so subject to setoff is less than the amount of such allowed claim.[170]

Thus, the holder of a lien against property of a debtor's bankruptcy estate will have a secured claim for amounts owed to the extent that the amounts owed do not exceed the value of the property which secures the lien. However, the Bankruptcy Code does not govern the creation of liens. Rather, whether a creditor holds a valid lien is governed by non-bankruptcy law.

While the Bankruptcy Code generally recognizes liens, in certain instances a trustee or debtor-in-possession has the ability to avoid such security interests.[171] Pursuant to Section 544, a trustee or debtor-in-possession, who is granted the rights of a lien creditor, and a bona fide purchaser for value of real property as of the commencement date of the bankruptcy case may avoid an unperfected security interest.[172]

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165 11 U.S.C. § 362(d).
166 *In re* Nat'l Envtl. Waste Corp., 129 F.3d 1052, 1054 (9th Cir. 1997); Compass Bank for Savings v. Billingham (*In re* Graves), 212 B.R. 692 (B.A.P. 1st Cir. 1997); Marder v. Turner (*In re* Turner), 161 B.R. 1 (Bankr. D. Me. 1993).
167 *See e.g.*, 11 U.S.C. §§ 101(37), (50), (51), 506, 544, 546 (2006).
168 11 U.S.C. § 506.
169 11 U.S.C. § 101(37).
170 11 U.S.C. § 506(a)(1).
171 *See* 11 U.S.C. §§ 544, 545, 547, 548.
172 11 U.S.C. §§ 544, 1107.

Similarly, Section 545 allows a trustee or debtor-in-possession to avoid the statutory lien of a government, if the government has not fully perfected its lien prior to the filing of the bankruptcy case.[173] Even if the government has fully perfected its lien prior to the bankruptcy filing, a trustee or debtor-in-possession may avoid the lien pursuant to Section 547 if the act of perfection is determined to have been a preference.[174] For a lien to be avoided as a preference certain conditions must be met, including, *inter alia*, that the lien holder has acquired the lien within ninety days of the bankruptcy filing and that the lien was granted on account of antecedent debt.[175] Thus, while the holder of a lien is typically afforded priority treatment under the Bankruptcy Code, in some instances the Bankruptcy Code transforms the holder of a lien, who believed that they held a secured claim, to the lowly status of a general unsecured creditor.

B. Statutory Environmental Liens

The federal government and several states have enacted laws that create nonconsensual liens on account of environmental obligations. Under these laws, the various governments are granted liens against the responsible party's property to secure the payment for, or performance of, environmental obligations.

While the various environmental lien laws have all been enacted to provide a government with a lien to secure environmental obligations, each law typically have distinguishing characteristics. These variances include: (1) the property covered by the lien (*i.e.*, all property, contaminated property only (real and/or personal in both instances)); (2) whether the lien is against the owner or all responsible parties; (3) the requirements to establish a valid lien (*i.e.*, notice and perfection); (4) the lien dispute procedures; and (5) the requirements for government to obtain priority over third parties.[176]

Some of these laws have been drafted in such a manner as to provide the government with a lien that takes priority over all other liens, regardless of when the other liens came into existence.[177] These liens are commonly referred to as "superliens," Federal environmental laws do not provide for superliens. Three states, however, have enacted superlien laws: Massachusetts, New Hampshire, and New Jersey.[178]

Other states, such as Connecticut and Maine, have drafted their laws to provide a more limited superlien.[179] These more limited superliens provide the government with a priority lien but only as to those third party liens that were filed after the date on which the statute creating the environmental lien took effect.[180] It is worth noting, however, that the majority of the environmental lien statutes that have been enacted

173 11 U.S.C. § 545.
174 11 U.S.C. § 547.
175 11 U.S.C. § 547(2), (4).
176 AHERN & MARSH, *supra* note 77, at § 7:12.
177 *Id.*
178 *See* MASS. GEN. LAWS ANN. ch. 21E §§ 2, 13 (West 2010); N.H. REV. STAT. ANN. § 147-B:10-b (2010); N.J. STAT. ANN. § 58:10-23.11f(f) (West 2010).
179 *See* CONN. GEN STAT. ANN. § 22a-452a (West 2010); ME. REV. STAT. ANN. tit. 38, § 1371 (West 2010).
180 *Id.*

do not provide superliens.[181] Instead, the majority of environmental lien statutes provide that the government will have priority only over those liens that are perfected after the government has undertaken the necessary steps to perfect its lien.[182]

C. Environmental Liens Under Texas Law

Texas's environmental lien laws provide that "all remediation costs for which a person is liable to the state constitute a lien in favor of the state on the real property and the rights to the real property that are subject to or affected by a remedial action."[183] However, under Texas law, the lien does not arise or is not perfected until such time as a lien affidavit is recorded in the local official public records.[184] Moreover, the priority of the lien "does not relate back to a time before the date on which the affidavit is recorded, which date is the lien inception date."[185] In fact, the statue specifically provides that the environmental lien is "not valid or enforceable if real property, an interest in real property, or a mortgage, lien or other encumbrance on or against real property is acquired before the affidavit is recorded . . ."[186]

However, is the statute provides an exception under which the environmental lien would be enforceable against parties who obtained their interest prior to the recordation of the environmental lien. The statute provides that the environmental lien is valid and enforceable against a mortgagee or lienholder, if they "had or reasonably should have had actual notice or knowledge that the real property is subject to or affected by a clean-up action or has knowledge that the state has incurred clean-up costs."[187]

D. Liens Under CERCLA

CERCLA provides the EPA with the ability to obtain a lien on property on account of environmental liabilities to the federal government.[188] Section 9607(1) of CERCLA provides that:

> All costs and damages for which a person is liable to the United States under subsection (a) of this section . . . shall constitute a lien in favor of the United States upon all real property and rights to such property which–(A) belong to such person; and (B) are subject to or affected by a removal or remedial action.[189]

Section 9607(2) of CERCLA describes the time at which such a lien arises as follows:

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181 Jonathon R. Nash, *Environmental Superliens and the Problem of Mortgage-Backed Securitization*, 59 Wash. & Lee L. Rev 127, 145–46 (2002).

182 *Id.*

183 Tex. Health & Safety Code Ann. §361.194(a) (2010).

184 Tex. Health & Safety Code Ann. §361.194(b).

185 *Id.*

186 Tex. Health & Safety Code Ann. §361.194(g).

187 *Id.*

188 42 U.S.C. § 9607(1) (2006).

189 42 U.S.C. §9607(l)(1).

> Duration. The lien imposed by this subsection shall arise at the later of the following:
>
> (A) The time costs are first incurred by the United States with respect to a response action under this chapter.
>
> (B) The time that the person referred to in paragraph (1) is provided (by certified or registered mail) written notice of potential liability.
>
> Such lien shall continue until the liability for the costs (or a judgment against the person arising out of such liability) is satisfied or becomes unenforceable through operation of the statute of limitations provided in section 9613 of this title.[190]

Thus, upon either the occurrence of notification of liability or upon incurring the removal or remedial costs, the EPA has a lien against the property affected. However, that lien is not perfected, as is required under bankruptcy law in order to be considered a secured claim, until the EPA actually files the liens in the Real Property Records of the state.[191] Pursuant to Section 9607(1)(3) of CERCLA, the lien becomes perfected at the time it is filed in an office that a state has designated for receipt of notice of liens or, if the subject state has not designated such office at the time, it is filed in the office of the clerk of the United States District Court.[192]

Interestingly, CERCLA provides that governmental action (*i.e.,* the environmental lien), may not be attacked until such time as the government brings an enforcement action against the responsible party.[193] One court has held that the attachment of a CERCLA lien, without allowing the owner to dispute the attachment of the lien, effectively takes the owner's property without affording due process in violation of the Fifth Amendment.[194]

VIII. THIRD PARTY LIABILITY FOR CONTAMINATION

Third party and successor liability under CERCLA has historically been expanded beyond general, federal, and state common law concepts for such liability. Under the CERCLA statutory scheme, any "*person* who, at the time of disposal of any hazardous substance owned or operated in a facility," or "any *person* who . . . arranged for disposal of any hazardous substance," or "any *person* who accepts. . . hazardous substances for transport . . ." has liability for costs of removal and remediation that the EPA incurs.[195]

A "person" was defined in Section 9601(21) of CERCLA to include both individuals and corporations. Thus, for years, in an effort to give effect to the congressional mandate to cover both corporate officers and parent corporations as arrangers, transporters, and operators, the courts devised various tests. These tests include, *inter alia*, the "substantial control" and "actual control" tests that determine whether par-

190 42 U.S.C. § 9607(l)(2).
191 *See* 42 U.S.C. § 9607(1)(3).
192 *See id.*
193 42 U.S.C. § 9613(h).
194 *See* Reardon v. United States, 947 F.2d 1509 (1st Cir. 1991).
195 42 U.S.C. § 9607(a)(2)(3), (4) (2006)(emphasis supplied).

ent corporations actually controlled the subsidiary, even in matters not relating to environmental activities.[196] Moreover, courts rendered decisions that allowed company shareholders, officers, and secured lenders to be subjected to direct liability for environmental obligations.[197] However, the decision in *U.S. v. Bestfoods* significantly curtailed these broad and expansive third party and successor liability theories.[198] Although *Bestfoods* primarily addressed whether a parent corporation could be held derivatively liable for the actions of its subsidiary, it will, nonetheless, have a direct effect on liability for various third parties as well. In *Bestfoods*, the Supreme Court held that a parent corporation can be held derivatively liable only if the corporate veil could be pierced under federal common law standards.[199] Moreover, the holding is likely applicable to shareholders, as the court explicitly recognized the principal that the limited liability of corporate shareholders is generally to be respected, but also recognized the ability to subject shareholders to liability in instances in which the "corporate form would otherwise be misused to accomplish certain wrongful purposes, most notably fraud, on the shareholder's behalf."[200]

The *Bestfoods* holding will likely also have a direct impact on successor liability, as most courts have held that the Supreme Court "intended to include all known forms of business and commercial enterprises."[201] Thus, it appears that courts, after *Bestfoods*, may provide a more restrictive reading for the proper standard of successor liability and revert back to principles announced in federal common law as opposed to environmental theories of successor liability broadened under CERCLA case law.[202]

196 *See* Landsford-Coaldale Joint Water Authority v. Tonolli Corp., 4 F.3d 1209, 1220 (3rd Cir. 1993); FMC Corp. v. U.S. Dep't of Commerce, 29 F.3d 833, 843 (3rd Cir. 1994); Aluminum Co. of America v. Beazer East, Inc., 124 F.3d 551 (3d Cir. 1997); Schiavone v. Pearce, 79 F.3d 248 (2d Cir. 1996); John S. Boyd Co., Inc. v. Boston Gas Co., 992 F.2d 401 (1st Cir. 1993).

197 *See* U.S. v. Kayser-Roth Corp., 910 F.2d 24 (1st Cir. 1990) (holding shareholders directly liable without having to resort to traditional theories shareholder liability); Guidice v. BFG Electroplating & Mfg. Co., Inc., 732 F.Supp. 556 (W.D. Pa. 1989) (holding that post foreclosure secured creditor was liable); U.S. v. Fleet Factors Corp., 901 F.2d 1550 (11th Cir. 1990), reh'g denied, No. 89-8094 (11th Cir. 1990) (holding secured creditor could in certain circumstances be liable). But see Joslyn Mfg. Co. v. T.L. James & Co., Inc., 893 F.2d 80 (5th Cir. 1990) (holding that shareholders not directly liable, but instead may be liable in those instance in which the corporate veil could be pierced).

198 U.S. v Bestfoods, 524 U.S. 51 (1998).

199 *Id.* at 55.

200 *Id.* at 61-62 (citations omitted).

201 *See*, e.g., North Shore Gas Co v. Solomon, Inc., 152 F.3d 642, 649 (7th Cir. 1998)(citing Anspec Co. v Johnson Controls, Inc., 922 F.2d 1240 (6th Cir. 1991)); BF Goodrich v. Betkoski, 112 F.3d 88 (2d Cir. 1997).

202 *See*, e.g., New York v. National Services Indus., Inc., 352 F.3d 682, 684-85 (2d Cir. 2003); New York v. Westwood-Squibb Pharmacy Co., Inc., No. 90-CV-1324C, 2004 WL 1570261 (W.D.N.Y. May 25, 2004); North Shore Gas Co. v. Salomon, Inc., 152 F.3d 642 (7th Cir. 1998).

IX. CONCLUSION

The analysis of the nature and extent of environmental obligations in a bankruptcy case and how those obligations will be treated can be extremely complex and will many times depend on not only the type of debtor, the type of obligation, when the obligation arose, or the type of creditor, but even on public policy involved in the case. Extra care must be given regarding the position that the government or PRP creditor should take prior to asserting any obligation against the Debtor.

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Wind Severance

By Michael J. Stephan

I. Introduction

The child of technological innovation[1] and popular demand,[2] "wind power is the most developed and least costly method of producing power from renewable sources."[3] As the world's fastest growing alternative energy source,[4] wind power will

1 *See* Christopher E. Cotter, Comment, *Wind Power and the Renewable Portfolio Standard: An Ohio Analysis*, 32 U. Dayton L. Rev. 405, 409 (2007) (describing how the cost of electricity generated by wind power has significantly dropped in the last two decades mostly due to technological innovations).

2 *See* Corey Stephen Shoock, Note, *Blowing in the Wind: How a Two-Tiered National Renewable Portfolio Standard, a System Benefits Fund, and Other Programs Will Reshape American Energy Investment and Reduce Fossil Fuel Externalities*, 12 Fordham J. Corp. & Fin. L. 1011, 1059 (2007) (describing a "white-hot demand for wind power facilities").

3 *Law of Environmental Protection*, 2 Envtl. L. Inst. § 12:161 (2008).

4 *E.g.*, Meredith Blaydes Lilley & Jeremy Firestone, *Wind Power, Wildlife, and the Migratory Bird Treaty Act: A Way Forward*, 38 Envtl. L. 1167, 1169 (2008); Nicholas H. Rabinowitsh, *Bringing*

very likely serve a fundamental role in the nation's energy future.[5] Indeed, the wind is wonderful.[6] What is more, it is an extremely clean source of renewable energy[7] — a refreshing fact for many concerned about climate change problems[8] and national energy independence.[9] Truly, the cleanliness, cost-effectiveness, and copiousness of wind-energy production have rightly garnered this renewable resource much praise in both academia and government.[10] As many have observed, wind power is exciting, thriving, and here to stay.[11]

New Source Review Back: The Supreme Court's Surprise (and Disguised) Attack on Grandfathering Old Coal Plants in Environmental Defense v. Duke Energy Corp., 31 ENVIRONS ENVTL. L. & POL'Y J. 251, 260 (2008).

5 *See, e.g.*, Kieran Dwyer, *Unclos: Securing the United States' Future in Offshore Wind Energy*, 18 MINN. J. INT'L L. 265, 266 (2009) (explaining that wind power is a fast developing energy source that will play a large part in U.S. energy development).

6 CHARLES GEORGE PERCEVAL, PLAIN SERMONS V2: PREACHED IN A VILLAGE CHURCH 81 (1832).

7 *See e.g.*, Lilley & Firestone, *supra* note 4, at 1214 (noting that "wind power is a clean, noncarbon dioxide-emitting source of energy"); Arjun Makhijani, *Atomic Myths, Radioactive Realities: Why Nuclear Power Is a Poor Way to Meet Energy Needs*, 24 J. LAND RESOURCES & ENVTL. L. 61, 71 (2004) ("Wind power is available in plentiful supply."); Brian E. Maxted, *Developing Wind Power in the Commonwealth: No Longer a Quixotic Quest to Build Wind Farms in Virginia*, 33 WM. & MARY ENVTL. L. & POL'Y REV. 319, 323 (2008) ("Wind power is a clean source of energy..."); Susan Perera, *Following Minnesota's Renewable Energy Example: Will Federal Legislation Fly High or Flap in the Wind?*, 9 MINN. J. L. SCI. & TECH. 949, 951 (2008) (discussing wind power's cleanliness as contrasted with "highly polluting traditional sources of energy").

8 *See, e.g.*, Donald C. Bauer & Jena A. MacLean, *The "Degreening" of Wind Energy: Alternative Energy v. Ocean Governance*, 19 NAT. RESOURCES & ENV'T 44, 46 (2004) ("[A] positive step to combat climate change is promoting alternative energy technologies, such as. . . wind power."); Maxted, *supra* note 7, at 323 ("The environmental benefits of wind power are extraordinary."); Ronald H. Rosenberg, *Making Renewable Energy a Reality–Finding Ways to Site Wind Power Facilities*, 32 WM. & MARY ENVTL. L. & POL'Y REV. 635, 660–61 (arguing that "the strongest advantage of wind power is the absence of air pollution and greenhouse gas emissions," resulting in a reduction of public health concerns and greenhouse gases).

9 *See, e.g.*, Antoine Halff, *Energy Nationalism, Consumer Style: How the Quest for "Energy Independence" Undermines U.S. Ethanol Policy and Energy Security*, 19 STAN. L. & POL'Y REV. 402, 409 (2008) (discussing how U.S. energy independence has been sought through the use of more wind power); Bent Ole Gram Mortensen, *Getting Real About Renewables: Economic and Environmental Barriers to Biofuels and Wind Energy*, 2 ENVTL. & ENERGY L. & POL'Y J. 179, 184–85 (2008) ("[W]ind power technology can contribute to greater [national] energy independence . . . ."); Jonathan Hibshman, Note, *Utilizing Wind Power to Offset Agribusiness Utility Costs*, 12 DRAKE J. AGRIC. L. 475, 492 (2007) ("[W]ind power technology will continue to become a viable option for . . . a more energy independent and efficient nation.").

10 *See, e.g.*, Rosenberg, *supra* note 8, at 658 (noting many "persuasive reasons favoring the expansion of wind energy in America"); Joshua Prok, Note, *Interstate Wind: Using New Technology to Enhance Transportation Fuel Investments*, 35 TRANSP. L.J. 67, 75 (2008) (describing several ways in which "[t]he federal government [] supports wind energy production").

11 *E.g.*, Christopher W. Fry, Note & Comment, *Harvesting the Sky: An Analysis of National and International Wind Power*, 19 COLO. J. INT'L ENVTL. L. & POL'Y 427, 436 (2008) ("Contemporary political will, recent technological improvements, and the success of wind power generation as a proven business model suggest that wind power is here to stay.").

But the nascent realm of wind-energy law is already in disrepair, despite the extraordinariness of wind energy and the technology utilized to harness it. The swiftness with which this renewable resource has been developed seems to have resulted in the law lagging behind the industry, at least with respect to one significant issue: severance.[12] The notion of severance is broadly defined as "[t]he removal of anything (such as crops or minerals) attached or affixed to real property, making it personal property rather than a part of the land."[13] For instance, "[m]ineral rights are frequently severed from surface rights on property that may contain oil and gas or other minerals."[14] So, through severance an individual can own or lease one or many rights (*i.e.*, separate estates) in a tract of land without owning the underlying fee simple.[15] While severance has generally been accepted when applied to (among other things) water rights[16] and mineral rights,[17] it is entirely unclear as to whether, and on what basis, courts will deem wind rights severable.[18] One expert has proclaimed that in Texas — the state producing the most wind energy since 2006[19] and one of the "top ten states for wind energy potential"[20] — the chance that wind-severance provisions would be upheld is "arguabl[e]."[21] This prediction is largely because only one case in the United States has ever addressed this issue even tangentially, and it did so in a rather superficial way.[22]

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12 *See, e.g.*, Ernest Smith, *Wind Energy: Sitting Controversies and Rights in Wind*, 1 ENVTL. & ENERGY L. & POL'Y J. 281, 300, 303 (2007) (explaining that wind severance is a very important and unresolved legal issue, the outcome of which is arguable in Texas and other states); Lisa Chavarria, *The Severance of Wind Rights in Texas* 1 (2008), http://www.sbaustinlaw.com/library-papers/Chavarria-The_Severance_of_Wind_Rights%20(Final).pdf ("Texas law is silent on whether the right to develop (or not develop) the wind that flows across property may be severed from the surface estate.").

13 BLACK'S LAW DICTIONARY 1406 (8th ed. 2004).

14 *Id.*

15 Michelle Andrea Wenzel, Comment, *The Model Surface Use and Mineral Development Accommodation Act: Easy Easements for Mining Interests*, 42 AM. U. L. REV. 607, 618 (1993) (explaining that the owner of a fee simple may create many separate estates through severance, which "may be accomplished by exception, reservation, grant, or lease").

16 *See, e.g.*, Lynda L. Butler, *Defining a Water Ethic Through Comprehensive Reform: A Suggested Framework for Analysis*, 1986 U. ILL. L. REV. 439, 455 (noting that the holder of water rights typically can sever the rights and transfer to another without transferring the land itself).

17 *See, e.g.*, J. Zach Burt, Note and Comment, *Playing the "Wild Card" in the High-Stakes Game of Urban Drilling: Unconscionability in the Early Barnett Shale Gas Leases*, 15 TEX. WESLEYAN L. REV. 1, 10 (2008) ("It is obvious to many that a landowner who sells his mineral rights but retains the surface has effected a severance of the surface and mineral estates.").

18 Note that, as mentioned *infra*, wind rights have been assigned value by the marketplace. *See, e.g.*, Chavarria, *supra* note 12, at 1 (explaining how wind rights are valuable in the marketplace).

19 Shoock, *supra* note 2, at 1044 (noting that Texas surpassed California as the largest wind-energy producer in the United States in 2006).

20 Shane Thin Elk, Legislative Note, *The Answer is Blowing in the Wind: Why North Dakota Should Do More to Promote Wind Energy Development*, 6 GREAT PLAINS NAT. RESOURCES J. 110, 113 (2001) (including Texas in a list of the top ten states for wind-energy potential).

21 Smith, *supra* note 12, at 303.

22 *See infra* Part III.

The lack of case law or statutes pertaining to wind severance, coupled with the merely patchy examinations of the issue in academia,[23] has left landowners and practitioners quite uncertain as to the ultimate validity of wind-severance provisions. Accordingly, those seeking to sever wind rights can do so only at their own risk — *i.e.*, without any assurances that the severances will be upheld if challenged.[24] Nevertheless, the "conveyance of wind rights to individuals or entities who do not own the surface estate has become a common undertaking by Texas landowners."[25] And, Texas is not unique: "Wind leases have been executed by landowners in all parts of the country."[26] This risk-laden state of affairs is not the only response to the law's inability to keep up with technological development; many risk-averse wind companies prefer that seller-landowners not separate wind rights from surface rights.[27] As discussed below, these over- and under-cautious responses to the absence of a clarifying statute or judicial decision are problematic.[28] Certainly, the dearth of law on wind severance and the legal uncertainty it yields creates complications for individuals generally, as well as the emerging and ever-important wind-energy industry.

In this note, I seek to fill a gap left by legislative, judicial, and academic responses to the issue of wind severance. I recognize that the allowance or disallowance of severance has meaningful implications for wind-energy production. I then critically analyze the reasons for and against wind severance, the present law on the topic, and the adaptability of existing legal frameworks to new technologies and issues. I conclude that wind severance should be allowed because it harmonizes with many normative interests that our law pursues, and because it is supported by existing legal schemes. Moreover, I argue that novel issues raised by the extraordinariness of wind energy fit comfortably into existing legal structures. Despite wind power's unconventionality, neither a legal overhaul nor great judicial creativity is necessary.

In Part II of this note, I discuss several normative interests that guide our decision whether we ought to allow wind severance, ultimately concluding that the pros outweigh the cons. In Part III, I engage in a case study of *Contra Costa Water District.. v. Vaquero Farms, Inc.*,[29] the only United States case to have analyzed the issue of wind severability. I argue that, while the *Contra Costa* court reached the right substantive result based upon the normative interests discussed in Part II of this note, it did so with reasoning that was both wrong and incomplete. In Part IV, I explain, somewhat counter-intuitively, that the extraordinariness of wind-energy technology does not seem to cause extraordinary legal problems. As evidenced by the demand for wind severance and the ease with which it can be implemented, the legal problems posed by wind-energy technology seem resolvable within the framework of existing property law.

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23 While scholars and practitioners acknowledge that a lone case exists and that the future of wind severance is uncertain, none has examined the issue in depth, studied the case critically, or otherwise materially responded to the uncertainty at hand. *See, e.g.*, Smith, *supra* note 12, at 303; Chavarria, *supra* note 12.

24 Chavarria, *supra* note 12, at 4–5.

25 *Id.* at 4.

26 Smith, *supra* note 12, at 303.

27 Chavarria, *supra* note 12, at 4–5.

28 *See infra* Part II(A)(2)–(4).

29 58 Cal. App. 4th 883 (1997).

II. Normative Concerns Supporting Allowance of Wind Severance

When considering the creation of a legal rule or standard, it is helpful, if not necessary, to consult first principles and policy concerns to reach a desired outcome that is compatible with social and legal goals.[30] While no definition of such considerations fully encapsulates their purpose and utility,[31] for the benefit of this discussion they can broadly be defined as normative premises or objectives that may guide the design of our legal system.[32] These normative interests are especially useful in crafting laws to govern novel issues because they help us understand the incentives and disincentives fostered through particular approaches, as well as what types of results are maximized or minimized through those approaches.[33] Of the normative interests that follow, some may be classified as first (or second) principles while others may be better classified as policy concerns. This largely semantic issue is inconsequential, for it is important only that these considerations are worthy. Moreover, I do not insist that these interests are the only normative interests, but they are among the most relevant ones.

A. Normative Interests in Favor of Wind Severance

1. Freedom of Contract

Notwithstanding its fall from grace in the late 1930s,[34] freedom of contract, or in some sense "freedom of choice," remains a normative interest today.[35] That freedom of contract is implicated by the issue of wind severance is apparent in that landowners who may sever wind estates will have a greater ability to strike deals regarding their properties. These deals (or choices) are expressed through contracts.[36] Not allowing severance means landowners will have fewer choices and less power to contract. Promoting increased freedom of contract through the allowance of wind severance is a

30 *See, e.g.*, Duncan Kennedy, *Form and Substance in Private Law Adjudication*, 89 Harv. L. Rev. 1685, 1754 (1976) (referring to "the rule of law" model of decision making as including "the deduction of legal rules from first principles"); Brian Tamanaha, *A Holistic Vision of the Socio-Legal Terrain*, 71 Law & Contemp. Probs. 89, 97 (2008) (noting that legal decision makers focus on policy and social goals, in addition to principles).

31 *Cf.* Gabe Shawn Varges, *Good Faith in International Law*, 86 Am. J. Int'l L. 841, 841 (1992) (book review) ("One frustration about 'first principles' is that they invariably are the hardest to define.").

32 *See, e.g.*, Thomas A. Kochan, *On the Paradigm Guiding Industrial Relations Theory and Research: Comment on John Godard and John T. Delaney, "Reflections on the 'High Performance' Paradigm's Implications for Industrial Relations as a Field,"* 53 Indus. & Lab. Rel. Rev. 704, 707 (2000) (equating guiding "normative premises" with first principles).

33 For a canonical example of normative interests as judicial guideposts in legal rulemaking, see *Pierson v. Post*, 3 Cai. R. 175 (1805).

34 *See* West Coast Hotel Co. v. Parrish, 300 U.S. 379, 391–92 (1937) (rejecting prior judicial loyalty to freedom of contract).

35 *See, e.g.*, Richard A. Epstein, *In Defense of the Contract at Will*, 51 U. Chi. L. Rev. 947, 953 (1984) (equating "freedom of contract" as an institutional system with autonomy and freedom of choice, and explaining "the importance of freedom of contract as an end in itself").

36 *See* Smith, *supra* note 12, at 303–04 (noting that wind leases have been executed throughout the United States, and describing the nature of wind leases).

normative goal for at least two related reasons. First, increased choice (or power to contract) is often itself a good that should be advanced.[37] Second, the power to contract over one's property is a right that is fundamental and essential to our notion of ownership.[38] Certainly, the latter reason may be the case because of the former, but division or convergence of these two justifications is not relevant here. Ultimately, the important point is that our legal system often seeks to protect and promote choice.[39] Only infrequently do courts deny freedom of choice (or contract); the default rule appears to preserve these freedoms. Insofar as wind severance promotes the freedoms of contract and choice, courts would serve normative interests by upholding the validity of wind-severance provisions.

2. Use of Wind as an Alternative Energy Source

Perhaps the most persuasive normative interest supporting the allowance of wind severance is the desire for more energy derived from wind. As discussed above, the use of wind energy brings many substantial benefits beyond merely an alternative to fossil fuels.[40] As the already considerable demand for wind energy rises, only an equally considerable supply of wind energy will satiate consumers' needs.[41] Allowing wind severance will result in greater usage of the wind as an alternative energy source.

As noted, at least two responses to the uncertainty of wind-severance provisions exist: some landowners sever wind rights in the face of uncertainty, and others intentionally avoid severance by conveying their surface estates along with the wind estates.[42] While each approach has serious problems,[43] still another response to the ambiguity is available — doing nothing. Landowners who (1) want to sever their wind rights, (2) are not themselves harnessing the wind for energy, (3) are unwilling to sell the surface estate with the wind estate, and (4) are unwilling to take a risk of severing under an uncertain legal rule, will simply do nothing. They will not sell their estates, whatever their scope. This inaction is tragic because the wind energy that could be

37 *See, e.g.*, Epstein, *supra* note 35, at 953 (highlighting "the importance of freedom of contract as an end in itself").

38 *See, e.g.*, Buchanan v. Warley, 245 U.S. 60, 74 (1917) ("Property is more than the mere thing which a person owns. It is elementary that it includes the right to acquire, use, and dispose of it."); Natasha N. Aljalian, *The Role of Patent Scope in Biopharmaceutical Patents*, 11 B.U. J. SCI. & TECH. L. 1, 47 n.174 (2005) ("An aspect of property ownership in the U.S. is the right to contract away such rights as one desires.").

39 *See, e.g.*, Richard A. Epstein, *Are Values Incommensurable, or Is Utility the Ruler of the World?*, 1995 UTAH L. REV. 683, 705 (discussing a way in which the legal system ought to be organized to protect individuals' sovereign choices); Morgan Shipman, *The Liabilities of Lawyers in Corporate and Securities Work*, 62 U. CIN. L. REV. 513, 522 (1993) (noting that our legal system protects and promotes individual rights and choices).

40 *See supra* notes 3–11 and accompanying text.

41 *See, e.g.*, Brit T. Brown & Benjamin A. Escobar, *Wind Power: Generating Electricity and Lawsuits*, 28 ENERGY L.J. 489, 497 (2007) (observing that domestic demand for wind energy is increasing); Roy Fuller, Note, *Wind Energy Development on BLM Lands*, 24 J. LAND RESOURCES & ENVTL. L. 613, 624 (2004) (noting that the Bureau of Land Management recognizes "an increasing demand for wind energy development").

42 *See supra* notes 24–27 and accompanying text.

43 *See infra* Part II(A)(3)–(4).

acquired from these landowners' properties will go unused. For the lack of a legal rule authorizing severance, this perfectly good wind power is wasted.[44] However, if courts or legislators were to create such a rule, then hesitant landowners would be able to sell or lease their otherwise "unsevered" wind estates with ease of mind, and localities and the nation would thereby have more wind energy at their disposal. Indeed, more legal certainty triggers more wind severance, which triggers more wind-power harnessing, which triggers more wind energy available as an alternative energy source.

3. Fewer Unnecessary Sales of Entire Estates

Dovetailing with the previous normative consideration is the likelihood that allowing wind severance will result in fewer sales of entire estates (*i.e.,* the wind estate *plus* the surface estate and any other lawfully severed estates) motivated by a desire for wind rights alone. Less abstractly, if wind severance were clearly allowed, then the overly cautious, risk-averse landowners discussed above[45] would no longer need to sell their whole properties when they only really wanted to sell the wind rights. Wind severance fixes this situation, which is especially problematic for those landowners who would like to keep their land (*i.e.,* the surface estate) "in the family" while also letting buyers utilize wind resources.[46] With wind severance, the results are positive all around: the landowner profits financially *and* retains his surface estate. The wind estate buyer buys only what he wants, and can turn a profit himself.[47] Our society, which seeks to utilize clean, renewable energy sources, does so. Thus, allowing wind severance increases the amount of wind energy used,[48] facilitates property transfers by cautious landowners, and ensures profits for landowners and wind rights buyers. Oh, and our increasingly green society is made happy, too.

4. Avoiding a Surge of Litigation

Disallowing wind severance could give rise to a sharp increase in litigation; many landowners are already severing wind estates notwithstanding a lack of law on the issue. As explained, gross wind severance occurs de facto despite utter uncertainty as to severance's validity.[49] Because the law has not addressed the issue,[50] courts are free to strike down wind-severance provisions without having to contradict precedent. If courts do strike down wind severances, then the many existing wind severances would

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44 Truly, the position of the risk-averse, surface-retaining landowner should not be called unreasonable or faulty, but at most idiosyncratic.

45 *See supra* note 27 and accompanying text.

46 Indeed, keeping land "in the family" is not unheard of. *See generally* A. Latham, *Keeping the Family Farm in the Family*, Extension Online News, Feb. 12, 2008, http://www.ncsu.edu/project/calscommblogs/archives/2008/02/keeping_the_fam.html; Brochure, Farm Prosperity Project, Keeping the Farm in the Family, http://www.cals.ncsu.edu/specialty_crops/pdf/fpOptions_brochure.pdf.

47 This also applies to wind estate lessees who lease wind rights. *See infra* Part III(B).

48 *See supra* Part II(A)(2).

49 *See supra* notes 21–26 and accompanying text.

50 *See supra* notes 18–24 and accompanying text.

be invalid.[51] It would then become likely, if not certain, that surface and wind estate owners would engage in litigation to determine rights to estates, royalties, and the like.[52] In other words, disallowing wind severance would invalidate agreements on which many people have relied, thus inciting litigation over the proper allocation of the existing property rights.

It is worth noting that courts are not unwilling to uphold a rule or standard in light of popular reliance.[53] The disallowance of wind severance may result in "serious inequity to those who have relied on it or significant damage to the stability of the society governed by it."[54] Reliance on wind-severance provisions should be, at a minimum, a point that merits consideration by courts and legislatures. At a maximum, reliance on wind-severance provisions and the litigation that would result from such provisions' invalidation should cause courts to proceed cautiously if inclined to disallow wind severances.

5. WIND STEALING?

A final normative interest favoring the allowance of wind severance is admittedly an unexpected one — discouraging wind stealing. While I could not locate any reported cases of wind stealing, it is not impossible to imagine wind stealing occurring in light of a legal rule barring severance.[55] As noted, without wind severance less wind power will be developed.[56] However, the demand for wind energy and the profitability of harnessing wind power would remain high.[57] Significantly, without wind severance, otherwise willing buyers of wind rights may be dissuaded by the necessity of buying pricey surface estates, and many sellers may be unwilling to sell their whole properties.[58] Therein lies the motivation for wind stealing: a strong demand for wind power exists with, at best, a prohibitively high price tag. It is not unreasonable to expect that when a good is costly (or not for sale at all), demanding consumers may try to steal

51 *See* Chavarria, *supra* note 12, at 2 (explaining that if courts do not uphold wind-severance provisions, the many existing wind-severance provisions would become invalid).

52 *See* Maureen B. Callahan, Comment, *Post-Employment Restraint Agreements: A Reassessment*, 52 U. CHI. L. REV. 703, 705 (1985) (noting that uncertain validity of contracts results in increased litigation); Chavarria, *supra* note 12, at 2 ("Significantly, an invalidation of wind leases would put the legal rights to billions of dollars of investment in jeopardy. . . .").

53 *See* Planned Parenthood v. Casey, 505 U.S. 833, 855–56 (1992) (using an inquiry into the reliance on a rule as relevant in considering that rule's continued validity).

54 *See id.* at 855 (using the concerns quoted to determine the continued validity of a rule).

55 As a matter of fact, it seems that wind stealing is not completely unheard of in the wind-energy community. *See* Brad Crabtree, Opinions, *Stutsman County Officials Acting Correctly on Wind Farm Issues*, JAMESTOWN SUN, Feb. 27, 2009, *available at* http://www.windaction.org/opinions/20213 (explaining how Florida Power and Light could have stolen a landowner's wind rights without consultation or compensation by erecting wind turbines near the landowner's property); TEDxNewYork, I Call Dibs on the Wind!, (Feb. 3, 2009) http://tedxnewyork.blogspot.com/2009/02/i-call-dibs-on-wind.html ("One can literally 'steal' wind from someone downwind of them.").

56 *See supra* Part II(A)(2).

57 *See supra* notes 2–3, 41 and accompanying text.

58 *See supra* note 27, and Part II(A)(2) and accompanying text.

that good.[59] Although the logistics of wind stealing have yet to be worked out, arguably the motivation exists.[60] Consequently, a normative interest in avoiding wind stealing is yet one more reason for courts to uphold wind-severance provisions.

B. Normative Interests in Opposition to Wind Severance

1. Avoiding Unnecessary Litigation and Complication

The first clear objection to wind severance is that litigation may become more frequent as estates become more complicated and divided.[61] In other words, severing wind rights from the underlying fee simples creates more estates within single parcels of land, which means more self-interested actors are involved. The mere presence of more interests and more players complicates any real estate transaction, and results in more litigation as new parties compete for rights and interact with existing parties.[62]

While avoiding litigation is a valid normative interest, it is unlikely that allowing wind severance would cause a significant increase in litigation. The risk of more litigation resulting from estate complication was not great enough to prevent many other accepted kinds of severance. Water,[63] minerals,[64] and other natural resources are severable in spite of the potential for litigation-breeding complexity. Furthermore, while allowing wind severance might cause some litigation, much more would likely result if courts did not allow wind severance. Any potential rise in litigation resulting from estate complication would almost surely be dwarfed by the certain surge in litigation ensuing from what can fairly be described as gross contract nullification.[65] Allowing severance is the lesser of two litigation-inspiring evils. In fact, estate severance has a lengthy track record of acceptance regardless of potential increases in estate complication and litigation.

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59 *See* J. Brian Beckham, *Can the RIAA Survive "Substantial Non-Infringing Uses?,"* 10 Va. J.L. & Tech. 4, 4 n.18 (2005) (suggesting that people may steal televisions if televisions are overpriced).

60 *But see* Crabtree, *supra* note 55 (describing the logistics of one form of wind stealing); TEDxNewYork, *supra* note 55 (touching on the logistics of one form of wind stealing).

61 *Cf.* Philip Harvey, *Joblessness and the Law Before the New Deal*, 6 Geo. J. Poverty L. & Pol'y 1, 8 (1999) (noting "the self-interested behavior of landowners"); Wenzel, *supra* note 15, at 618 ("In all jurisdictions today, the owner of a fee simple may create [] many separate estates. . . . Once ownership is transferred, each severed estate is held under separate and distinct title. . . .").

62 *See, e.g.*, David H. Getches, *Colorado River Governance: Sharing Federal Authority as an Incentive to Create a New Institution*, 68 U. Colo. L. Rev. 573, 638 (1997) (noting that "it surely complicates matters to include more parties" in a settlement negotiation); La. State Bar Ass'n, *Recent Developments: Taxation*, 51 La. B.J. 227, 227 (2003) (stating that more complication breeds more litigation); Brian D. Park, Note, *Continued Minimalization of Fourth and Fifth Amendment Rights: Will* Hiibel v. Nevada *Create a Loophole for States to Further Intrude on the Rights of Their Citizens?*, 26 Whittier L. Rev. 1189, 1213 (2005) (explaining that a Supreme Court decision "may complicate the law and create more litigation for our courts").

63 *See supra* note 16 and accompanying text.

64 *See supra* note 17 and accompanying text.

65 *See supra* Part II(A)(4).

2. Avoiding Conflicts as to Which Estate Is Dominant

Another normative objection is that allowing wind severance may lead to conflicts between estate owners as to which estate is dominant and which is servient.[66] This competition for dominance, among other things, can lead to litigation thereby disincentivize the creation of already-accepted forms of severance.

Again, this fear is easily dismissed on two familiar grounds. First, such potential conflicts did not prevent the allowance of water,[67] mineral,[68] and other forms of severance. Wind severance does not have any new components or issues that suggests it should be otherwise. Second, even if estate conflicts ensue, they will likely cause less litigation than would not allowing wind severance.[69]

Lastly, this concern can be avoided with any one of four rather primitive jurisprudential tools. First, a bright-line judicial rule declaring that wind estates are dominant to estates of type X and/or servient to estates of type Y will settle this issue. Contrariwise, the problem is avoided by letting the parties determine which estates are dominant. Thus parties could dictate estate dominance through contracts. Third, courts may prefer to let the rule of "first in time" control the dominance of estates. Fourth, courts may determine estate dominance by looking to maximize the values of conflicting estates on a case-by-case basis. Therefore, it appears that the normative concerns about wind severance may just be the same as those for other forms of severance. Regardless, concerns over estate dominance are outweighed by the possible solutions, responses, and many benefits garnered from wind severance.

3. Avoiding an Increase in Disparity between Economic Classes

The final normative interest weighing against the allowance of wind severance is the expectation that such allowance will contribute to an already-severe wealth disparity between economic classes. Wealthy individuals with much land, says the objector, will get richer through the sale or lease of wind rights. They would presumably profit less if they had to harness wind energy themselves or sell the fee simple to those eager to harvest the wind. While this objection is a coherent one, it too is met with dispositive responses.

First, it is meaningful to note that water,[70] mineral,[71] and other forms of severance have been accepted despite potential aggravation of an existing wealth disparity. Second, even if this potential economic divergence is realized, it may be a worthwhile tradeoff for a cleaner planet and increased energy independence.[72] Admittedly, how-

66 BLACK'S LAW DICTIONARY 589 (8th ed. 2004) (A dominant estate is one that benefits from an easement, while a servient estate is one that is burdened by an easement.).

67 *See supra* note 16 and accompanying text.

68 *See supra* note 17 and accompanying text.

69 *See supra* Part II(A)(4) and accompanying text.

70 *See supra* note 16 and accompanying text.

71 *See supra* note 17 and accompanying text.

72 This is especially likely given recent concern over energy and environmental issues. *Cf. infra* notes 115-16 and accompanying text (noting increased demand for climate protection and energy independence); *Energy, Environment, and Elections: Mapping Voter Behavior in 2008, A Conversation with Jon Krosnick*, RESOURCES, Summer 2008, *available at* http://www.rff.org/Documents/Resources/Resources-169-Krosnick.pdf ("Without a doubt, the environment has

ever, this second rebuttal relies on debatable, subjective valuations of the social and political benefits.[73]

III. *Contra Costa*: The Right Result for the Wrong Reasons

Normative interests should ultimately guide courts toward allowing wind severance. Concerns over increased litigation, increased use of renewable resources, and the like, point to net benefits resulting from clear judicial or legislative affirmation of wind-severance provisions. But, only one court has even tangentially considered the issue: a California appellate court from 1997. Despite the fact that the court correctly upheld the severability of wind in *Contra Costa Water Dist. v. Vaquero Farms, Inc.*,[74] the court's reasoning was both wrong and incomplete. The result of this aging decision is a one-time, single-state precedent, consisting of a correct legal rule tailored from fallacious doctrine. Although the *Contra Costa* court got the job done, its method ought not to become the norm.

A. Factual Background and the Issue Presented

This unique case began when the Contra Costa Water District used its eminent domain authority to acquire portions of a 6,000-acre ranch from Vaquero Farms, Inc.[75] At that time, much of Vaquero's property was leased for wind-power production, and hundreds of wind turbines were installed on the property.[76] In exercising eminent domain, the Water District severed the wind-power rights and wind-power leasehold interests, reserving them to Vaquero and acquiring only the fee interest in the property.[77] "Vaquero did not contest the right of the Water District to take its property," but rather complained about "the amount of 'just compensation' to which [it] was entitled."[78] Vaquero argued that the wind estate could not be severed from the underlying fee interest, and thus, that the Water District owed Vaquero an additional

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been a greater priority among the American electorate in the last 12 months than in a generation . . . and certainly greater than in any recent election cycle.").

73 It may also be worth mentioning that the ability to do more (and make more money) because of abundant land ownership is not new. *See, e.g.*, Julia Sullivan Hooten, Comment, *"Caught Between a Rock and a Hard Place:" Fringe Landowners "Can't Get No Satisfaction." Is It Time to Re-Think Annexation Policy in North Carolina?*, 24 Campbell L. Rev. 317, 317 (2002) (noting that land yields power, and more land equates to more power); *see also* Bernadette Atuahene, *Land Titling: A Mode of Privatization with the Potential to Deepen Democracy*, 50 St. Louis L.J. 761, 775 (2006) (explaining how greater property ownership ensures greater political independence and power). This is a byproduct of our private property system, which seems generally accepted. *See id.* There appears to be no reason to think that such a result is somehow worse in the context of wind severance or natural-resources law generally.

74 Contra Costa Water Dist. v. Vaquero Farms, Inc., 58 Cal. App. 4th 883, 893–94 (1997).

75 *Id.* at 888.

76 *Id.*

77 *Id.* at 890-91. The Water District *did* acquire the wind-power rights in certain areas where Vaquero's use of these rights would be inconsistent with the Water District's plans for the areas. *Id.* at 891.

78 *Id.* at 889.

incremental payment for the value of the wind rights.[79] The Water District argued that it was legally permissible for it to acquire Vaquero's land without acquiring the wind rights, and the trial court agreed.[80]

At issue in this case was a wind-severance provision (within the Water District's resolution of necessity) that reserved to Vaquero:

> [A]ll rights for wind energy power conversion and the transmission of power generated by wind, including (1) the exclusive and perpetual right, ... to develop, construct, install, maintain and operate windpower facilities, including but not limited to windmills, transmission lines and other facilities, necessary or advantageous for the purposes of generating or transmitting electric power from wind on the real property...[81]

The issue before the court was: "When a public entity acquires property through eminent domain, are the windpower rights capable of segregation or are they so affixed to the underlying land that they must be acquired by the condemning authority?"[82] In answering this "question of first impression," the court applied California law pertaining to severance in the context of eminent domain.[83]

B. THE COURT'S REASONING

The court's holding that wind rights can be severed is ultimately based on fairly straightforward logic. The court established several premises by citing a 1946 eminent domain case involving a public utility that sought to acquire joint use of an entity's utility poles through condemnation.[84] With this precedent, the *Contra Costa* court established: (1) if a right is "capable of being bought and sold in the marketplace," (*i.e.*, compensable and capable of being assigned by contract) then it is a "substantial right"; (2) if a right is a "substantial right," then such a right is subject to condemnation; and (3) if a right is subject to condemnation, then it can be severed.[85] So, the court rea-

79 *Id.* at 890–91.

80 *Id.* at 891–92.

81 *Id.* at 891.

82 *Id.* at 892.

83 *Id.* at 892–93. The eminent domain element of the case does not diminish the fact that the *Contra Costa* court was fundamentally deciding whether wind rights could be severed generally. *Id.* The eminent domain ingredient only forced one additional step in the court's analysis: "[A] condemnor cannot be required to take more *severable* rights in property than what it needs for public use." *Id.* at 893 (emphasis added). The court's opinion more significantly focused on the remaining issue of what counts as "severable." *See generally id.* at 890–95. This point is underscored by the fact that this section of the court's opinion was titled "Severance of Windpower Rights," and excludes an eminent domain-based qualification. *Id.* at 890. Also, all academic references to this portion of *Contra Costa* state that the court addressed the validity of wind severance and gave no attention to the fact that eminent domain, rather than private contracting, gave rise to the wind-severance provision at issue. *See, e.g.*, Smith, *supra* note 12, at 303 (summarizing the *Contra Costa* case as a "California appellate court [upholding] the validity of a wind-severance provision").

84 *Contra Costa*, 58 Cal. App. 4th at 893.

85 *See id.*

soned, a right's capability of being bought and sold in the marketplace is sufficient to make that right severable.

The fact that wind rights are capable of being bought and sold in the marketplace, and thus constitute "substantial rights," was made evident by the 30-year lease for wind power entered into by Vaquero and a wind-energy development company.[86] To the court, this lease was "irrefutable evidence that one may have a right to use windpower rights without owning any interest in the land."[87] As "substantial rights," therefore, wind rights can be condemned, or excluded from condemnation, through severance.[88]

The court also addressed Vaquero's concern that use of wind rights is dependent on control of the surface estate. Specifically, Vaquero argued that it could no longer give its wind lessees authority to build new windmills or relocate existing windmills on land that Vaquero no longer owned.[89] The *Contra Costa* court explained that, despite different ownership of the surface estate, as owner of the wind estate Vaquero retained "an easement for ingress and egress and such other access rights as may be required for the maintenance and development of these windpower rights."[90] Quoting the Water District's brief — and noting that mineral severances allow for like easements — the court reasoned that the "argument that harvesting windpower somehow requires greater usage of the surface than harvesting oil and gas resources defies common sense to anyone who has seen a field of oil derricks."[91] Ergo, with the preceding discussion of "substantial rights," the court upheld the severability of wind rights.

C. Why the Court's Reasoning Is Wrong and Incomplete

Notwithstanding its ultimately desirable outcome, the *Contra Costa* case was decided through an analysis that is deficient and erroneous. The court's opinion is flawed for at least three reasons.

First, the *Contra Costa* court did not seek normative guidance from first principles or policy concerns. The court instead opted to shoehorn the wind-severance issue into an arguably ill-fitting standard of what counts as "severable." This analysis is problematic for multiple reasons. Without an explanation of the incentives created or goals sought through the creation of this legal rule, future courts may not fully understand the normative implications of allowing wind severance.[92] Moreover, by ignoring normative interests, the *Contra Costa* court risks making a normatively undesirable deci-

86 *Id.*
87 *Id.*
88 *Id.* at 893–94.
89 *Id.* at 894.
90 *Contra Costa*, 58 Cal. App. 4th at 894.
91 *Id.*
92 In fact, this decision's reasoning is worthless to courts in jurisdictions lacking an identical "substantive right" precedent, whereas first principles and policy concerns tend to have more cross-jurisdictional appeal. Note, however, that I am not suggesting normative interests should always be used in lieu of analogous precedent. Rather, I assert that when creating a novel rule or standard, normative interests are at least worth considering.

sion.[93] Comparing this case to other property cases in which legal rules or standards were established through the use of normative guideposts, one sees the meaningful contribution these considerations add to opinions.[94] In its discussion concerning wind severability, the court also fails to draw analogies to other severable rights, the justification of which might touch on first principles or policy concerns.[95] In sum, the court's reasoning is incomplete for want of normative-interest consideration.

Second, the court decided the severability issue on the relatively arbitrary fact of wind rights being bought and sold in the marketplace. Although the court's logic is internally consistent, it is completely divorced from the more relevant normative considerations described above: individual freedom, environmental goals, and potential increases in litigation. It is wholly unclear from the court's opinion why compensability in the marketplace and status as a "substantive right" means a right should be severable. Indeed, it seems like a rather antiquated precedent, the reasons for which have been forgotten, or at least unmentioned. Indeed, one who seeks to use the law for normative good can argue that the "substantive right" test is arbitrary. Perhaps our first principles and policy concerns would be equally served by arbitrarily allowing severance for all estates that are "natural resources," or that are "bigger than a breadbox" — when a court does not provide an explanation for a criterion, the criterion seems arbitrary.[96] Accordingly, the court's reliance on a seemingly arbitrary test for severability makes the ultimately positive rule allowing wind severance questionable.

Finally, although the court was right to assert the presence of Vaquero's ingress and egress easements, it was wrong to say that harvesting wind power does not require greater use of the surface estate than harvesting oil and gas. While a single

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93 *See, e.g.*, Margaret E. McGuinness, *A Discussion Following the Release of the Blackmun Papers: The Internationalism of Harry Blackmun*, 70 MO. L. REV. 1289, 1301 (2005) (noting how, in ignoring first principles, the Supreme Court can create a highly controversial decision); William L. Reynolds, *The Silver Anniversary of the Second Conflicts Restatement: Legal Process and Choice of Law*, 56 MD. L. REV. 1371, 1392 (1997) (arguing that ignoring policy concerns can lead to absurd results); Deborah Zalesne, *Lessons from Equal Opportunity Harasser Doctrine: Challenging Sex-Specific Appearance and Dress Codes*, 14 DUKE J. GENDER L. & POL'Y 535, 559 (2007) (explaining how courts ignoring normative interests concerning gender can result in the undesirable outcome of devaluation of feminized people).

94 Can one really imagine judges Tompkins and Livingston discussing Pierson v. Post, 3 Cai. R. 175 (1805), *without* considering normative interests?

95 I concede that the court analogizes to mineral severance in its discrete discussion concerning easements of ingress and egress. That portion of the opinion, however, is flawed for a different reason. *See infra* notes 98–99 and accompanying text.

96 *See, e.g.*, Kristin E. Hickman & Matthew D. Krueger, *In Search of the Modern* Skidmore *Standard*, 107 COLUM. L. REV. 1235, 1297 (2007) (explaining that little or no explanation for a decision raises suspicions as to that decision being arbitrary); Major Edward J. Kinberg, *USALSA Report: Hindsight–Litigation that Might Be Avoided*, 1989 ARMY LAW. 26, 30 (highlighting a decision in which "[t]he failure or refusal to give an explanation when one is clearly called for appears [] to be arbitrary"); Richard W. Parker, *Grading the Government*, 70 U. CHI. L. REV. 1345, 1405 n.225 (2003) (criticizing an author for using arbitrary rationale because he offers no explanation for the rationale); Marianne Koral Smythe, *Judicial Review of Rule Rescissions*, 84 COLUM. L. REV. 1928, 1963–64 (1984) (describing a Court's finding that an agency decision was arbitrary because the agency "offered no explanation whatever for that decision").

wind turbine may use surface space comparable to that used by a single oil derrick, natural-resources developers often only need a few oil derricks to access an entire oil reservoir.[97] Hundreds of turbines may be needed to access an entire wind "reservoir."[98] The court is wrong to assume that oil derricks and wind turbines are usually needed in commensurate quantities. Thus, this rationale for wind estate owners' easements to use surface estates fails. Consequently, the court's analogy to mineral severance here, while correct in the end, is made from an incorrect understanding of natural-resource development.

Irrespective of its incorrectness and incompleteness, the *Contra Costa* court reached a result in concord with the normative interests discussed above. California law would presumably uphold wind-severance provisions.[99] This pro-severance rule should be adopted in other jurisdictions, like Texas, that are leading wind-producing and wind-potential states.[100] However, other courts should not rely on *Contra Costa*'s erroneous reasoning, for it is dubious that such reliance will consistently yield a correct outcome. No other cases could be located that uphold the validity of wind-severance provisions — be it in the eminent domain or private contracting context. Future courts should thus reach the same conclusion as in *Contra Costa*. However, their reasons should instead stem from first principles and policy concerns.

IV. The Adaptability of Existing Legal Structures to Newfangled Wind Technology

Having explored the reasons for and against wind severance, and having evaluated the lone judicial decision in this area, I have shown that courts would be well-advised to allow wind severance. However, taking a step back from the nitty-gritty of this issue allows one to see that the wind-severance story amounts to more than just a compelling argument for allowing estate division. Rather, the case of wind severance illustrates the hypothesis that, despite the extraordinariness of wind-energy innovations, wind technology and wind-power development will not cause extraordinary problems for our legal system.

One clear example of how wind law issues, in spite of their seeming novelty, can fit comfortably into existing legal structures, comes from the relationship between domi-

97 *See* Lawrence J. Drew, Undiscovered Petroleum and Mineral Resources 46 (1997) (suggesting that one or two wells would adequately serve a given reservoir); Mary L. W. Jackson, *Port Acres Field–U.S.A. Gulf of Mexico Coast, Texas*, *in* Treatise Atlas: Stratiographic Traps II 329 (Norman H. Foster & Edward A. Beaumont eds., 1991) (noting two reservoirs which require one to three wells per reservoir); *see also* Charlotte J. Wright & Rebecca A. Gallun, Fundamentals of Oil & Gas Accounting 29 (5th ed. 2008) ("Today the various states as well as the U.S. government regulate the number of wells drilled into a reservoir through the use of spacing and density regulations in order to prevent economic waste and to maximize recovery from the reservoir.").

98 For instance, the Vaquero property in *Contra Costa* hosted approximately 260 wind turbines. *See Contra Costa*, 58 Cal. App. 4th at 888.

99 As noted, because there are no other (recent) cases addressing the issue, it is impossible to know for certain whether California courts would uphold wind-severance provisions.

100 *See supra* notes 19–20 and accompanying text.

nant/servient estates and wind severance.[101] As previously noted, water severance and mineral severance have been allowed for generations, notwithstanding potential conflicts over estate dominance.[102] Because the law is relatively well developed for these and other areas of the law, the groundwork has been laid for wind law. Accordingly, lawmakers and academics can turn to "first in time," "value maximization," "bright-line rules," and other tools to resolve what appear to be novel, wind-related issues. In the immediate case, these tools will help permit wind severance. In the broader sense, however, these tools' utility suggests that new and amazing wind-technology innovations seem to require very little legal innovation. That is, with existing legal structures, we can address problems raised by wind-power development.

This point is also highlighted by other potential challenges that the maturing field of wind law presents. For instance, wind turbines seem to be acquiring a reputation as nuisances.[103] To some, wind turbines are too loud.[104] To others, wind turbines are ugly.[105] To others still, wind turbines kill too many bats.[106] The list of nuisance complaints about wind turbines goes on; yet these nuisance complaints can probably be addressed in the same way that similar complaints are handled for, say, oil derricks. Oil derricks also receive their fair share of nuisance complaints;[107] it seems fair to

101 *See supra* Part II(B)(2).

102 *See supra* notes 68–69 and accompanying text.

103 *See, e.g.*, Rose v. Chaikin, 453 A.2d 1378, 1380 (1982) (assessing whether a windmill constituted a private nuisance); Brian Dietz, Comment, *Turbines vs. Tallgrass: Law, Policy, and a New Solution to Conflict over Wind Farms in the Kansas Flint Hills*, 54 KAN. L. REV. 1131, 1159–60 (2006) (discussing the published cases in the country considering whether a wind turbine constitutes a nuisance).

104 *See, e.g.*, David R. Bliss, *Tilting at Wind Turbines: Noise Nuisance in the Neighborhood After* Rassier v. Houim, 69 N. DAK. L. REV. 535, 535–36 (1993) ("Noises can be considered nuisances, such as airplane noise, gunshots from a firing range, or the whine and whir of a wind turbine."); Judy Keen, *Neighbors at Odds over Noise from Wind Turbines*, USA TODAY, Nov. 3, 2008, *available at* http://www.usatoday.com/money/industries/energy/2008-11-03-windturbines_N.htm (discussing objections to wind turbines for being noisy).

105 *See, e.g.*, Glenn Adams, *Maine Wind Farm on Line*, ASSOCIATED PRESS (Jan. 30, 2007), *available at* http://www.projo.com/business/content/BZ_marshill30_01-30-07_BJ45SG6.d5a2aa.html ("[Windmills] may be smart, but they're ugly, critics say."); Thom Patterson, *Neighbors Fight, States Scramble over Clean Power*, CNN.COM, Oct. 18, 2007, http://www.cnn.com/2007/TECH/science/10/09/pip.wind.energy/index.html (quoting a neighbor of a wind turbine as saying, "[i]t's unattractive and it's a nuisance").

106 *See, e.g.*, Justin Blum, *Researchers Alarmed by Bat Deaths from Wind Turbines*, WASH. POST (Jan. 1, 2005), *available at* http://www.washingtonpost.com/wp-dyn/articles/A39941-2004Dec31.html (explaining how wind turbines yielded "hundreds of bat carcasses, some with battered wings and bloodied faces"); Don Hopey, *New Wind Turbine Site May Hold Key for Bat Deaths*, PITT. POST-GAZETTE (Oct. 16, 2008), *available at* http://www.post-gazette.compg/08290/920284-56.stm (noting the "high number of deaths of migratory bats at wind turbine sites").

107 *See, e.g.*, Joe Follick, *Is Florida Set for the Oil Drill?*, SARASOTA HERALD-TRIBUNE (June 22, 2008), *available at* http://www.heraldtribune.com/article/20080622/NEWS/806220336/1661 (noting that drilling is "an ugly fix"); Josh Shaffer, *Westlake, Texas, Approves Temporary Ban on Oil, Gas Drilling*, FORT WORTH STAR-TELEGRAM (Oct. 14, 2003), *available at* http://www.accessmylibrary.com/coms2/summary_0286-8589865_ITM (noting "the noise and nuisance of drilling").

suggest that comparable turbine-based complaints be handled with like rules and standards. This approach to wind law seems all the more viable as one ponders the adaptability of other natural-resources doctrine to wind development. Laws pertaining to royalty payments, wildlife protection, easements and covenants, state and Indian lands, liability considerations, et cetera, are all applicable to wind law with only minor modifications.[108]

In fact, in some ways it seems that wind law issues are actually easier to address than other natural resource allocation issues. Consider the fact that wind-power harnessing does not implicate the sticky variable of physical reservoirs present in oil and gas law. Wind power does not have issues pertaining to wind "reinjection"[109] or underground trespass[110] of subsurface reservoirs. For this reason, wind-power harnessing might be considered less complicated and less invasive than the management of at least some mineral resources. Similarly, wind development can be seen as less problematic than mineral and water development insofar as it seems to result in less damage to the surface. Specifically, acquiring wind does not require substantial drilling into the earth's surface as must be done to reach groundwater or oil and gas.[111] Moreover, while the removal of a wind turbine from the land's surface is perhaps not a minor task, it seems at least as laborious to remove an oil derrick, and the removal of a derrick *also* requires that the well be filled or covered.[112] Thus, it appears that wind technology may, at times, present fewer difficulties than other types of natural-resource development.

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108 Surely, each legal structure's adaptability to wind law could be the subject of an entirely separate discussion. I seek only to point out the intuitive adaptability of these structures to wind law.

109 *See, e.g.*, Phillip J. Sheehe, Comment, *Conservation of Oil and Gas in Tennessee*, 41 TENN. L. REV. 323, 329 (1974) (discussing the reinjection of gas, water, or other fluids into a reservoir).

110 *See, e.g.*, Daniel K. Brough, Comment, *Alternatives in Accretion: Why There Is Not Yet an Appropriate Solution to the Application of Accretion Law to Mineral Estates*, 2004 B.Y.U. L. REV. 169, 187–88 (2004) (describing subsurface trespasses through underground reservoirs).

111 *See* Richard J. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. 631, 693 n.373 (1986) (noting that a landowner's capture of groundwater or oil and gas is done by drilling). It also seems that typical wind turbines and typical oil derricks are relatively similar in above-ground height. *Compare* PAUL GIPE, WIND POWER: RENEWABLE ENERGY FOR HOME, FARM, AND BUSINESS 46 (2d ed. 2004) (describing typical turbine heights as ranging from 100 feet above ground to 164 feet above ground), *and* Press Release, American Wind Energy Association, Small Wind Systems, www.awea.org/pubs/factsheets/Small_Wind_FAQ_Factsheet.pdf (noting that smaller turbines are 80 feet tall on average, and range from 30 to 140 feet in height above ground), *with* MARTIN S. RAYMOND & WILLIAM L. LEFFLER, OIL AND GAS PRODUCTION IN NONTECHNICAL LANGUAGE 89 (2005) ("The derrick or mast is a steel structure up to 170 feet tall."), *and* J.H. THOMSON & BOVERTON REDWOOD, HANDBOOK ON PETROLEUM 39 (2d ed. 1906) (describing typical derricks in the United States as being at least 70 feet in height).

112 *See, e.g.*, Timothy Holahan, Note, *A Framework for Alternative Energy Development: Shifting from Drilling Rigs to Renewables*, 35 B.C. ENVTL. AFF. L. REV. 321, 327 n.48 (2008) (explaining that the proper decommission of an oil well requires that it be plugged or sealed "to prevent underground materials from leaking up through the well and polluting the surrounding environment").

The comfortable fit of wind-energy issues into existing legal structures is good for many reasons. Aside from the many social and political benefits outlined previously,[113] it also reflects well on our large legal system. Rules and standards that exist for natural-resource allocation seem sufficiently detailed that they allow brand new technologies to be stuck right into our existing legal framework. And, not only are these legal structures *existing*, but many of them are also *old*.[114] This adaptability of old law will likely help us in the future as new technologies are developed to sate the growing desire for a greener planet[115] and greater energy independence.[116] So, while allowing wind severance furthers national climate- and energy-related goals,[117] the accommodating legal system also furthers those goals by clearing a legal landing pad for innovations yet to come.

V. CONCLUSION

Wind-energy development is an instrument with great potential to help the nation reach some of its most pressing goals. However, it seems that in the haste to harness the wind and ameliorate climate and energy problems, at least one very significant legal issue has gone unaddressed. Severance of wind rights is not merely a niche consideration or an isolated deficiency in existing law; rather, it is a core legal concern that should be resolved in order to inject greater legal certainty into the development of wind energy nationwide.

In this note, I have considered the issue of wind severance from a blank slate. An examination of several first principles and policy concerns germane to wind severance weigh in favor of courts upholding wind-severance provisions in private agreements. This analysis is necessary largely because the only court to have ruled on the issue to date ignored such fundamental considerations, opting instead to rely on a seemingly arbitrary test divorced from normative interests. Nevertheless, the pro-severance outcome of the *Contra Costa* decision is a good one, and the ease with which our legal framework can adapt to wind severance and other wind law challenges underscores the admirable versatility of our legal system. Indeed, it seems that wind energy is less challenging for our legal system than it is extraordinary for our nation.

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113 *See supra* notes 3–11 and accompanying text.

114 *See, e.g.*, Baltimore & P.R. Co. v. Fitzgerald, 2 App. D.C. 501, 517 (D.C. Cir. 1894) (explaining what constitutes a nuisance as including disagreeable noises and sights); Lowell v. Lewis, 15 F. Cas. 1018, 1021 (C.C.D. Mass. 1817) (No. 8,568) (noting that the law gives the right "to him [] who is first in time").

115 *See, e.g.*, J. David Breemer, *What Property Rights: The California Coastal Commission's History of Abusing Land Rights and Some Thoughts on the Underlying Causes*, 22 UCLA J. ENVTL. L. & POL'Y 247, 296 n.268 (2004) (noting "a popular demand for environmental protection"); Gareth Porter, *Pollution Standards and Trade: The "Environmental Assimilative Capacity" Argument*, 4 GEO. PUB. POL'Y REV. 49, 67 (1998) (describing "popular demands for protection from the impacts of industrial pollution").

116 *See, e.g.*, William Hett, Note, *U.S. Corn and Soybean Subsidies: WTO Litigation and Sustainable Protections*, 17 TRANSNAT'L L. & CONTEMP. PROBS. 775, 806 (2008) (noting "the rising demand for . . . greater energy independence").

117 *See supra* notes 3–11, and Part II(A)(2), and accompanying text.

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Categorizing Environmental Crimes: *Malum in se* or *Malum prohibitum*?

by Michael Parker

I. Introduction

Unlike the discretionary penalties that parents issue to their children, criminal punishment is not doled out merely because someone "said so." Justifications for criminal punishment can either be *malum in se*, wherein punishment is merited because an individual's act is morally repugnant, or *malum prohibitum*, wherein the simple performance of a prohibited act is a basis for punishment – similar to parents telling children "because I said so."

However, unlike parental punishment, the difference between punitive consequences depending on whether an action is wrong because it violates society's conception of morality, or wrong because society says it is wrong is quite distinct and dramatic. Boiled down to their essential characteristics, crimes traditionally consid-

ered *malum in se* carry burdensome penalties[1] — such as imprisonment or the death penalty[2] — while crimes considered *malum prohibitum* are usually met with milder punishments.[3]

The distinction between *malum in se* and *malum prohibitum* has recently gained particular importance in the realm of environmental crimes. This increase in importance is due to the fact that over the past few decades, "Congress and virtually every state legislature have sought to include criminal penalties for violations of nearly every major environmental law."[4] In 2008, for example, 204 defendants charged with federal environmental and wildlife crimes entered guilty pleas,[5] a number approximately three times greater than the number of federal guilty pleas for murder (69).[6] This number of guilty pleas in environmental crimes also marks a steady increase from previous annual levels—167 guilty pleas in 2006 and 197 in 2007.[7] These numbers clearly illustrate the continuously evolving terrain in which lawmakers are participants. With the number of prosecutions steadily increasing and a greater percentage of federal criminal work devoted to this subject, careful analysis of why environmental crimes are punished is necessary.

The purpose of this note is to examine society's sentiments towards environmental crimes and to analyze what, if any, objectives society has set for itself. With this purpose in mind, this note seeks to explore whether the justifications that governments currently follow in promulgating environmental legislation correspond to society's justifications for punishing environmental crimes. This note proposes that although many governments and academics currently view environmental crimes as *malum prohibitum* and merely regulatory, to accurately reflect society's attitude towards environmental crimes, governments must treat environmental crimes as *malum in se*, morally repugnant, offenses.

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1 *See* JOSHUA DRESSLER, UNDERSTANDING CRIMINAL LAW 158 (2006) ("non-public-welfare ... offenses often result in severe punishment.").

2 *See* ARTHUR RIPSTEIN, EQUALITY, RESPONSIBILITY, AND THE LAW 157 (1999) (stating that crimes *malum in se* require severe punishment, including imprisonment).

3 DRESSLER, *supra* note 1, at 157 (stating that for *malum prohibitum* offenses "the penalty for violation is relatively minor").

4 *See* Avi Samuel Garbow, *The Federal Environmental Crimes Program: The Lorax and Economics* 101, 20 VA. ENVTL. L.J. 47, 47 (2001) (describing the recent historic awareness of environmental crimes and the increasing rate at which environmental crimes are prosecuted).

5 *See* U.S. SENTENCING COMMISSION, U.S. SENTENCING COMMISSION FINAL QUARTERLY DATE REPORT 48 (Mar. 24, 2009), *available at* http://www.ussc.gov/sc_cases/USSC_Quarter_Report_Final_FY2008.pdf.

6 *Id.* It is important to note, however, that murder is almost always prosecuted in state courts. For example, in Texas, the total murder arrests were 895. *See* CRIME IN TEXAS 68, *available at* http://www.txdps.state.tx.us/crimereports/08/UCR-27.pdf#page=8. The point is only to demonstrate the increase in criminal prosecution for environmental crimes.

7 U.S. SENTENCING COMMISSION, U.S. SENTENCING COMMISSION FINAL QUARTERLY DATE REPORT 35 (Mar. 16, 2007), *available at* http://www.ussc.gov/sc_cases/USSC_Quarter_Report_Final_06.pdf; U.S. SENTENCING COMMISSION, U.S. SENTENCING COMMISSION FINAL QUARTERLY DATE REPORT 41 (Mar. 19, 2008), *available at* http://www.ussc.gov/sc_cases/Quarter_Report_Final_07.pdf.

To support this claim, the note first explains the characteristics and history of *malum in se* and *malum prohibitum* crimes. Section III then discusses the impacts of categorizing a crime as either *malum in se* or *malum prohibitum*. Section IV analyzes environmental crimes and determines whether they are considered *malum in se* or *malum prohibitum* by academics and law makers — and Section V attempts to establish whether these categorizations are correct. Finally, Section VI concludes that environmental crimes should be viewed as *malum in se*.

II. *MALUM IN SE* AND *MALUM PROHIBITUM*: A BRIEF EXPLANATION

Some have argued that the basic definitions of *malum in se* and *malum prohibitum* have a deceptive simplicity, "but attempts to utilize the categories quickly demonstrate their frustrating ambiguity."[8] Thus, before any significant debate on classification can take place, the qualities of both *malum in se* and *malum prohibitum* crimes must be properly defined. This section will briefly touch on the history and definitional qualities of each punishment rationale. By articulating a clear definition of both terms, the ambiguity problem is alleviated. Furthermore, defining these terms clearly provides a foundation for the impact of these categorizations, which will be discussed in Part III.

A. *MALUM IN SE*

Often a categorization reserved for the most heinous crimes, offenses deemed *malum in se* are typically considered non-public-welfare offenses.[9] According to a simplified definition, crimes described as *malum in se* represent "behavior or conduct that is wrong because of a certain societal intolerance or moral code."[10] Black's Law Dictionary elaborates on this definition by emphasizing the wickedness of *malum in se* crimes, stating that such a crime is "inherently and essentially evil, that is, immoral in its nature and injurious in its consequences, without any regard to the fact of its being noticed or punished by the law of the state."[11] In short, the *malum in se* category of crimes is reserved for what are considered to be the gravest violations.

Perhaps because *malum in se* crimes represent the most evil offenses of society — those that cut to the core of humanity's sense of "wrongness" — they have a long legal history. Prior to the mid-nineteenth century, "Anglo-American crimes almost exclusively involved conduct *malum in se*, such as murder, arson, rape, and robbery."[12] Thus, offenses constituting the majority of regulatory crimes that affect health and safety, such as the sale of alcohol to minors, were not significantly punished until recent times.[13] As a result of both the nature of *malum in se* crimes, and the fact that

8 Nancy Travis Wolfe, *Mala in Se: A Disappearing Doctrine?*, 19 CRIMINOLOGY 131, 132 (1982); *see also* John C. Coffee Jr., *Does "Unlawful" Mean "Criminal"?: Reflections on the Disappearing Tort/Crime Distinction in American Law*, 71 B.U. L. REV. 193, 200 (1991) ("[T]he line between *malum in se* and *malum prohibitum* has been crossed many times and largely discredited.").

9 *See* DRESSLER, *supra* note 1, at 158.

10 Garbow, *supra* note 4, at 51 (defining the differences between crimes that are *malum in se* and crimes that are *malum prohibitum*).

11 BLACK'S LAW DICTIONARY, 1045 (9th ed. 2009).

12 *See* DRESSLER, *supra* note 1, at 157.

13 *Id.*

criminal punishment was narrowly limited to only a few particular offenses, "conviction for such offenses... was gravely stigmatizing, and the penalties for their violations were severe."[14]

Finally, since crimes classified as *malum in se* represent acts that are inherently wrong, it should not be surprising that these offenses regularly require an element of *mens rea*.[15] It seems logical that if an action is morally repugnant, an individual should be held accountable only in the event that he or she intended the consequences of his or her actions — or at the very least knew the consequences were foreseeable. However, despite the general rule that *malum in se* crimes require an element of *mens rea*, it is not categorically true that intent is necessary.[16] Some *malum in se* crimes are strict liability offenses.[17]

Two chief examples of *malum in se* crimes that require no *mens rea* are statutory-rape and felony-murder.[18] Both crimes, the consequences of which can easily be viewed as morally repugnant, can be committed despite a lack of intent on the actor's part. In the case of statutory-rape, this categorization is justified by the argument that strict liability "serves as an appropriate substitute for *mens rea* because the actor is not entirely blameless. Culpability arises from the actor's assumption of the risk in engaging in sexual intercourse with someone who might be underage."[19] This same assumption of risk argument also applies to felony-murder, but categorizing felony-murder as a *malum in se* crime has other justifications as well.

In a felony-murder case, a defendant may be found guilty of murder during the commission of a crime despite lacking intent to murder.[20] An individual who commits felony-murder has already intentionally undertaken criminal activity — even more so than the actor committing statutory-rape (since statutory rape can occur without any intent of committing a crime).[21] Moreover, proponents of the felony-murder rule argue that criminals are deterred from criminal conduct by threat of punishment — specifically since this "punishes those people that actively resist deterrence and instead favor risk and criminal conduct."[22]

14 *Id.*

15 *See id.* ("Conviction for such offenses ...required proof of *mens rea*.")

16 *See e.g.*, Catherine L. Carpenter, *On Statutory Rape, Strict Liability, and the Public Welfare Offense Model*, 53 AM. U. L. REV. 313, 385-91 (2003) (observing that thirty states impose strict liability for sexual activity with an underage female).

17 *See id.*

18 *Id.*

19 Catherine L. Carpenter, *The Constitutionality of Strict Liability in Sex Offender Registration Laws*, 86 B.U. L. REV. 295, 321 (2006).

20 *See* DRESSLER, *supra* note 1, at 557.

21 *Id.*

22 Erin H. Flynn, *Dismantling the Felony-Murder Rule: Juvenile Deterrence and Retribution Post-Roper v. Simmons*, 156 U. PA. L. REV. 1049 (2008).

B. *Malum prohibitum*

On the opposite end of the punishment spectrum are crimes that are considered to be *malum prohibitum*. While crimes deemed *malum in se* have existed since time immemorial, crimes described as *malum prohibitum* are in their infancy in the scheme of legal history. Beginning in the last few centuries, and as a result of industrialization, legislatures became aware of a new problem: "[c]onduct by a single actor that, although not morally wrongful, could gravely affect the health, safety, or welfare of a significant portion of the public."[23] In an effort to fashion a remedy, lawmakers have crafted legislation to punish criminally those who have placed the welfare of the public in danger. This legislation is what is now called public-welfare offenses, or *malum prohibitum* crimes.[24]

Crimes described as *malum prohibitum* represent "behavior that is wrong simply because it is prohibited by law."[25] Furthermore, a crime considered *malum prohibitum* is "an act which is not inherently immoral, but becomes so because its commission is expressly forbidden by positive law; an act involving illegality resulting from positive law."[26]

In his book *Understanding Criminal Law*, Joshua Dressler describes five qualities of crimes determined to be *malum prohibitum*: "(1) these offenses have no root in common law; (2) a single offense can cause injury to a significant number of individuals; (3) the standard imposed by the statute is reasonable; (4) there is typically a minor penalty for violation; (5) [and] the reputation of the violator is rarely damaged by a conviction."[27] This note will later apply these five qualities to determine whether environmental crimes fit the mold of a *malum prohibitum* crimes.

III. The Impact of a Crime Being *Malum in se* or *Malum prohibitum*

Although one encounters some difficulty in defining what it means for a crime to be *malum in se* or *malum prohibitum*, the real distinction between the terms lies in the consequences of committing such crimes. In fact, depending on how a crime is perceived, the discrepancy in consequences can be colossal. It is precisely because of the dissimilarity in consequences that close scrutiny of categorization is warranted. This section will analyze the differences in punishment between *malum in se* and *malum prohibitum* crimes and provide a range of examples to illustrate the importance of the distinction.

If an individual is convicted of a crime deemed *malum prohibitum*, the available penalties are by and large exceedingly mild.[28] The maximum penalty for a crime of this

23 *See* Dressler, *supra* note 1, at 157.

24 *Morissette v. U.S.*, 342 U.S. 246, 259-60 (1952).

25 Garbow, *supra* note 4, at 51-52 (defining the differences between crimes that are *malum in se* and crimes that are *malum prohibitum*).

26 Black's Law Dictionary, *supra* note 11.

27 *See* Dressler, *supra* note 1, at 157 (enumerating the qualities of crimes *malum prohibitum*).

28 Rollin M. Perkins, *The Civil Offense*, 100 U. Pa. L. Rev. 832, 845-56 (1952) (discussing penalties for civil offenses).

nature is typically limited to a fine or its equivalent.[29] According to Arthur Ripstein, punishment for *malum prohibitum* offenses often take the form of monetary penalties because they do not entail violations of the fundamental rights of others.[30] This mild punishment is in stark contrast to crimes *malum in se*, which require more severe punishment.[31]

A final distinctive quality of *malum prohibitum* offenses is that they are "likely to allow ignorance of law defenses."[32] In other words, even if an individual violates a public-welfare offense, the fact that he or she was unaware of the law could create a possible excuse. Furthermore, some have argued that due process "requires that [*malum prohibitum*] statutes clearly define the scope of the conduct that they criminalize, leaving no ambiguity as to whether knowledge of illegality is an element of the crime."[33] This reasoning seems to be correct considering the fact that *malum prohibitum* offenses are not regarded as crimes of moral turpitude.[34] This difference is because individuals are not guided by universal moral understandings in acting, and therefore may be unaware that their behavior is illegal. Defendants convicted of *malum in se* crimes, on the other hand, may not use ignorance of law as a defense.[35]

Differing from the penalties assessed for crimes *malum prohibitum*, an array of additional penalties is available for *malum in se* offenses. Some examples include: deportation,[36] revocation of a business license,[37] loss of professional accreditation,[38] long-term imprisonment,[39] and reputational damage.[40]

One consequence of being convicted of a *malum in se* crime is an impact on immigration status. If convicted of a crime constituting a violation of moral turpitude (a *malum in se* violation), a defendant may be subject to deportation.[41] According to Section 237(a)(2)(A)(i) of the Immigration and Nationalities Act, an individual is deportable if he or she:

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29 David M. Turchetta, *Modernizing Public Welfare Offenses in Massachusetts (Go to Jail-Go Directly to Jail)*, 28 NEW ENG. L. REV 783, 784 (1994) (describing the qualities of crimes *malum prohibitum*)

30 RIPSTEIN, *supra* note 2, at 156.

31 *Id.* at 157.

32 Uri Matthew Myerson, *Requiring Accountability Among Those Who Sell Firearms: Ignorance of the Law Should Not Be an Excuse*, 22 CARDOZO L. REV. 665, 687 (2001) (discussing defenses for violators of *mala prohibita* offenses).

33 Michael L. Travers, *Mistake of Law in Mala Prohibita Crimes*, 62 U. CHI. L. REV. 1301, 1321 (1995).

34 *Id.* at 1322.

35 *Id.*

36 Immigration and Nationality Act, 8 U.S.C. §237(a)(2)(A)(i) (2009).

37 *See e.g.*, *In re* Madden, 184 A.2d 204, 205 (D.C. Mun. App. 1962) (revocation of a bail bond license); *In re* C. Schmidt & Sons, Inc., 79 N.J. 344, 355 A.2d 637 (1979) (revocation of a wholesale liquor license).

38 *See e.g.*, Jordan v. DeGeorge, 341 U.S. 223, 227 (1951) (disbarment of an attorney); Golde v. Fox, 98 Cal. App. 3d 167, 180-89 (1979) (revocation of a real estate license).

39 *See* DRESSLER, *supra* note 1, at 157.

40 *Id.*

41 8 U.S.C. §1227(a)(2) (2009).

> (I) is convicted of a crime involving moral turpitude committed within five years (or 10 years in the case of an alien provided lawful permanent resident status under section 245(j) [8 U.S.C.A § 1255(j)]) after the date of admission, and
> (II) is convicted of a crime for which a sentence of one year or longer may be imposed.[42]

Thus, the immigration consequences depend heavily upon how society views and treats particular classes of crime.

In addition to the possibility of deportation, a significant number of professions maintain regulations that permit them to rescind licensing if the license is convicted of an offense involving moral turpitude.[43] In one example, a bondsman was stripped of his license after a jury found him guilty of three counts of filing a "false and fraudulent joint income tax return."[44] According to the controlling statute in the jurisdiction, "no person shall be permitted to engage, either as a principle or agent, in the business of becoming surety upon bonds for compensation in criminal cases, who has ever been convicted of any offense involving moral turpitude."[45] Thus, as a result of a *malum in se* violation, the regulatory agency revoked the professional license. This result demonstrates that crimes involving moral misdeeds carry with them the greatest penalties.

Committing a crime the prohibition of which stems from a moral violation can also lead to a loss of accreditation. In *Golde v. Fox* a real estate broker pled guilty to possession of marijuana for sale in a prosecution arising out of his transportation of at least 800 pounds of marijuana from Mexico to the United States.[46] Following his guilty plea, the Commissioner of the Department of Real Estate revoked his broker's license as per the California Business and Professions Code.[47] The code states that "[t]he commissioner may suspend or revoke the license of a real estate licensee, or may deny the issuance of a license to an applicant, who has ... [e]ntered a plea of guilty or nolo contendere to, or been found guilty of, or been convicted of, a felony or a crime involving moral turpitude."[48]

Finally, the last two penalties frequently connected with *malum in se* crimes are long-term imprisonment and reputational damage.[49] While these penalties can be considered two distinct categories, they are interrelated in the sense that long-term imprisonment often carries with it stigma and reputational harm. [50] These penalties

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42 *Id.*

43 *See e.g.*, *In re* Madden, 184 A.2d 204, 205 (D.C. 1962) (revocation of a bail bond license); *In re* Schmidt & Sons, Inc., 399 A.2d 637, 643 (N.J.1979) (revocation of a wholesale liquor license).

44 *In re* Madden, 184 A.2d at 205.

45 *Id.*

46 *Golde*, 98 Cal. App. 3d at 172.

47 *Id.*

48 CAL. BUS. & PROF. CODE ANN. §10177 (West 2010) (discussing disciplinary grounds).

49 *See* DRESSLER, *supra* note 1, at 157.

50 *See* Frederick Lawrence, *Declaring Innocence: Use of Declaratory Judgments to Vindicate the Wrongly Convicted*, 18 B.U. PUB. INT. L.J. 391, 395 (2009) (suggesting that "[t]he stigma associated with

are not shocking considering that, as previously suggested, crimes that are considered *malum in se* are overwhelmingly the crimes that carry the most severe penalties.

As an example, the Texas Penal Code categorizes robbery, a clear *malum in se* crime, as a second degree felony.[51] As such, this criminal offense carries a punishment of "not more than 20 years or less than 2 years."[52] This punishment range is quite serious compared to the punishment of a *malum prohibitum* offense. Thus, not only is the imprisonment for *malum in se* crime long in duration, but a severe punishment is also accompanied by an attached stigma which is punishment on its own.

IV. ARE ENVIRONMENTAL CRIMES *MALUM IN SE* OR *MALUM PROHIBITUM*?

Armed with a firm grasp of what defines *malum in se* and *malum prohibitum* crimes, and with an understanding of why the difference between the two types of crimes is important, the next step in determining how environmental crimes should be defined is to explore the historical classification of these crimes. This section will first identify the definition of an environmental crime, discuss several categories of environmental crimes, and finally explore whether environmental crimes are currently considered *malum in se* or *malum prohibitum*.

A. WHAT ARE ENVIRONMENTAL CRIMES?

Although many human actions harm the environment, only some of those actions legally constitute environmental crimes. The expression "reduce, reuse, and recycle," for example, is a well-known alliterative phrase reminding us of the "appropriate" actions to take with respect to waste. As guilty as an individual may feel for noncompliance with this motto, however, the phrase fails to impose punishment on those who choose to throw away a recyclable item. When a sovereign government crafts a criminal law, however, it turns what is merely a suggestion into a mandatory prohibition, punishable by fine or imprisonment. When the government sets this prohibition to protect the environment, and someone violates that law, the result constitutes an environmental crime.

Despite the fact that humans have a long history of environmental controls within densely populated areas, those controls did not always constitute what contemporary academics call "environmental law."[53] This distinction is primarily because prior to the last century, "what we would now identify as environmental law lay in the interstices of the common law, principally in the law of neighbors."[54] In fact, it was not until

criminal proceedings is often great and can linger even when the wrongly accused are able to vindicate themselves through the legal system.").

51 TEX. PENAL CODE ANN. § 29.02 (West 2009).

52 *Id.* at §12.33.

53 *See generally* Stuart Bell & Donald McGillivray, ENVIRONMENTAL LAW 17 (2008) (describing the world history of environmental law).

54 Zygmunt J.B. Plater, *From the Beginning, A Fundamental Shift of Paradigms: A Theory and Short History of Environmental Law*, 27 LOY. L.A. L. REV. 981, 994 (1994).

the late 1960s that the first wave of modern environmental regulations surfaced.[55] Environmental crimes developed even more recently, having "been made a subject of crime policy since the late seventies when public opinion in the industrialized world expressed greater concern about serious threats building up against the natural environment and demanded for effective ways of protecting national resources and the environment at large."[56]

Given the youth of environmental crimes as a body of law, it is not surprising that numerous groups have had difficulty defining it. As one example, although the definition of environmental crime can be classified broadly, no consensus exists within federal organizations on how to classify environmental crimes. When it comes to reporting crimes, for example, the Department of Justice "does not include environmental offenses . . . as white collar crime." [57] The United States Attorney's Office for the Northern District of California, on the other hand, "includes environmental offenses . . . as white collar crime, and reports on their white collar prosecutions explicitly using this designation."[58]

As another example of definitional differences, the U.S. Environmental Protection Agency classifies environmental crimes as "cases that involve negligent, knowing or willful violations of federal environmental law."[59] To prosecute environmental crimes, it is necessary to prove two elements: "(i) an act that substantively violates a statute and (ii) an intent to so violate the statute."[60] This is quite different than the definition given by the Department of Justice or the United States Attorney's Office for the Northern District of California. With all of the disagreement amongst federal regulatory bodies, it is not surprising that academic commentators have had difficulty in categorizing environmental crimes as *malum in se* or *malum prohibitum*.

B. Are Environmental Crimes Currently Considered *Malum in se* or *Malum prohibitum*?

Environmental crimes can fit into a variety of distinct types. They can range from polluting the oceans[61] to participating in the illegal trade of endangered animals.[62] Regardless of which type of environmental crime is being explored, however, a significant

55 Johnathan Baert Weiner, *On the Political Economy of Global Environmental Regulation*, 87 Geo. L.J. 749, 753 (1999) (stating that the modern environmental statutory scheme began in 1969).

56 Hans-Jörg Albrecht, *The Extent of Organized Environmental Crime*, in Environmental Crime in Europe 73 (Françoise Comte & Prof. Dr. Ludwig Krämer, eds., 2004).

57 *See e.g.*, Ellen S. Podgor, *The Challenge of White Collar Sentencing*, 97 J. Crim. L. & Criminology 731, 736-37 (2007).

58 *Id.* at 737.

59 Environmental Protection Agency, What is an Environmental Crime? (Jan. 13, 2009), *available at* http://www.epa.gov/compliance/criminal/investigations/environmentalcrime.html.

60 Thomas Duncombe et al., *Environmental Crimes*, 45 Am. Crim. L. Rev. 381, 387 (2008).

61 Vincent J. Foley & Christopher R. Nolan, *The Erika Judgment – Environmental Liability and Places of Refuge: A Sea Change in Civil and Criminal Responsibility that the Maritime Community Must Heed*, 33 Tul. Mar L.J. 41, 52 (2008) ("With respect to potential criminal liability, the United States Department of Justice (DOJ) prosecutes marine pollution and environmental crime statutes.").

62 16 U.S.C.A. § 1538(1) (West 2009).

number of academics believe that all environmental crimes constitute a crime *malum prohibitum*.[63] The remainder of this subpart will explore the possible reasoning for this consensus.

Examining the characteristics of environmental crimes on their face, it could be argued that environmental crimes are *malum prohibitum*. Taking into consideration the factors listed in the above sections, it appears that environmental crimes are a comfortable fit with many of the criteria. First, criminal punishments for environmental crimes are in their infancy.[64] Although environmental regulation has a long history, the criminal element is fairly new.[65] At least in this respect, environmental crimes are similar to *malum prohibitum* offenses, which are new to the legal scene.

Furthermore, when analyzing the five qualities of *malum prohibitum* crimes described by Joshua Dressler, [66] it appears that environmental crimes fit, at least with three of the five qualities: (1) environmental crimes do not have a solid root in common law[67]; (2) a single environmental violation (such as spilling nuclear waste) can injure a significant number of individuals[68]; and (3) the punishment for environmental crimes tends to be minor when compared to other crimes.[69] The remaining two criteria — reasonable punishment and significantly low reputational damage — are more debatable and will be left for discussion in the subsequent section.[70] Although environmental crimes may ultimately fail to match up with all five criteria, a good faith argument can be made that they fit these criteria more closely than murder or rape, which at the very minimum are deeply rooted in common law.

Finally, in addition to being a relatively recent creation, and sharing many of Dressler's rudimentary *malum prohibitum* qualities, environmental crimes are also al-

63 *See, e.g.*, Garbow, *supra* note 4, at 52 ("Some people, however, characterize environmental crimes as being strictly *malum prohibitum*. Viewed through such a lens, critics of the environmental crimes program adorn the underlying environmental regulatory scheme with the proverbial shade of gray for which criminal sanctions are questionable."); Stephen L. Pepper, *Counseling at the Limits of the Law: An Exercise in the Jurisprudence and Ethics of Lawyering*, 104 YALE L.J. 1545, 1576 (1995) (arguing that environmental laws are primarily *malum prohibitum*, and as such, there is a relativity and cost-benefit analysis that a client may appropriately consider when determining the means and level of compliance); DRESSLER, *supra* note 1, at 157 ("Examples [of *malum prohibitum* crimes] include... anti-pollution environmental laws....").

64 *See* Garbow, *supra* note 4, at 48-49; Judson W. Starr, *Turbulent Times at Justice and EPA: The Origins of Environmental Criminal Prosecutions and the Work that Remains*, 59 GEO. WASH. L. REV. 900, 902 (1991).

65 Albrecht, *supra* note 56.

66 *See id.* (enumerating the qualities of crimes *malum prohibitum*).

67 *See* Jim Gitzlaff, *Getting Back to Basics: Why Nuisance Claims are of Limited Value in Shifting the Costs of Climate Change*, 39 ENVTL. L. REP. NEWS & ANALYSIS 10218, 10221 (2009) (although some ancient causes of action, such as nuisance, had application to environmental issues, these causes of actions were not criminal).

68 United States Nuclear Regulatory Commission, *Backgrounder on the Three Mile Island Accident*, *available at* http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/3mile-isle.html.

69 *See* Albrecht, *supra* note 56, at 89.

70 *Id.*

most always strict liability offenses.[71] Thus, unlike crimes *malum in se*, which regularly require an element of intent to successfully complete an offense, environmental crimes are more similar to crimes *malum prohibitum* that often do not require any *mens rea*.[72] Considering the various similarities between the attributes of environmental crimes and *malum prohibitum* offenses, it is rational to conclude that environmental crimes should be considered *malum prohibitum*.

C. What are the Consequences of Environmental Crimes Being Considered *Malum prohibitum*?

Now that both the qualities of *malum in se* and *malum prohibitum* crimes have been laid out, and environmental crimes have been placed within the sphere of *malum prohibitum*, the next step is to determine the consequences of this categorization — particularly for environmental crimes. And, while the consequences are indeed numerous, for the purposes of this note, they will be limited to two in-depth examples — the severity of criminal punishment in the United States and the severity of punishment in China for environmental crimes.

1. The United States Endangered Species Act

It is estimated that 25% of the 350 million plants and wildlife traded annually in the international market come through illegal means.[73] In 2008, a Congressional Research Service report estimated that illegal trade in wildlife generates more than 20 billion dollars.[74] Furthermore, the issue of the trade in environmental species is of such importance that 174 parties came together to address the problem in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).[75] With all this background in mind, punishment for these crimes should carry the heaviest penalties, but this is not the case.

The Endangered Species Act (ESA) criminalizes the import, export, transport, possession, and sale of any endangered fish or wildlife species.[76] In addition to those restrictions, it is also makes illegal the reduction, destruction, or damage of any such species.[77] Violating this act carries several consequences. If an individual is in violation of the ESA, the maximum civil fine is currently twenty-five thousand dollars.[78] Additionally, the maximum term of imprisonment that may be imposed is a meager one year period[79] — much shorter than other crimes of lesser perceived severity. According

71 Charles J. Babbit, Dennis C. Cory & Beth L. Kruchek, *Discretion and the Criminalization of Environmental Law*, 15 Duke Envtl. L. & Pol'y F. 1, 6 (2004) (stating that "[i]t is widely held that environmental crimes have become crimes of strict liability").

72 *See* Dressler, *supra* note 1, at 157.

73 Albrecht, *supra* note 56, at 89.

74 Liana Sun Wyler & Pervaze A. Sheikh, Congressional Research Service, International Illegal Trade in Wildlife: Threats and U.S. Policy, at Summary (2008), *available at* http://fpc.state.gov/documents/organization/102621.pdf.

75 What is CITES?, http://www.cites.org/eng/disc/what.shtml (last visited Oct. 26, 2009).

76 16 U.S.C.A. § 1538(1) (West 2009).

77 *Id.* at § 1538(2).

78 *Id.* at § 1540.

79 *Id.*

to the Texas Penal Code, for example, a single incident of burglary of a non-habitation (a fact that mitigates punishment) carries a penalty of "any term of not more than two years or less than 180 days."[80] This length of imprisonment is double the prescribed punishment for trafficking in endangered species.

A comparison with the punishments doled out for drug trafficking crimes further demonstrates the discrepancy. With reports indicating that 27% of robberies and 30% of burglaries are committed by individuals with a drug habit, and with almost half of individuals arrested for assault testing positive for drug use, the importation of drugs is a serious problem.[81] In an effort to address the problem of drugs, the Controlled Substances Act (CSA) made it criminally culpable to import and export specific drugs into the United States.[82] This prohibition is similar to the type of prohibition that is included in the ESA. However, under the Controlled Substances Act, the punishments are much more stringent than under the ESA. For the first offense of a schedule I (heroin, LSD) or schedule II (cocaine, PCP, methamphetamine) drug, the punishment ranges from "not less than 5 years, and not more than 40 years," to "not less than 10 years, and not more than life" depending on the quantity of the drug.[83] For a second offense, the punishment range is "not less than 10 years, and not more than life," to "not less than 20 years, and not more than life."[84] After a third offense, the punishment is life imprisonment.[85]

Although punishment for wildlife trade and drug trafficking have differing statutory ranges, data indicates that punishment via judicial discretion is much more severe in the case of drug trafficking offenses. In 2008, the average time of incarceration to which offenders were sentenced for environmental and wildlife crimes was 3.2 months.[86] For drug trafficking, the average time of incarceration to which offenders were sentenced was 80.2 months.[87] This data clearly shows that, although both illegal trade in wildlife and drug trafficking are of great concern, a greater emphasis on punishment exists with respect to drug trafficking.

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80 TEX. PENAL CODE ANN. §§ 12.35, 30.02 (West 2009).

81 *See* BUREAU OF JUSTICE STATISTICS, DEPARTMENT OF JUSTICE, FACT SHEET: DRUG RELATED CRIME 2-3 (1994), *available at* http://bjs.ojp.usdoj.gov/content/pub/pdf/DRRC.PDF.

82 21 U.S.C.A. §§ 952-53 (West 2009).

83 *See* DEA, Federal Trafficking Penalties, http://www.usdoj.gov/dea/agency/penalties.htm (last visited Apr. 4, 2009); *see also* 21 U.S.C.A. § 960 (West 2009).

84 *Id.*

85 *Id.*

86 *See* U.S. SENTENCING COMM'N, PRELIMINARY QUARTERLY DATA REPORT: 1ST QUARTER RELEASE (2008) *available at* http://www.ussc.gov/sc_cases/USSC_2008_Quarter_Report_1st.pdf; U.S. SENTENCING COMM'N, PRELIMINARY QUARTERLY DATA REPORT: 2ND QUARTER RELEASE (June 2, 2008) *available at* http://www.ussc.gov/sc_cases/USSC_2008_Quarter_Report_2nd.pdf; U.S. SENTENCING COMM'N, PRELIMINARY QUARTERLY DATA REPORT: 3RD QUARTER RELEASE (Sept. 16, 2008) *available at* http://www.ussc.gov/sc_cases/USSC_2008_Quarter_Report_3rd.pdf; U.S. SENTENCING COMM'N, PRELIMINARY QUARTERLY DATA REPORT: 4TH QUARTER RELEASE (Dec. 15, 2008) *available at* http://www.ussc.gov/sc_cases/USSC_2008_Quarter_Report_4th.pdf. Each of these summarizes the sentencing statistics for its respective quarter, including the average month sentences for various crimes.

87 *Id.*

2. China's Environmental Policies

In 1978, China formally began legislating environmental issues in the *Constitution of the People's Republic of China*.[88] Article 26 requires that the state protect and improve both "the environment in which people live and the ecological environment."[89] It also requires the state to prevent and control "pollution and other public nuisance."[90] Since 1978, legislation aimed at protecting the environment has continuously been enacted.[91] This legislation has grown rapidly and has even expanded to influence the functions of local governments.[92] Furthermore, China has also been an active participant in worldwide efforts to protect the environment.[93]

Despite the fact that China has put in place a system of punishment for environmental offenses, the data surrounding punishment in China shows that environmental crimes are not fully enforced.[94] As an example, since the revision of China's Criminal Law Code, the amount of environmental accidents annually has increased to over 387.[95] And, while this number is quite large, the number of cases prosecuted under this newly revised criminal code numbers less than 20.[96] This disparity indicates a severe problem with China's environmental crime enforcement mechanisms. Additionally, some have argued that this lack of prosecution is the result of environmental authorities being reluctant to transfer environmental crimes to judicial authorities.[97]

At first glance, this disparity might be thought of as a consequence of generally low enforcement throughout China; but this disparity is not the case when compared to enforcement for *malum in se* crimes; criminal enforcement for other crimes in China is particularly harsh. For example, under Articles 140-150 of the Chinese criminal code, the production and sales of fake medicines and producing and selling poisonous or harmful foods carries a penalty of life imprisonment.[98] And, unlike environmental crimes, violations are not taken lightly. When the head of China's Food and Drug Administration was convicted of taking an $850,000 worth of bribes for licensing substandard medicines, he was executed.[99]

Finally, although this disparity in punishment may be the result of a multitude of causes, one plausible explanation is that the Chinese do not view environmental

88 Wang Canfa, *Chinese Environmental Law Enforcement: Current Deficiencies and Suggested Reforms*, 8 Vt. J. Envtl. L. 159, 163 (2006-2007).

89 *Id.*

90 *Id.*

91 *Id.* at 161.

92 *Id.*

93 United Nations Framework Convention on Climate Change, May 9, 1992, KAV 3339, 1771 U.N.T.S. 164, *available at* http://unfccc.int/2860.ph (demonstrating China's participation in international conventions on environmental protection).

94 Canfa, *supra* note 88, at 167.

95 *Id.* at 168.

96 *Id.*

97 *Id.*

98 *See* China: An Enforcement Roadmap, http://ns3.patent.gov.uk/chinaroadmap.pdf (last visited Nov. 9, 2009) (describing the penalties for intellectual property crimes in China).

99 Alexa Olesen, *China Ex-Food and Drug Chief Executed*, Wash. Post, July 10, 2007, *available at* http://www.washingtonpost.com/wp-dyn/content/article/2007/07/09/AR2007070900689_pf.html.

crimes as morally wrong. This conclusion is further supported by the fact that construction sites frequently fail environmental assessments,[100] thus leading an observer to conclude that environmental protection is being sacrificed at the expense of economics.[101] Perhaps if environmental crimes in China was viewed as *malum in se*, this disparity in punishment and enforcement might be remedied.

V. ARE THESE CATEGORIZATIONS CORRECT?

To establish whether environmental crimes are categorized properly as *malum in se* or *malum prohibitum*, a determination must be made as to what qualities make a categorization of *malum in se* or *malum prohibitum* "correct." Does "correct" mean the categorization that creates the most deterrence? Does it mean what seems intuitively fair, or perhaps what an individual deserves? Could it suggest that the most prevalent definition of *malum in se* or *malum prohibitum* is the answer? Is the categorization correct when the qualities of either *malum in se* or *malum prohibitum* match the qualities of environmental crimes? Or, does it mean something entirely different?

In fact, we have a myriad of ways to define what it means for a categorization of *malum in se* or *malum prohibitum* to be "correct." With that in mind, however, it would be impossible to pick one criteria that would be completely objective. One solution is to define "correct" by applying numerous criteria and analyzing the punishment of environmental crimes through that prism of definitions. In other words, by taking multiple subjective criteria and combining them into one large collection of factors, the analysis of environmental crimes can become one that is significantly more objective.

To form this collection, this note will use four broad criteria to determine whether environmental crimes are correctly classified as *malum prohibitum*. The first factor is whether the public considers environmental crimes to be morally wrong, or whether the average person believes it is merely regulatory. The second and third factors are looked at together and explore criminal punishment theory — specifically utilitarianism and retributivism — and establish whether a *malum prohibitum* tag for environmental crimes fits with each of those theories. The fourth factor involves a close look at the characteristics of *malum in se* and *malum prohibitum* listed in Section II, above. The properties of environmental crimes are then compared to these qualities and a conclusion is given in pursuit of what best constitutes a proper fit.

A. ARE ENVIRONMENTAL CRIMES INHERENTLY IMMORAL?

Equipped with a process to determine the validity of environmental crimes' *malum prohibitum* classification, the first question becomes: are environmental crimes considered immoral by the average person? This question can be answered through both anecdotal evidence and statistical data.

In his article, *The Federal Environmental Crimes Program: The Lorax and Economics 101*, Avi Garbow discusses a series of stories that illustrate that environmental crimes are indeed a violation of moral principles.[102] He references the work of Theodor Gei-

100 Canfa, *supra* note 88, at 166.
101 *Id.*
102 Garbow, *supra* note 4, at 54-55.

sel (Dr. Seuss).[103] This work is useful because literature often reflects society's ideals. Using this principle, he suggests that Dr. Seuss's books embody values that Americans embrace and wish to pass along to their children.[104] Through Dr. Seuss's book, *The Lorax*, Garbow argues that the protection of the environment is a fundamental moral value that should be passed to the next generation of Americans, And, given the widespread fame and influence of Dr. Seuss, it is a good marker of how the average individual feels about this issue.[105]

Garbow also relates a story of a woman's call to the Environmental Protection Agency (EPA).[106] The woman phoned the EPA to report that a substance, which appeared to be pollution, was flowing from a pipe into a river.[107] The employee that answered the call explained to the caller that it was possible that the discharge was in compliance with a National Pollutant Discharge Elimination System permit issued pursuant to the Clean Water Act[108] Shocked by this response, the caller reacted by expressing her disbelief that one could actually get permission to pollute.[109] This evidence is anecdotal, but demonstrates how average individuals could place environmental damage in the category of moral violations.

Furthermore, in October of 2007, E.ON, a German utility company, planned to build a coal-fired power plant in Great Britain after one had not been built for many years.[110] In response to this, protesters "occupied and spray-painted a smokestack at the site" and were subsequently arrested.[111] While this action constitutes obvious property damage, the activists claimed that it was lawful to damage the smokestack in an effort to protect other property that is at risk of "much more serious damage from climate change."[112] This event, once again, demonstrates that while actions taken by individuals or corporations may be permitted in terms of legality, many people today see environmental damage as a criminal harm nonetheless.

Statistical data also provides evidence that the general population considers environmental crimes to be immoral. In a 60,000 person survey by the United States Department of Justice asking individuals to rank the severity of crimes, environmental crimes ranked seventh in magnitude.[113] Although they placed after crimes such as murder, environmental crimes were deemed more severe than skyjacking, armed robbery, and bribery of public officials.[114] This data demonstrates that the general public has a

103 *Id.* at 54.
104 *Id.*
105 *Id.*
106 *Id.* at 54-55.
107 *Id.* at 55.
108 Garbow, *supra* note 4, at 55.
109 *Id.*
110 James Kanter, *Did Protestors Commit a Crime Trying to Stop Coal Plant?*, N.Y. TIMES, Sept. 3, 2008, *available at* http://greeninc.blogs.nytimes.com/2008/09/03/did-protestors-commit-a-crime-trying-to-stop-coal-plant/?scp=27&sq=environmental%20crime&st=Search.
111 *Id.*
112 *Id.*
113 Nicholas Targ, *Attorney Client Confidentiality in the Criminal Environmental Law Context: Blowing the Whistle on the Toxic Client*, 14 PACE ENVTL. L. REV. 227, 228-29 (1996).
114 *Id.*

strong inclination to characterize negative environmental conduct as not just criminal, but immoral.

B. Environmental Crimes in Light of Criminal Punishment Theory

After verifying that environmental crimes are considered immoral by the average individual, it must be determined if criminal punishment theory can assist in categorizing environmental crimes. The two punishment theories discussed in this section are utilitarianism and retributivism.

At its most basic level, classical utilitarianism belief is that the purpose of all law is to maximize the net happiness of society.[115] "No matter how egregious the wrongdoing, utilitarians do not advocate punishment unless they believe it will provide an overall social benefit."[116] To determine what level of punishment achieves the maximum net happiness of society, utilitarians begin with the premise that the criminal justice system should minimize the sum of the cost of crime and crime prevention.[117] In other words, once everything is said and done, society should be better off with the punishment than without. To determine what level of punishment achieves the maximum happiness of society, two variables must be defined. First, what is the magnitude of the harm generated by environmental crimes, and second, how harsh is the current punishment? To decide whether environmental crimes warrant a further increase in punishment, both of these variables must be balanced.

In terms of the harm generated by environmental crimes, it has been said that "[e]nvironmental crimes have the potential to cause catastrophic harm to the environment, public health, and local economies and ways of life."[118] An example of the cataclysmic damage sometimes caused by environmental crimes is a 1984 incident which involved Union Carbide Corporation negligently releasing poisonous gas into the atmosphere of their plant in Bhopal, India.[119] According to the data collected by the Indian government, the incident caused the death of 3,329 individuals and injured another 20,000.[120] Thus, the magnitude of the harm appears to be severe.

Other than the magnitude of the harm, the second important variable for a utilitarian analysis is the amount of the punishment. This note has already demonstrated that the punishment for environmental crimes is mild by any standards. Thus, using a utilitarian analysis, it appears that the punishment given for environmental crimes, compared to the harm generated, is inadequate to promote proper deterrence. To allow for greater punishment, which will provide the necessary deterrence, environmental crimes need to be thought of as *malum in se*.

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115 *See* DRESSLER, *supra* note 1, at 14.

116 *Id.* at 17.

117 Louis Michael Seidman, *Soldiers, Martyrs and Criminals: Utilitarian Theory and the Problem of Crime Control*, 94 YALE L.J. 315, 320 (1983).

118 Kathleen F. Brickey, *Environmental Crime at the Crossroads: The Intersection of Environmental and Criminal Law Theory*, 71 TUL. L. REV. 487, 507 (1996).

119 Neal Shover & Aaron S. Routhe, *Environmental Crime*, 32 CRIME & JUST. 321, 324 (2005).

120 *Id.*

Retributivism also suggests that environmental crimes should be treated as *malum in se*. Retributivists believe that punishment is justified when it is deserved.[121] To an uncompromising retributivist "the wrongdoer should be punished, whether or not it will result in a reduction in crime."[122] Not only do retributivists believe that a criminal should be punished, they also believe it is morally right to punish someone in proportion to his "desert", or culpable wrong doing.[123] In other words, an eye for an eye is just punishment. Although individuals should be punished in proportion to their crime, they should not be punished in excess.

Once again, the important factors to consider are both the harm generated by environmental crimes and the current punishment. According to a retributivist analysis, because the harm generated by environmental crimes is tremendous, the punishment that is "deserved" should be proportionate. Looking at the punishment, however, it is clear that the sentences given for environmental offenses are grossly inadequate in terms of "desert." One way to remedy this problem would be to rethink the way that environmental crimes are categorized, and to instead consider them to be *malum in se* offenses.

C. Characteristics of *Malum in se* and *Malum prohibitum*

Finally, the last parameter to analyze is whether the definition of *malum prohibitum* matches up well with the characteristics of environmental crimes. This section will utilize the characteristics described by Joshua Dressler in Section II.

First, even if environmental crimes do not have a root in common law,[124] that fact does not necessarily mean that it fails to implicate a moral dilemma. In many instances in recent history something had initially been permitted, perhaps even encouraged, but later was prohibited and eventually was morally condemned. One major example of this is slavery. Prior to 1865, slavery was permitted in many U.S. states. Prior to emancipation, the Supreme Court in *Dred Scott v. Sanford* held that the drafters of the Constitution viewed African-Americans as "beings of an inferior order, and altogether unfit to associate with the white race, either in social or political relations; and so far inferior, that they had no rights which the white man was bound to respect."[125] However, despite this sentiment, it would be difficult to find any significant body of Americans today who agree with that proposition.

This shifting morals argument is similarly strong when it comes to environmental crimes. Although environmental crimes have a short history, much of this appears to result from a lack of knowledge with regard to the consequences of environmental harm. It would be hard to argue that humans knew two thousand years ago that damaging the environment would have long lasting consequences. This situation is different than for murder, for which the consequences have been apparent regardless of the time period. Thus, the connection to *malum prohibitum* crimes through this criterion is tenuous at best.

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121 *See* Dressler, *supra* note 1, at 16 (describing the basics of retributivism).

122 *Id.* at 17.

123 Russell L. Christopher, *Deterring Retributivism: The Injustice of "Just" Punishment*, 96 Nw. U. L. Rev. 843, 860 (2002).

124 *See* Albrecht, *supra* note 56, at 73.

125 Dred Scott v. Sanford, 60 U.S. 393, 407 (1857).

Second, a single violation of a *malum prohibitum* offense can cause injury to a significant number of individuals. Although environmental crimes fail to fall solidly within the first criterion, having a root in common law, environmental law clearly harms a significant number of individuals. For instance, if a corporation or a country releases pollution into the air, the consequences are widespread and victims numerous. In 2007, for example, the World Health Organization reported that diseases "triggered by indoor and outdoor air pollution kill 656,000 Chinese citizens each year, and polluted drinking water kills another 95,600."[126] Thus, it appears that environmental crimes, by harming a significant number of individuals, meet the second criterion of Dressler's description of *malum prohibitum* crimes.

A third quality of *malum prohibitum* crimes is that the sentence imposed is reasonable. It appears that the punishment imposed for environmental crimes, given the gravity of the harm caused by it, is anything but reasonable. This unreasonableness is because according to utilitarians, the punishment is too inadequate to promote the deterrence needed for the magnitude of harm,[127] and according to retributivists, the punishment doled out for environmental crimes fails to provide the adequate amount of desert.[128] Thus, environmental crimes fail to meet this criterion of *malum prohibitum* crimes.

Fourth, while it is true that the punishment for environmental crimes is unreasonable, it is also true that the punishment is mild. And, while environmental crimes appear to meet this criterion of mild punishment on its face, that fact alone fails to prove much. In fact, the only reason that the punishment is mild is because the punishment is unreasonable in the first place. If the punishment for environmental crimes were adjusted to the proper level demanded by utilitarianism and retributivism, environmental crimes would no longer fall under this criterion.

Finally, the last of Dressler's criteria is that a *malum prohibitum* offense rarely damages the reputation of the actor. Once again, after a closer review, it appears that environmental crimes fail this prong as well. While many regulatory crimes may leave an individual's reputation untarnished, it is clear that environmental crimes do harm one's reputation. For example, despite the fact that the owners of Pacific Lumber legally purchased 350 square miles of forest to expand their logging business, certain individuals and groups still considered their action to be criminal in nature.[129] The outcry was so severe that members of activist groups took up living in the trees illegally in order to stall their destruction, a response that was viewed positively by the public and ended with Pacific declaring bankruptcy.[130] Boycotts such as these damage companies' reputations and place a stigma on their brand.

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126 Kevin Holden Platt, *Chinese Air Pollution Deadliest in World, Report Says*, NATIONAL GEOGRAPHIC NEWS, July 9, 2007, *available at* http://news.nationalgeographic.com/news/2007/07/070709-china-pollution.html.

127 *See* DRESSLER, *supra* note 1, at 159.

128 *Id.* at 158-59.

129 Paul Rogers, *A decade after Headwaters deal, truce comes to Northern California redwood country*, SILICON VALLEY MERCURY NEWS, March 8, 2009, *available at* http://www.mercurynews.com/science/ci_11844764?nclick_check=1.

130 *Id.*

D. Environmental Crimes Should Not be Considered *Malum Prohibitum*

After analyzing environmental crimes through the lens of the criteria set out in Subpart IV.A, it is clear that categorizing it as *malum prohibitum* is an error.

First, the average individual considers environmental crimes not just as regulatory crimes, but as moral crimes. This view matches better with Black's definition of *malum in se* which is "inherently and essentially evil, that is, immoral in its nature and injurious in its consequences, without any regard to the fact of its being noticed or punished by the law of the state."[131] Second, when compared to utilitarianism and retributivism, current environmental statutes fail to provide adequate penalties. While low penalties are akin to *malum prohibitum* crimes, environmental crimes, due to the severe harm they cause, require the harsher penalties that come with the *malum in se* classification.[132] This requirement is further evidence of a need for change.

Finally, by comparing the five criteria of *malum prohibitum* crimes to those of environmental crimes,[133] it is clear that the qualities of environmental crimes do not match these criteria. While environmental crimes are a suitable fit with the second prong (a single violation can harm a large number of individuals), it fails to meet a whopping 80% of the criteria. Once again this demonstrates that *malum prohibitum* is an incorrect classification.

VI. Conclusion

After an examination of *malum in se* and *malum prohibitum* crimes, it is apparent that the differences in punishment are significant. While *malum in se* offenses are punished with the harshest of penalties, *malum prohibitum* offenses are given mild punishment. This note has demonstrated that environmental crimes are classified as *malum prohibitum* by the majority of academics and governments, and that this classification has consequences. By examining the definition of *malum prohibitum* closely, this note makes clear that environmental crimes do not fit the mold. A classification of *malum prohibitum* for environmental crimes fails to meet inherent concepts of morality, the goals of criminal punishment theory, and the five-prong definition of *malum prohibitum* found in Dressler.

While strong arguments can alternatively be made for environmental crimes being *malum prohibitum* — such as its youth, or wide range of harm — these reasons are outweighed by the arguments in favor of making it a *malum in se* crime. The most important of these reasons is the strong sense of moral harm individuals feel towards environmental crimes. Without some form of reevaluation, it will be difficult to enforce both legislative goals of deterrence, concepts of "desert," and to satisfy what most individuals intuitively feel is a moral wrong.

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131 Black's Law Dictionary, *supra* note 11

132 *See* Dressler, *supra* note 1, at 158 (describing the harsh penalties of *malum in se*).

133 Dressler, *supra* note 1, at 157 (enumerating the qualities of crimes *malum prohibitum*).

Achieving the High-Water Mark of Wave Technology

by David Webster

I. Introduction

Today, reliance on foreign oil continues to rise and outstrip future supply. Scarcity of domestic and foreign energy resources is a reality. Growing power gaps between supply and demand, especially in coastal areas, threaten future developments. New renewable energy sources must necessarily emerge. The answer may lie in capturing a potentially endless power source trapped in the ocean's waves. Ten years ago, the ability to harness the energy of the waves seemed as plausible as running a car on recycled cooking oil or on alcohol made from corn. Today, all are a reality. But while bio-diesel and ethanol-powered cars are more and more commonplace, wave energy is still an outlier. The notion of harnessing the endless rise and fall of the ocean still appears unobtainable in the United States. However, across the globe in Scotland, wave-energy projects are already supplying enough energy to power thousands of homes, with production capacity increasing steadily. Why hasn't the U.S. followed suit? In short, the problem with capturing wave energy is not that the U.S. does not know how or lacks the technology. The problem is that the sector is under-developed, under-utilized, lacks incentives for developers, and sits on the periphery of United States' energy policy. States have thus taken up the cause, pressing the technology. Under pressure from states like Texas, the wave-energy movement has achieved great success and progress. However, if wave energy is to become a commercially viable reality in the United States, state methods and achievements must be replicated at the federal level.

This note provides an analysis of the barriers to the development of wave energy and other offshore energy sources such as ocean wind farms. It focuses heavily on the cumbersome regulatory permitting process. The current system has created confusion and uncertainty regarding future development. After summarizing these barriers, as

described by Laura Koch in her 2008 Comment, this note will build on Koch's framework and further investigate the continued challenges. A primary question is whether wave energy can be a viable future energy source. This note investigates recent developments in technology, financial incentives, and environmental impacts. The analysis looks at these factors both at the federal level and in Texas — where wave-energy development benefits from an unusual regulatory exemption. Based on the findings, this note argues that wave energy and other forms of ocean-based energy production may indeed be a viable alternative resource in the future. A caveat is that continued technological and environmental challenges may substantially slow this sector's growth.

This note first summarizes Koch's Comment, utilizing her framework, and expanding upon it in parts, to discuss current wave-energy technology, environmental impacts and concerns, the Federal Energy Regulatory Commission's (FERC) permitting system, and solutions emphasizing proactive state involvement. It then addresses the extent to which full-scale wave-energy operations have emerged in the United States and in Texas. Next, it highlights how new tax credit, licensing, and ocean planning programs under the Obama Administration will affect wave-energy development. And finally, it looks to Scotland and its successful implementation of wave energy as a model for future development in the United States.

II. SUMMARY OF KOCH'S 2008 COMMENT

Laura Koch's main contention is that while wave energy offers the prospect of a relatively benign source of electricity, uncertainties about commercial viability, technology, and environmental impacts have suppressed development.[1] Currently, the main problem for long-term development is FERC's permit process.[2] The present permit system prematurely encourages wave-energy developers to stake claims in large sectors of the ocean.[3] Proper screening regarding qualifications, intentions, or financial ability does not exist.[4] This deficient oversight exacerbates already serious issues. Technological challenges and above-market output costs exist as the primary commercial deterrents for developers.[5] User conflicts — especially with the fishing industry — and uncertainties over environmental effects plague policymakers.[6] In her article, Koch states that despite the need for careful state planning in light of these problems, wave energy is currently being improperly directed by federal agencies.[7] Pragmatically, she argues, states should be asserting their own power and leadership.[8] While federal approaches lack adequate safeguards and planning mechanisms, states have the ability to optimally guide wave-energy programs.[9] The window for such involvement, however, is

1 Laura Koch, Comment, *The Promise of Wave Energy*, 2 GOLDEN GATE U. ENVTL. L.J. 163 (2008).
2 *See id.* at 188.
3 *See id.*
4 *See id.*
5 Koch, *supra* note 1, at 163.
6 *Id.* at 163.
7 *Id.* at 199, 194–95.
8 *Id.*
9 *Id.* at 163, 194–95, 199.

brief.[10] Koch's solutions hinge on the idea that coastal states must assert their leadership if they are to balance the public interest in sustainable wave-energy development with the interests of federal agencies, developers, and local communities.[11] Koch cites Oregon as the paradigm of proper state involvement in wave energy.[12] Specifically, Koch highlights the State's Memorandum of Understanding (MOU) with FERC. She also praises Oregon's ongoing preparation, phased development, and research funding.[13] Koch's insights are the starting point for analyzing the use of wave energy in a commercial viable way.

A. Technology

Koch first explains two primary forms of wave-energy technology, highlighting their benefits, but noting their unknown environmental impacts.[14] Wave-energy technology is not a new concept, but historically, it has not been commercially viable.[15] However, the potential for tidal and wave energy is significant, theoretically capable of meeting ten percent of U.S. electricity demands.[16] Current wave-energy technology exists in two primary forms, both in infancy: wave farms and point absorbers.[17] The following discussion will expand this list by introducing ocean wind farms and underwater wave turbines.

Wave farms and point absorbers operate differently. Wave farm technology utilizes attenuators, four cylindrical pontoons that float on the surface.[18] Waves passing over the fixture cause hinged joints between the pontoons to flex, driving hydraulic pumps.[19] By contrast, point absorbers utilize a free-floating buoy housed in a fixed cylinder; the buoy rises and falls relative to the cylinder, driving a hydraulic converter.[20] Both devices employ an undersea cable to transmit electricity to an onshore location.[21]

Point-source absorber technology has been implemented in Texas. While the deployment is discussed in further detail later, the technology specifics warrant an introductory discussion. The SEADOG pump, produced by Independent Natural Resources Inc. (INRI), is currently in operation in Texas. The pump is comprised of seven main components: a buoyancy chamber, buoyancy block, piston assembly, piston shaft, piston cylinder, and intake and exhaust valves.[22] The buoyancy block is filled with air and floats within the buoyancy chamber.[23] This block is connected to the pis-

10 *Id.*
11 Koch, *supra* note 1, at 199.
12 *Id.* at 190–92.
13 *Id.*
14 Koch, *supra* note 1, at 165–66, 166–68.
15 *Id.* at 164.
16 *Id.*.
17 *Id.* at 165.
18 *Id.*
19 *Id.*
20 Koch, *supra* note 1, at 165.
21 *Id.*
22 Independent Natural Resources, Inc., *The SEADOG Pump,* http://inri.us/index.php/SEADOG (last visited Mar. 11, 2010).
23 *Id.*

ton shaft.[24] The buoyancy chamber rises and falls in relation to the waves and swells, causing the block to rise and fall within the chamber.[25] The block's movement drives the piston shaft which moves the piston assembly through the piston cylinder.[26] As the buoyancy block moves down in the trough of the wave, it draws the piston downward through the piston cylinder.[27] This downward movement of the block draws water into the cylinder through the intake valve.[28] As the next wave lifts the buoyancy block, the water in the piston cylinder comes under pressure and is released through the exhaust valve.[29] One stroke is considered a single cycle of the buoyancy block rising, drawing in water, falling, and then expelling water.[30] This type of absorber technology stands in stark contrast to turbine-focused ocean technology.

The basic technology design for turbine-generated ocean energy relies on water flowing by a turbine that spins a rotor blade. The rotor blade rotation, in turn, generates energy that can be transmitted by a generator inside the turbine to electrical conducting cables. These cables capture, harness, and distribute the energy.[31] Not all turbine energy from the ocean, however, must come from its underwater currents. Newer turbine technology, both in the form of offshore wind farms and underwater turbines, has emerged as a plausible means of generating renewable technology. Underwater turbine technology, for example, uses underwater currents to rotate a turbine and is the primary technology employed in Florida's newest pilot program.[32]

Ocean wind farms operate like on-shore wind farms but sit in the deep ocean where their size can better accommodate great wind-energy potential. A March 26, 2007 phone interview with H. Sterling Burnett, Ph.D., Senior Fellow, at the National Center for Policy Analysis, illuminated the hurdles facing ocean wind farms.[33] Burnett observed, for example, that critics of deepwater wind-farm technology argue the turbines could encroach on shipping lanes and harm seabird sanctuaries.[34] The turbines may also be "prohibitively expensive, because they require long undersea transmission lines to hook turbines up to the grid system."[35]

Installation and repair costs also make ocean wind farms appear less commercially viable in light of less expensive, more reliable options. Project Beatrice, an ocean-situated wind farm project, is one exemplar. The project began with the world's largest wind turbines, each blade longer than a football field.[36] The farm has cost $90 million,

24 *Id.*
25 *Id.*
26 *Id.*
27 *Id.*
28 Independent Natural Resources, Inc., *supra* note 22.
29 *Id.*
30 *Id.*
31 Azadeh Ansari, *Is the ocean Florida's untapped energy source?*, CNN, July 27, 2009, http://www.cnn.com/2009/TECH/07/27/ocean.turbines/index.html.
32 *Id.*
33 Telephone Interview with H. Sterling Burnett, Senior Fellow, National Center for Policy Analysis (Mar. 26, 2007).
34 *Id.*; *See* Guy Chazan, *Can Wind Power Find Footing in the Deep?*, WALL ST. J.,Nov. 29, 2007 at B1.
35 Burnett, *supra* note 33.
36 *Id.*

or about $9 million per megawatt of installed generating capacity.[37] By comparison, Burnet notes, a gas-fired power station costs less than $1.5 million per MW to build.[38] Costs continue to rise on ocean wind technology in light of reliability problems. In 2004, for instance, wind turbines at Horns Reef, about 10 miles off the Danish coast, broke down when storms and seawater damaged their critical equipment.[39] Vestas, a Danish manufacturer, replaced the equipment at a cost of €38 million, or $50 million.[40] Peter Kruse, the head of investor relations for Vestas, says that the lesson of Horns Reef is that ocean wind farms will remain far more expensive than those on land.[41] Kruse noted that while off-shore wind farms "don't destroy your landscape," the added installation and maintenance costs are "going to be very disappointing for many politicians across the world.'"[42]

Intermittency of power is another distressing factor for ocean wave farms. Recent underwater technology relies on consistent, strong currents — as detailed later. Wind farms, in contrast, suffer from periods of little to no energy generation. The journal Energy Policy reported in August 2008 that British wind power would experience power swings of 70 percent.[43] This variance in wind-power would require individual generators to go on or off line frequently.[44] This intermittency reduces the "utilisation and reliability of large centralised plants."[45] The decrease in reliability and utility will lead, the article insists, to increases in the cost of electricity and reductions in potential carbon savings.[46] Europe's off-shore wind turbines elucidate the problem: they start generating electricity when wind speed reaches nine miles per hour, and have to shut down if it exceeds 55 mph. Thus, while they generate electricity between 70% and 90% of the time, low wind speeds cause generation to fall far short of capacity.[47] Empirically, these wind farms failed for a period as long as 54 days in western Denmark in 2002.[48] According to an analysis by Denmark's Incoteco energy consulting firm, wind-power systems during this period supplied less than one percent of demand.[49]

The American Wind Energy Association (AWEA) still argues that the benefits outweigh the initial costs. In short, the investment in wind energy is recouped quickly. The AWEA explains, for example, that the energy payback time — the measure of how long an energy plant must operate in order to generate the amount of electricity

37 *Id.*
38 *Id.*
39 *Id.*
40 *Id.*
41 Burnett, *supra* note 33 .
42 *Id.*; *see* James Kanter, *Denmark leads the way in green energy–to a point*, Int'l Herald Trib. Mar. 21, 2007, *available at* http://www.iht.com/articles/2007/03/21/business/green1.php.
43 James Oswald, Mike Raine, & Hezlin Ashraf-Ball, *Will British weather provide reliable electricity?*, 36 Energy Pol'y 3312, 3312 (2008).
44 *Id.*
45 *Id*
46 *Id.*
47 Pete du Pont, *Air Power: Don Quixote tilted at windmills. We can use them to increase our energy supply*, Wall St. J. (Apr. 25, 2007), *available at* http://www.opinionjournal.com/columnists/pdupont/?id=110009980.
48 *Id.*
49 *Id.*

required for its construction and manufacturing — is three to eight months.[50] This energy payback period is one of the shortest of any energy technology.[51] The AWEA also stresses the emissions benefits wind farms hold over conventional technology. According to the AWEA, "[e]missions from the manufacture and installation of wind turbines are negligible."[52] Operational pollution is similarly low. According to the Alliance to Save Energy, a 600-megawatt offshore wind farm would annually save the emission of 2.5 billion pounds of carbon dioxide, 29 million pounds of sulfur dioxide, and 9 million pounds of nitrous oxide.[53]

The benefits of underwater wave technology, wind farms, and other offshore energy options abound. Important advantages exist over other renewables like wind and solar. Such advantages include greater consistency of the energy source.[54] Also, fewer devices are needed to produce a given amount of electricity.[55] Predictability of wave strength is similarly important, as is the technology's low profile — likely invisible from the shore.[56] These benefits are offset, however, by reasonable fears. Those with reservations about the technology insist that the devices may not be durable enough to withstand powerful ocean conditions.[57] Critics also highlight the high price of electricity production relative to conventional sources.[58] Koch believes, however, that costs will improve with economies of scale.[59]

B. Environmental Impacts

Another major unknown in the implementation of wave-energy schemes is the potential impacts to marine life and the environment. Koch frames the environmental problems against the context within which wave energy is emerging.[60] The Pew Oceans Commission and the U.S. Commission on Ocean Policy both indicate that the state of ocean health and the ecological integrity of ocean resources are declining.[61] This decline impacts our ability to fully realize ocean potential, threatens revenue, and affects human health.[62] The need to expand wave energy is evidenced, Koch suggests, by the fact that by 2025, 75 percent of the population will be living near the coast.[63] Ocean conservationists and environmental groups have concluded that offshore renewable energy "appears to be worth the risks."[64] Problematically, unlike conservation, "energy expansion always has negative environmental impacts."[65] In line with this belief, the

50 *Id.*
51 *Id.*
52 *Id.*
53 Du Pont, *supra* note 47.
54 Koch, *supra* note 1, at 165.
55 *Id.* at 165-66.
56 *Id.* at 166.
57 *Id.*
58 *Id.*
59 *Id.*
60 Koch, *supra* note 1, at 167–69.
61 *Id.* at 168.
62 *Id.*
63 *Id.* at 170.
64 *Id*
65 *Id.*

U.S. Minerals Management Service (MMS) released a programmatic Environmental Impact Statement (EIS).[66] The EIS insisted that while many factors, including the physical and ecological conditions, will vary by location, several other areas are of more general concern.[67] Primarily at issue are the requisite anchoring systems and submarine electrical cables.[68] Water-quality impacts would be short-term and localized, but the ecological impacts might be vast.[69] Among the primary concerns are the cumulative noise of the large facilities and injury to animals.[70] Similarly problematic is the alteration of coastal zone sediment transport, deposition, and erosion.[71] Proposed solutions abound. MMS suggests, for instance, that proper siting and design can minimize these effects, aided by sonic pingers that warn marine animals.[72] In addition, scientists propose a staggering of wave-energy development.[73] These planned phases of development would allow the environment to react and adjust.[74] Scientists also want regulators to create incentives for information sharing.[75] They argue the current "shotgun" approach of independent information gathering is inefficient.[76]

C. Regulatory Barriers

Technological barriers and environmental concerns are just two hindrances. Legally, this realm is mired by conflicting policies. Most problematic are the overlapping jurisdictions between federal agencies, each of which claims the right to direct policy.[77] The MMS and FERC stand as the two major players in the agency conflict.[78] Koch explains that the current statutory framework fails to promote a federal-state partnership.[79] The present scheme also lacks a regulatory regime capable of balancing environmental protection and offshore energy development.[80] Suppressing development is the ambiguity about whether the MMS or FERC is the lead agency on wave-energy regulation.[81] Koch reiterates that siting problems, market conflicts, and unknown environmental impacts already hinder wind energy's commercial viability.[82] To this list, Koch adds the need for a proven prototype.[83] A prototype device would attract outside investors, but the obvious problem is the enormous initial capital needed to

66 Koch, *supra* note 1, at 167.
67 *Id.* at 167.
68 *Id.*
69 *Id.*
70 *Id.*
71 *Id.*
72 Koch, *supra* note 1, at 167–68.
73 *Id.* at 168.
74 *Id.*
75 *Id.*
76 *Id.*
77 *Id.* at 176-77..
78 Koch, *supra* note 1, at 176-77.
79 *Id.* at 174.
80 *Id.*
81 *Id.* at 175.
82 *Id.*
83 *Id.*

produce this device.[84] Separate from these technical factors, Koch identifies the most significant non-technical obstacle: regulatory conflicts between agencies, specifically the MMS and FERC.[85]

Koch first outlines the statutory authority to regulate wave energy.[86] Section 338 of the Energy Policy Act of 2005 ("EP Act") amended the Outer Continental Shelf Lands Act (OCSLA).[87] The revised OCSLA gives the Secretary of the Interior jurisdiction over the development of wind, wave, ocean current, and other alternative energy sources in federal waters.[88] The EP Act authorized the MMS to develop related regulations and policy. The EP Act also enables the MMS to monitor and regulate facilities used for renewable energy.[89] Most importantly, under the EP Act, the MMS acts as the lead agency in the permitting process.[90]

Systemic problems exist under this setup. A major criticism of the MMS is the lack of opportunity for state input.[91] The MMS has indicated, however, that its wave-energy policy commits it to the use of adaptive management strategies.[92] This scheme, it argues, could allow for state involvement and signal a "welcome departure" from the current approach.[93] On the other side of the problem is FERC. FERC acts as the federal licensing agency responsible for approving hydropower projects in "the navigable waters of the United States."[94] FERC derives its powers in this realm from the Federal Power Act (FPA).[95] The FPA preempts state and local laws on hydroelectric power.[96] FERC determined in 2002 that wave, tide, and ocean-current devices fell under the umbrella of "hydrokinetic technologies," and thus, required a FERC license.[97] The preliminary wave-energy development permits FERC currently authorizes stand in contrast to the previously cumbersome and expensive licensing schemes.[98] Previous permits could last for up to fifty years.[99] These initial permits also reflected "the size, relative permanence, and potential impact of a traditional hydroelectric dam."[100] Problematically, current preliminary FERC permits do not authorize project construction.[101] These permits also have a maximum duration of three years, and can be obtained relatively easily.[102] During the permit's life, FERC cannot award another

84 Koch, *supra* note 1, at 175.
85 *Id.*
86 *Id.* at 177-79.
87 *Id.* at 177.
88 *Id.*
89 *Id.*
90 Koch, *supra* note 1, at 177.
91 *Id.* at 178.
92 *Id.*
93 *Id.*
94 *Id.*
95 *Id.* at 178–79.
96 Koch, *supra* note 1, 178- 79.
97 *Id.* at 179.
98 Koch, *supra* note 1, at 179.
99 *Id.*
100 *Id.*
101 *Id.*
102 *Id.*

party development rights for a site, allowing the permit holder to study the feasibility of wave-energy project and prepare a license application.[103] This three-year permit program was designed to promote industry growth.[104] Problematically, however, a full FERC license for wave-energy development still requires substantially the same process as that for large hydroelectric dams.[105] Also causing issues are the MMS' and FERC's conflicting rights to wave-energy development.[106] Issues mainly arise in their jurisdictional overlap.[107]

FERC created the jurisdictional overlapping. The agency did so with a novel interpretation of the phrase, "navigable waters of the United States" — the statutory boundary of its authority. FERC claimed its jurisdiction extended to the outer limits of the territorial sea, nine miles beyond state waters.[108] The result was a nine-mile overlapping jurisdiction between the MMS and FERC, each claiming to be the lead agency.[109] FERC soon issued a preliminary permit that jutted onto the outer-continental shelf (OCS), causing the MMS to protest that FERC lacked statutory authority.[110] The MMS criticized FERC's permit process.[111] In its criticism, the MMS argued FERC "tied up large areas of potential development based on the first applicant rather than the best applicant."[112] The MMS and FERC have abandoned the idea of negotiating a Memorandum of Understanding (MOU).[113] This "inter-agency squabbling" has led to regulatory uncertainty that deters development, for which Congress has provided little resolution.[114] Thus, development located partially in state waters and partially in the OCS could be required to comply with two sets of complex, potentially conflicting, federal schemes.[115]

Much of the remaining sections of Koch's Comment focus on criticizing FERC's hydropower scheme, specifically its "premature" permits.[116] One primary concern is that the agency's first-in-time approach will lead to "site-banking" and speculation.[117] The implications of such issues includes site hoarding by those who do not have any real intent to develop a project.[118] Additionally, the process is costly, needlessly time-consuming, and leads to redundancies of expensive studies.[119] At a 2006 conference

103 *Id.*
104 Koch, *supra* note 1 at 180.
105 *Id*
106 *See id.* at 175–77.
107 *Id.*
108 *Id.* at 179-80.
109 *Id.* at 180.
110 Koch, *supra* note 1, at 181.
111 *Id.*
112 *Id.*(quoting Nic Lane, Cong. Research Serv., RL 33883, Issues Affecting Tidal, Wave, and In-Stream Generation Projects 22 (2008)).
113 *Id.*
114 *Id.*
115 *Id.*
116 *See* Koch, *supra* not 1, at 186–88.
117 *Id.* at 183.
118 *Id.*
119 *Id.*

that FERC hosted, panelists urged a more streamlined, shortened process.[120] This process needs to increase accountability, requiring applicants to demonstrate their financial ability to carry out the feasibility studies.[121] The proposed revisions also required submission of detailed activity plans and progress reports.[122] In 2007, FERC opened to public comments the question of whether it should change the permit process.[123] During July 2007, Chairman Kelliher announced a five-year pilot program.[124] This program allowed developers to collect data on environmental impacts and test device performance and grid connectivity.[125] Koch observes, however, that the unsuitability of the hydropower license scheme remained.[126] Similarly, the new pilot program ran afoul of the Coastal Zone Management Act (CZMA).[127] Under the CZMA, a federal agency cannot issue a permit for activity in or affecting state waters without state consent.[128] States did not want to shorten their timelines to suit FERC.[129] This resistance led FERC to create a workaround.[130] FERC planned to issue licenses after its own review, even if other authorizations "remained outstanding."[131] Before launching the permit program, FERC's press releases downplayed two points: the permits precluded construction, and were highly conditional.[132] A case has been filed against FERC claiming its permit policy is inconsistent with federal law.[133] However, should FERC prevail, its permit process still does not offer any real incentive to develop wave energy since state authorization could take years.[134] The implication of the plan, therefore, is that "a conditional license provides the same certainty as no license at all."[135] Koch states that in light of the technical and environmental uncertainties, FERC's permit process is premature, moving ahead despite a lack of integrated planning.[136] This system, Koch argues, makes it harder to ensure facilities are sited to use the resource most efficiently.[137] The long-term effects of FERC's "intransigence" on the ability to create a successful, sustainable wave-energy sector, Koch states, may take years to understand.[138]

120 *Id.*
121 *Id.*
122 Koch, *supra* note 1, at 183.
123 *Id.*
124 *Id.* at 184.
125 *Id.*
126 *Id.*
127 *Id.*
128 Koch, *supra* note 1, at 184.
129 *Id.* at 184.
130 *Id.*
131 *Id.*
132 *Id.* at 184-185.
133 *Id.* at 185–86.
134 Koch, *supra* note 1, at 185–86.
135 *Id.*
136 *Id.* at 188.
137 *Id.* at 188.
138 *Id.* at 189.

D. State-centric Solutions

Koch concludes by discussing potential solutions to current development problems. She stresses proactive approaches and urges state involvement like that of Oregon.[139] Coastal states have a statutory obligation to ensure that development in the coastal zone is consistent with their coastal management programs.[140] Coastal states have a concurrent duty to use submerged state lands in the public interest.[141] Oregon is the model of proactive preparation.[142] Oregon recently approved $4 million to create the Ocean Wave Energy Initiative.[143] This initiative subsidizes the cost of wave energy, promotes research and development, and expedites permitting.[144] Oregon has also created the Oregon Wave Energy Trust. The trust acts as a nonprofit energy clearinghouse.[145] The clearinghouse provides a forum for the exchange of information between stakeholders.[146] This new forum's main benefit has been creating baseline data against which to gauge negative ecological effects.[147] An MOU with FERC has also been negotiated.[148] In the MOU, FERC agrees to consult with the state regarding what studies and information are required of applicants.[149] A state emphasis on advance preparation enables states, Koch believes, to open a dialogue, make intelligent facility-siting choices, and monitor environmental impacts.[150] Unlike Oregon, California has generally lacked state leadership.[151] As a result, FERC has issued as many as six preliminary permits in California, "each representing a lost opportunity for the state to optimally guide development."[152] Koch suggests that to counter FERC's activities and properly guide wave energy, coastal states need to "prepare to participate in, rather than merely react to, wave energy siting decisions."[153]

Koch's useful and comprehensive evaluation shows that renewable wave technology holds great promise to meet the growing energy gap near coastal waters. Given the challenges to wave energy discussed above, the extent to which wave energy will actually emerge in the United States is still unknown. Thus, this analysis now turns away from Koch to a discussion of recent developments in wave-energy laws, implementation, and incentives, both at the national and state level, spotlighting Texas and its unique exemptions.

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139 *See id.* at 188–94.
140 Koch, *supra* note 1, at 195.
141 *Id.*
142 *Id.* at 190–91.
143 *Id.* at 190–91.
144 *Id.* at 190–91.
145 *Id.* at 191.
146 Koch, *supra* note 1, at 191.
147 *Id.*
148 *Id.*
149 *Id.*
150 *Id.* at 192.
151 *Id.* 194-195.
152 Koch, *supra* note 1, at 194-195.
153 *Id.* at 190.

III. THE POTENTIAL FOR FULL-SCALE OPERATIONS IN THE UNITED STATES

Despite the many barriers to wave development, some recent actions within the United States have the potential to spur progress. The 2008 Energy Act, for example, extended income tax credits for electricity produced from certain renewable resources.[154] Income-tax-credit eligibility is extended to marine and hydrokinetic energy facilities.[155] Such facilities are defined as those in which "the energy is derived from oceans, rivers, irrigation systems and differentials in ocean temperature."[156] The credit extends to facilities placed in service between October 3, 2008 and January 1, 2012.[157] Even with the recent income-tax-credit incentives, no full-scale commercial wave-energy field has been realized in the United States.[158]

Jurisdictional problems also persist. Amanda Leland of the Environmental Defense Fund argued, for example, that the "patchwork of federal agencies managing the oceans in the United States contributes to the problem" of future development.[159] To date, neither the MMS nor FERC has ceded jurisdiction.[160] Thus, the result is that each has continued "independent, but parallel, processes to regulate hydrokinetic resources."[161] In *Pacific Gas & Electric Co.*,[162] FERC asserted, for the first time, jurisdiction over the pilot projects it has authorized in California and OCS waters.[163] The Department of the Interior (DOI), under which the MMS sits, intervened.[164] The DOI argued that Section 338 of the Energy Policy Act of 2005 provided the DOI exclusive jurisdiction over the authorization of hydrokinetic projects on the OCS.[165] On rehearing, FERC issued an opinion establishing a legal basis for its jurisdiction under Part I of the FPA.[166] FERC focused its argument on a savings clause in Section 338 of the EP Act, claiming that it retained authority over hydrokinetic projects in OCS waters.[167]

To help spur development, in April 2009, FERC issued a white paper. This paper took licensing schemes for hydrokinetic pilot programs a step further.[168] The new method expedited the licensing process and waived certain requirements on a case-

154 Stefan F. Tucker, *Recent Developments Affecting Real Estate and Pass Through Entities*, 857 Practising L. Inst./Tax 57, 69 (Feb. 2009).
155 *Id.*
156 *Id.*
157 *Id.*
158 Jeffery S. Dennis, *Report of the Renewable Energy and Demand-Side Management Committee*, 30 ENERGY L.J. 273, 276 (2009).
159 John D. Sutter, *Governments trying to reel in 'ocean sprawl,'* CNN, Jul. 15, 2009, http://www.cnn.com/2009/TECH/science/07/15/ocean.planning/index.html.
160 Dennis, *supra* note 158, at 277.
161 *Id.*
162 122 F.E.R.C. ¶ 62,228, order on rehearing, 125 F.E.R.C. ¶ 61, 045 (2008).
163 Dennis, *supra* note 158, at 277.
164 *Id.*
165 *Id.*
166 *Id.*
167 Dennis, *supra* note 158, at 277-278.
168 *Id.*

by-case basis.[169] These test programs are small, short-term projects that deviate from FERC's licensing policy in that they allow for the pilot programs to recover the "revenues for sales of test electricity to the grid."[170] This change was in response to a recognized need to incentivize investment.[171] In addition to adding financial incentives, the new policy also allows for, on a case-by-case basis, reduced application requirements and the possibility for truncated review timeframes.[172] Empirically, the results of this incentivizing and streamlining are yet to be determined. The new plan also does not resolve Koch's concerns about FERC's impact on the sector.

FERC's influence in the area of offshore energy may be enhanced or tempered by the Obama Administration's announcement of a new federal ocean-planning task force. Announced on June 12, 2009, the task force was required to recommend, by September 2009, a national policy on ocean planning that aims to "protect ocean ecology, address climate change and promote sustainable ocean economies."[173] FERC's scheme cuts against the planning stressed by President Obama's task force and others investigating the ocean-planning problem. FERC exacerbates the severe limitations on the available ocean space. Moreover, FERC attempts to give priority to energy sources to the detriment of other valid interests. With respect to ocean space, Koch notes that FERC has released permits for huge tracts of ocean space without a comprehensive plan. Internationally, the North Sea situation reflects the ramifications of such an ill-planned permitting scheme. According to Fanny Douvere, a co-principal investigator at UNESCO's Intergovernmental Oceanographic Commission, expanding industries have already tried to claim three times the amount of ocean space than is available in the North Sea.[174] Sandra Whitehouse of the Ocean Conservancy similarly observes that when the renewable energy sector "moved into the sea, the situation went from crowded to unmanageable and without a clear plan."[175] In short, permit programs like FERC's give away large tracts of an already over-demanded resource.[176] FERC disregards important economic realities of the oceans.[177]

Charles Ehler, a co-principal investigator at the Intergovernmental Oceanographic Commission, echoed this sentiment. Ehler emphasized that former methods of divvying up the ocean by "free-for-all" cannot persist.[178] Careful planning is needed to avoid freely granting available ocean space to one interest to the detriment of others.[179] On this point, Charles M. Wahle, senior scientist at the National Oceanic and Atmospheric Administration also commented that we are acknowledging we want and need varied use of the ocean, and that all these interests have standing.[180] The key,

169 *Id.*
170 *Id.*
171 *Id.*
172 *Id.*
173 Sutter, *supra* note 159.
174 *Id.*
175 *Id.*
176 *Id.*
177 *Id.*
178 *Id.*
179 Sutter, *supra* note 159.
180 *Id.*

Wahle says, is to "figure out a way to allocate them fairly and sustainably."[181] Current planning and permitting schemes might be in jeopardy in light of what some have considered a "complete shift in thinking" about how the ocean should be managed and divided up.[182] Former methods of granting permits covering large areas for long periods of time cut against current viewpoints on the ocean's future development.

In line with Koch's proposed solutions, some states have already taken a planned, proactive approach to ocean planning. Massachusetts and Rhode Island are implementing on a state level the kind of planning and interest-balancing that Obama's new task force has as a goal. For example, on June 30, 2009, Massachusetts published a draft plan for its coastal waters.[183] The plan, which was finalized at the end of 2009, includes two ocean wind farms covering two percent of the State's waters.[184] The project aims at implementing renewable energies on the ocean without angering fishing industries, killing whales, or harming ecosystems.[185]

State recognition of the need to plan for renewable ocean sources has also led Florida to explore the potential of wave, tidal, and current energy.[186] Florida's wave-energy deployment plan focuses on the use of underwater turbines.[187] The plan aims to develop and test a 20-kilowatt turbine.[188] Driving the program is an energy demand in Florida that outstrips current capacity.[189] Florida, currently the fourth most populous state, possesses an estimated 19 million people.[190] Each of the 19 million people is driving Florida to the "cusp of an energy crisis," according to Frederick Driscoll, director of Florida Atlantic University's Center of Excellence in Ocean Energy Technology.[191] The solution may lie in the Gulf Stream.

Scientists believe that the Gulf Stream holds Florida's answer.[192] Beginning in the Caribbean and ending in the upper-North Atlantic, the Gulf Stream possesses consistent and sufficiently-strong currents to "propel Florida out of its potential energy crisis."[193] The Gulf Stream is the strongest current in the world, and potential power production could supply between 3 million and 7 million Florida homes.[194] Those figures total one-third of Florida's electricity demand.[195] These estimates are predicated upon a belief that the Gulf Stream can generate between four and ten gigawatts of

181 *Id.*
182 *Id.*
183 Press Release, Massachusetts Executive Office of Energy and Environmental Affairs, Patrick Administration Releases Final Blueprint for Managing Development in State Waters (Jan. 4, 2010), http://www.mass.gov/?pageID=eoeeapressrelease&L=1&L0=Home&sid=Eoeea&b=pressrelease&f=100104_pr_ocean_plan&csid=Eoeea.
184 *Id.*
185 *Id.*
186 Ansari, *supra* note 31.
187 *Id.*
188 *Id.*
189 *Id.*
190 *Id.*
191 *Id.*
192 Ansari, *supra* note 31.
193 *Id.*
194 *Id.*
195 *Id.*

power, each gigawatt the equivalent of a nuclear power plant, according to Sue Skemp, executive director at Florida Atlantic University's Center for Ocean Energy Technology.[196]

The Florida pilot program emphasizes the commercial viability concerns that permeate wave-energy plans.[197] At the Center for Ocean Energy Technology in Boca Raton, ocean engineers and scientists are working together to overcome cost problems.[198] Teams at the Center aim to "develop cost-competitive technologies to commercialize the energy within the Gulf Stream."[199] The program is also pushing progress via analyses of the true costs of wave-energy technology. Specific tests have been conducted to determine the financial costs and expected returns of tapping the Gulf Stream's energy.[200] Driscoll notes that the first step was to "do a resource assessment and understand how much energy is in the Gulf Stream current on a minute-to-minute, day-to-day, hour-to-hour, and yearly basis."[201] To achieve this task, Florida's Atlantic University Center for Ocean Energy Technology, in April of 2009, deployed four acoustic Doppler current profilers near the coast of Florida.[202] These orange, ball-shaped devises use high-frequency, lower-power sonar to measure the speed of the ocean currents.[203] The data generated by these devices are only a piece of the commercial viability study, however.

The strength of the current alone does not dictate the power gains.[204] Also at issue is how much energy can be safely extracted.[205] Driscoll states that a major question is "the sensitivity of extraction versus the environmental effects."[206] Thus, the costs of the endeavor and the impacts on local marine life — the two major barriers to wave energy's commercial viability — remain unknown.[207] Hampering the analysis is the novel nature of wave-energy programs like Florida's. Many "knowledge gaps" exist, as Driscoll states, not only on the technology side, but also from the ecological perspective.[208] Skemp notes the lack of models in the industry that could help inform estimates.[209] Wave energy is unlike established industries.[210] Skemp notes aerospace and the automotive industry have models on which cost can be based.[211] Wave energy lacks this beneficial tool. Thus, despite Florida allocating $13.75 million towards research and development of the pilot program, actual costs may be significantly higher.[212] Even

196 *Id.*
197 *Id.*
198 *Id.*
199 *Id.*
200 *Id.*
201 *Id.*
202 Ansari, *supra* note 31.
203 *Id.*
204 *Id.*
205 *Id.*
206 *Id.*
207 *Id.* (quoting Skemp: "Those are the questions we don't have answers to.").
208 Ansari, *supra* note 31.
209 *Id.*
210 *Id.*
211 *Id.*
212 *Id.*

if Florida's program is successful, it could take another five to ten years before the technology can be implemented.[213]

Despite the lack of a full-scale wave farm in the United States, some states are making substantial strides. The following section discusses Texas' unique wave-energy program. Texas benefits both from innovative technologies and an unusual regulatory exemption.

IV. Wave Energy in Texas

Wave energy in Texas is unique. The State of Texas has an exception to the MMS control to which other states are subject.[214] Texas entered the nation as a sovereign state and retained title to lands 10.36 miles from shore.[215] Therefore, Texas may control offshore leasing, as opposed to the MMS.[216]

While not on a full commercial scale, wave energy in Texas has already become a reality. The University of Texas at Galveston has already tested wave energy in the Gulf of Mexico.[217] Current deployments in Galveston rely upon point-absorber technology.[218] This test deployment involved the SEADOG pump, which the University says is a preliminary success.[219] The SEADOG pump received praise for its mechanical efficiency; it absorbs most potential energy and a significant amount of kinetic energy as well.[220]

The first performance test in real ocean conditions was INRI's Kitty Hawk.[221] INRI built a pump to be deployed off the coast of Freeport, Texas.[222] This pump stood 35 feet high and weighed 17,200 pounds.[223] After this initial device, in July of 2007, INRI launched a 3-month ocean demonstration.[224] Researchers from the Texas A&M University at Galveston Marine Engineering Technology Department analyzed the pump in actual wave conditions.[225] The tests revealed a number of benefits unique to INRI's device.

Grouping is one benefit of SEADOG. Since the SEADOG pumps can be placed in close proximity to one another, studies show they are capable of producing five to twenty times more power per square mile than other ocean, wind, and solar renewable

213 *Id.*

214 Jennifer Vining, Economic and Legal Aspects of Ocean Wave Energy Conversion, Advanced Independent Study Report for Masters Thesis, University of Wisconsin – Madison, at 3 (May 2006), *available at* http://homepages.cae.wisc.edu/~vining/JVining_WEC_EconomicsAndLegalAspect.pdf.

215 *Id.*

216 *Id.*

217 Laura McNamara, *UT Galveston Applauds Ocean Wave Energy Technology* (May 29, 2008), http://domesticfuel.com/2008/05/29/ut-galveston-applauds-ocean-wave-energy-technology/.

218 *See id.*

219 McNamara, *supra* note 218.

220 *Id.*

221 Independent Natural Resources, Inc., *supra* note 22.

222 *Id.*

223 *Id.*

224 *Id.*

225 *Id.*

technologies.[226] SEADOG also addresses two major, inter-related wave-energy issues: cost and intermittency.[227] This pump, unlike others, is less sensitive to the corrosive effects of seawater. Its corrosion resistance stems from its utilization of a simpler design with few moving parts and no electronics.[228] The SEADOG pump also reduces intermittency issues.[229] The greater consistency is achieved by transferring large amounts of water to shore for future energy production or desalination.[230] Most wave-energy technology involves using off-shore electrical generation to transfer power to the shore via an electrical cable along the seabed.[231] SEADOG pumps, however, capture wave energy in order to pump seawater to land-based or sea-based holding areas.[232] These holding areas then return the water to the ocean through turbines, producing inexpensive, renewable power.[233] The storage of water on-shore allows SEADOG-type pumps, unlike other renewable energy sources, to be a base-load (primary) source of power, drawing from the water holding area when needed to match demand.[234] On-shore storage also permits desalination.[235] This benefit adds to the SEADOG pumps' commercial viability.[236] Lack of sufficient fresh water is a growing concern in many regions of the world.[237] The SEADOG pump is capable of delivering "high volumes of water at sufficient head pressure to supply water for shoreline desalination facilities."[238] This technology can make desalination much less expensive.[239] The cost savings arise because energy consumption can represent as much as one-third of the operating cost of desalinated water.[240]

INRI has plans to launch an 18-pump field in the Gulf of Mexico between Galveston and Freeport, Texas.[241] This array will serve as a commercial demonstration facility that has the dual purpose of desalinating seawater using the power the SEADOG Pumps generate.[242]

Given federal disunity and conflict over the authorization of wave energy, state-centric solutions appear, as Koch suggests, more effective. This state-focused method, however, undercuts the benefits of an effective, clear, relied-upon federal wave-energy plan. Scotland's success in the field of renewables, specifically wave technology, highlights the gains such a federal plan could provide.

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226 McNamara, *supra* note 218.
227 *Id.*
228 *Id.*
229 *Id.*
230 *Id.*
231 *Id.*
232 McNamara, *supra* note 218.
233 *Id.*
234 Independent Natural Resources, Inc., *supra* note 22.
235 *Id.*
236 *Id.*
237 *Id.*
238 *Id.*
239 *Id.*
240 Independent Natural Resources, Inc., *supra* note 22.
241 McNamara, *supra* note 218.
242 *Id.*

V. SUCCESSFUL IMPLEMENTATION: SCOTLAND AS A MODEL

This note sketches a long-term picture of full-scale implementation of wave energy in the United States, suggesting its pragmatic utilization is years away. But, successful implementation has been achieved in Scotland. The Scottish plan should serve as a paradigm for future implementations in Texas and the United States. The Scottish method has four primary takeaways. First, it emphasizes renewables as means to spur economic growth. Second, the plan incentivizes renewable development at a federal level. Thirdly, it implements large, renewable projects that successfully supply power. Most importantly, however, Scotland has created and implemented an effective, efficient planning and approval process. The planning process in particular illuminates the harm resulting from poor ocean-planning and inter-agency quarrels.

Recent Scottish successes include an announcement in January 2009 that one of the world's largest wave stations will be constructed in the Scottish Western Isles.[243] The program was aimed at "advancing Scotland's lead in renewable energy."[244] The details of the program were outlined in a news release reporting that the energy Ministers granted consent for the operation of a wave farm with a four megawatt capacity.[245] This approval marked one of the first marine renewable energy projects in the UK.[246] The approval also highlights the benefits of a novel grant system that the Scottish government established.[247] The United States could utilize a similar grant system.[248]

The approved project came on the heels of the recently launched Saltire Prize. The Saltire Prize is a £10 million grant challenge that is given out to promote "advances in wave and tidal energy."[249] The Scottish government touts it as, "one of the biggest international innovation prizes in history."[250] The prize, launched by the Scottish Government in December 2008, is modeled on similar prize programs of the past.[251] Previous programs include the Ansari X Prize, which led to the first private spacecraft launch.[252] Another like-minded program was the Virgin Earth Challenge, which challenged scientists to devise a method to remove CO_2 gases from the atmosphere.[253] The attractiveness of the prize had, by March 2010 already attracted 140 registrations of interest from twenty-seven countries across five continents.[254]

Even the United States does not utilize a similar prize to inspire wave-energy projects, the United States should still take a page from Scotland's playbook. Specifi-

243 Press Release, Scottish Government, Scotland rules the waves (Jan. 22, 2009), http://www.scotland.gov.uk/News/Releases/2009/01/22121716.

244 *Id.*

245 *Id.*

246 *Id.*

247 *Id.*

248 *Id.*

249 *See* Scottish Government, The Saltire Prize Challenge, http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Action/leading/saltire-prize (last visited Mar. 17, 2010).

250 *Id.*

251 *Id.*

252 *Id.*

253 *Id.*

254 Press Release, Scottish Government, Saltire Prize open for Applications (Mar. 23, 2010), .http://www.scotland.gov.uk/News/Releases/2010/03/23095005.

cally, the United States needs to match or better Scotland's drive to establish itself as a world leader in renewables.[255] Scottish Minister Alex Salmond said that the January 2009 announcement of the wave project was a significant step towards accomplishing that goal.[256] The hard data appears to confirm this statement.[257] According to the news release, the project is the first commercial wave farm in Scotland and is starting with a capacity to power approximately 1,800 homes.[258] This success is the result of policies in the Scottish government that position renewables as an important piece of the country's economy. This emphasis on renewables helps ensure Scotland's position as a leader in the sector. One example of this policy is the Scottish government's announcement of a "six-point economic recovery programme."[259] The program identified renewable as a "key strength" of the economy, and as a sector that "continues to grow through the current downturn."[260] These policies embrace and rely on the potential of renewables and appear to harmonize with recent policies by the Obama Administration. The parallels in policy suggest the United States could be charting a course similar to Scotland's.

As previously noted in this analysis, new task forces and policies have been implemented to promote the use and development of renewable energy. Notably, however, much of the major strides have been taken independently by states. Texas, Oregon, Massachusetts, Rhode Island, and Florida, are the main examples. Thus, unlike Scotland, where the federal government promotes goals and policies to push the renewable sector, in the United States, the states are taking the initiative.

Reliance on multiple technologies has also aided Scotland. Scotland has approved projects that embrace multiple technologies and solutions.[261] For example, a project approved in September of 2007 for a three-megawatt array was to be comprised of four Pelamis machines.[262] The machines were to deploy at the European Marine Energy Centre in Orkney.[263] Like the SEADOG pump, the Pelamis machines float on the surface of the waves.[264] This project is distinct from the January 2009 approved project, which aimed at utilizing 40 turbines to produce four mega-watts.[265] Later in February of 2009, the Scottish government approved an additional hydro-electric plant in North Perthshire that will have an installed capacity of 1.2 megawatts, capable of powering up to 700 homes.[266] This approval was followed in March 2009 with yet another hydro

255 *See* Scotland rules the waves, supra note 244.
256 *Id.*
257 *Id.*
258 *Id.*
259 *Id.*
260 Scotland rules the waves, *supra* note 244.
261 *Id.*
262 *Id.*
263 *Id.*
264 *Id.*
265 *Id.*
266 Press Release, Scottish Government, Powering Ahead with Perthshire Hydro Scheme (Feb. 17, 2009), http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Infrastructure/Energy-Consents/Whatsnew/ECU-News-Archive-20091.

scheme near Strathcarron that will power 2,000 homes and will produce three and a half megawatts.[267] The diversity of technology implementation is evident.

Scotland's scope of implementation and approval of various wave-energy technology programs stand as a clear model for effectiveness. The hard numbers prove their successes. Current targets set by the Scottish government are likewise spurring development and implementation.[268] The Scottish Government aims to meet 31 percent of electricity demand with renewables by 2011.[269] As of January 2009, the total "installed capacity of renewables" in Scotland was over three gigawatts.[270] When factoring in the already approved projects, current operations total five and a half gigawatts.[271] At that pace, the Scottish Government was set to surpass the 2011 target by 2009.[272] In May of 2009, the Minister for Enterprise, Energy, and Tourism announced that at that time, six gigawatts of renewable capacity was "installed, consented or under construction" around Scotland. That number placed Scotland beyond its interim target for 2011.[273]

Notably, Scotland's wave-energy progress has not peaked. Growth in the industry has been consistently strong.[274] Between 2006 and 2007, data published in the latest Energy Trends reports showed that renewable electricity accounted for 20.1 percent of Scottish gross consumption in 2007, up from 16.9 percent in 2006.[275] Of this total, electricity from "hydro natural flow" increased 11 percent. In contrast, electricity from fossil fuels fell by 12 percent.[276]

A key to Scotland's success lies with its planning, application, and approval process. In a May 20, 2009 speech, the Minister for Enterprise, Energy, and Tourism, Jim Mather, spoke directly to these issues.[277] In his speech, Mather highlighted "Progress in Consents and Planning," as a primary development.[278] During the talk, Mather noted that he "understand[s] the scale of the energy challenge" in Scotland.[279] But Mather quickly cited the meeting of the 2011 goal as proof of positive gains.[280] He went on to say that since 2007, Scottish Ministers have consented to twenty-two major renewables projects.[281] This number represents a "substantial increase in pace and includes Eu-

267 Press Release, Scottish Government, Go Ahead for Chonais Hydro Scheme (Mar. 12, 2009), http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Infrastructure/Energy-Consents/Whatsnew/ECU-News-Archive-20091.

268 Scotland rules the waves, *supra* note 244.

269 *Id.*

270 *Id.*

271 *Id.*

272 *See id.*

273 Jim Mather, Minister for Enterprise, Energy and Tourism, Speech on status of Scotland's energy sector (May 20, 2009), http://www.scotland.gov.uk/News/This-Week/Speeches/Weathier-and-Fairer/all-energy-09.

274 Scotland rules the waves, *supra* note 244.

275 *Id.*

276 *Id.*

277 Mather, *supra* note 274.

278 *Id.*

279 *Id.*

280 *Id.*

281 *Id.*

rope's largest single consented onshore wind farm and one of the largest wave-energy projects in the world."[282]

Application assessment efficiency was also rightly touted. Mather pointed out that the government was committed to determining new applications within nine months of submission, in cases for the public has not made an inquiry.[283] This efficiency goal should be emulated. Its counterpart, Scotland's planning system, should as well.[284] Mather stressed the support of the planning scheme and the National Planning Framework, stating:

> during 2008 we helped planning authorities prepare supplementary planning guidance for wind farms. . . . We are now finalising the proposed second National Planning Framework. The NPF reflects our commitment to transmission system reinforcements to support renewable energy. It establishes the principle of renewing baseload generating capacity at existing power station sites, and highlights opportunities to decentralise energy production and supply.[285]

In addition to supporting a national planning program, Mather noted the importance of making the NPF's policies easy to implement and understand.[286] Mather revealed that the Scottish Ministers were consolidating Scottish Planning Policy into a single document. This consolidation fostered a new format that makes national planning policy "easier to understand and to use."[287]

The bolstering of federal programs, the effectiveness of application review, and the commitment to unity and comprehension in the system are the key attributes that make Scotland a model for future wave-energy implementation. Its successes have been touted above and stand on their own merits.

VI. Conclusion

In the United States, wave energy is not yet a commercially viable method of supplying power. Barriers to development and deployment still limit its prospects. Major problems hinder the regulatory permitting process. Financial uncertainty by investors is not being assuaged. Environmental impacts are still unknown. Individual states have tried to overcome some of these problems. Florida, for instance, is pushing wave energy as a potential solution for future energy shortcomings. These states are creating better planning and permitting systems. Particularly in Texas, progress in the sector is pushed by the deployment and testing of new wave-energy technology. Renewables like wave energy also will benefit greatly from new policies under the Obama Administration, such as new tax incentives and the ocean-planning task force. Commercial viability and implementation will remain unreachable, however, so long as the United

282 *Id.*
283 Mather, *supra* note 274.
284 *Id.*
285 *Id.*
286 *Id.*
287 *Id.*

States lacks the level of incentivizing, systemic efficiency, and federal support that countries like Scotland have achieved. I maintain confidence in the United States' capacity to overcome current commercial and technological hurdles. I trust in our ability to position wave energy as a great means to supplement future energy demands.

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Recent Developments

Air Quality

The Effect of the EPA's New Ozone Standard on Texas — Revisited

On January 19, 2010, the Environmental Protection Agency (EPA) proposed a new eight-hour ozone standard of 0.060-0.070 parts per millions (ppm), down from the 0.075 ppm that it had proposed in 2008. National Ambient Air Quality Standards for Ozone, 75 F.R. 2938 (Jan. 19, 2010) (to be codified at 40 C.F.R. pts. 50 and 58). The EPA is also proposing a secondary seasonal standard in the range of 7-15 ppm to protect the welfare of sensitive ecosystems and forests. *Id.* The comment period for the proposed rule closed on March 22, 2010, and the EPA expects to sign a final rule in October 2010. The EPA's 2010 Proposed Revisions to Air Quality Standards, http://www.tceq.state.tx.us/implementation/air/aqps/eighthour.html (last visited October 31, 2010).

If the rule becomes final, anything outside of the 0.060-0.070 ppm range will classify as nonattainment. Nonattainment is defined as "any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant." Clean Air Act § 107(d); 42 U.S.C. § 7407(d)(2007). Attainment means "any area (other than an area identified in clause (i)) that meets the national primary or secondary ambient air quality standard for the pollutant." *Id.* Areas designated unclassifiable are those that "cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant." *Id.*

Under the 2008 standard, the TCEQ recommended and the Governor approved the designation of the following counties as nonattainment: Travis (Austin area); Hardin, Jefferson, and Orange (Beaumont-Port Arthur area); Collin, Dallas, Denton, Ellis, Hood, Johnson, Kaufman, Parker, Rockwall, and Tarrant (Dallas-Fort Worth area); El Paso, with the exception on tribal lands; Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller (Houston-Galveston-Brazoria area); Bexar (San Antonio area); and Greg, Rusk, and Smith (Tyler area). Letter from Buddy Garcia, Chairman, Texas Commission on Environmental Quality, to Rick Perry, Governor

of Texas (December 11, 2008) (on file with author), *available at* http://www.tceq.state.tx.us/assets/public/implementation/air/sip/hgb/Gov_ltr_to_EPA.pdf. The TCEQ recommended all other Texas counties be designated as attainment or unclassifiable. *Id.*

The TCEQ evaluated the Austin area, including Travis, Williamson, Bastrop, Caldwell, and Hays Counties, and deemed only Travis County to be nonattainment. TEX. COMM'N ENVTL. QUALITY, 2008 EIGHT-HOUR OZONE STANDARD DECISION MATRIX 1 (2008), *available at* http://www.tceq.state.tx.us/assets/public/implementation/air/rules/eight_hour/decision_matrix121008.doc. As of October 2010, the 2008 Eight-Hour Ozone Standard Decision Matrix was the most recent and comprehensive averaged data available for the regions and is the data that the TCEQ used to determine attainment. Travis County had a reading of 80 parts per billion (or 0.08 ppm) for 2005 through 2007. *Id.* "Although more than 12% of the Travis County workforce commutes from Williamson County, proactive voluntary efforts such as voluntary participation in the state's vehicle inspection and maintenance program indicate future emission reduction trends will continue." TEX. COMM'N ENVTL. QUALITY, RATIONALE FOR DECISION MATRIX 1 (2008), *available at* http://www.tceq.state.tx.us/assets/public/implementation/air/rules/eight_hour/rationale_121008.doc. Emissions from the other remaining counties were relatively insignificant. *Id.*

The Beaumont-Port Arthur area includes Hardin, Jefferson, and Orange Counties, in which all three counties were classified as nonattainment. *Id.* Jefferson County had a reading of 83 parts per billion and Orange County had a reading of 76 parts per billion for 2005 through 2007. *Id.*

The Dallas-Fort Worth area consists of thirteen counties, including Collin, Dallas, Denton, Ellis, Hood, Hunt, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise. "Of these, four core counties have design values for 2005 through 2007 as follows: 88 parts per billion for Collin, 86 parts per billion for Dallas, 94 parts per billion for Denton, and 95 parts per billion for Tarrant." *Id.* at 1-2. Hood County had a reading of 84 parts per billion for 2005 through 2007. *Id.* at 1. The emissions produced in Denton County are insignificant. *Id.* Hunt County had a reading of 70 parts per billion, which is less than the 2008 standard. *Id.* However, under the new proposed standard, 70 parts per billion (or 0.070 ppm) is right at the upper allowable limit. Wise County is a mainly rural area with low population density, does not contain an ozone monitor, and analyses of historic surface winds on high ozone days indicate that the county does not contribute to ozone exceedances. *Id.*

El Paso County had a design value reading of 79 parts per billion for 2005 through 2007 and a preliminary design value of 78 parts per billion for 2006 through 2008. *Id.* at 2. El Paso County does not include tribal lands. *Id.* However, tribes may choose to make recommended designations for land under their jurisdiction. *Id.*

The Houston-Galveston-Brazoria area encompasses ten counties, including: Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, San Jacinto, and Waller. *Id.* Brazoria County had a design value reading of 91 parts per billion, and Houston County had a design value of 96 parts per billion. *Id.* Austin County commuters make up less than one-half percent of the Harris County workforce, and reported emissions were insignificant. *Id.*

The San Antonio area is comprised of eight counties, of which Bexar is the primary emissions contributor making up 62 percent of emissions in the area. *Id.* Bexar

County had a reading of 82 parts per billion for 2005 through 2007. *Id.* Emissions and commuting from the remaining seven counties was insignificant. *Id.*

Five counties comprise the air quality planning area of Tyler. "Gregg County contains the area's federal regulatory design-value monitor with a reading of 84 parts per billion for 2005 through 2007." *Id.* Historic wind patterns indicate that ozone was transported from Rusk County to the Gregg County monitor. *Id.* Smith County had a reading of 80 parts per billion for 2005 through 2007. *Id.* "Although the Harrison County design value for 2005 through 2007 is 77 parts per billion, the design value for 2006 through 2008 is at 72 parts per billion as of September 9, 2008, below the revised standard." *Id.* Upshur County reported emissions were relatively insignificant. *Id.*

The TCEQ has approved a recommendation for the EPA's 2008 eight-hour ozone standard, which includes classifying several counties from the following areas as non-attainment: the Austin area; the Beaumont-Port Arthur area; the Dallas-Fort Worth area; the El Paso area; the Houston-Galveston-Brazoria area; the San Antonio area; and the Tyler area. All other Texas counties have been designated as attainment or unclassifiable. If the new proposed standard becomes a rule, the counties already in non-attainment will have to work harder to implement control technology to come into compliance. Counties currently classified as attainment may have to revisit their ozone readings to see if they fit within the new standard, and if not, work to correct the problem.

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Section 185 Ozone Nonattainment Penalty Fees

Background

As amended in 1990, Section 185 of the Clean Air Act provides for a nonattainment fee program that requires major stationary sources in severe or extreme nonattainment areas to pay a penalty fee for emissions over eighty percent of a calculated baseline amount. *See* Tex. Comm'n Envtl. Quality, SIP Section 185 Fees, http://www.tceq.state.tx.us/implementation/air/industei/psei/sipsection185.html (last visited Dec. 5, 2010). This program was applicable to the Houston-Galveston-Brazoria (HGB) nonattainment area because of its "severe" classification under the one-hour standard for ozone. However, in 2004, the United States Environmental Protection Agency (EPA) promulgated rules withdrawing the one-hour National Ambient Air Quality

Standard (NAAQS) for ozone, and waiving the Section 185 fee program with respect to that standard, based on its promulgation of the revised 8-hour ozone standard in 1997.

In December 2006, the United States Court of Appeals for the District of Columbia vacated the 2004 rule withdrawing the one-hour ozone standard in favor of the eight-hour ozone standard that had been in effect. *South Coast Air Quality Management District v. EPA*, 742 F.3d 882, 905 (D.C. Cir. 2006). The court further held that the EPA improperly waived the Clean Air Act Section 185 penalty fee provision for nonattainment under the one-hour ozone NAAQS. *Id.* at 903. Ultimately, this holding requires that states submit State Implementation Plans (SIPs) to the EPA for severe and extreme nonattainment areas to implement the previously waived penalty fee provision.

The HGB area, which was labeled as severe for the one-hour standard in 1990, failed to demonstrate attainment, thereby requiring the TCEQ to submit SIP revisions. David Brymer, Proposed Section 185 Fee Termination Determination 9 (Apr. 28, 2010), *available at* http://www.tceq.state.tx.us/assets/public/implementation/air/ie/pseiforms/proposed_td.pdf. On June 8, 2009, the Texas Commission on Environmental Quality released draft language for the SIP revisions implementing the Section 185 failure to attain fee and equivalent alternative obligation. *See* TEX. COMM'N ENVTL. QUALITY, DRAFT FAILURE TO ATTAIN RULE LANGUAGE, *available at* http://www.tceq.state.tx.us/assets/public/implementation/air/ie/pseiforms/draftrule062009.pdf [hereinafter *Draft Rule*].

APPLICABILITY

The proposed nonattainment fee program would apply in those areas that have been designated severe or extreme nonattainment areas under the one-hour ozone standard as of the effective date of the eight-hour ozone standard. *Draft Rule*, § 101.110. Section 185 requires major stationary sources of volatile organic compounds (VOC) or nitrogen oxides (NOx) in those areas to pay a penalty fee. Clean Air Act § 185, 42 U.S.C. § 7511(d) (2006). In severe nonattainment areas, major stationary sources are those that have the potential to emit at maximum operation or design capacity 25 tons of VOC or NOx per year. *Draft Rule*, § 101.110(a)(1),(2). In extreme nonattainment areas, such as Los Angeles, California, major stationary sources are those that have the potential to emit at maximum operation or design capacity 10 tons of VOC or NOx per year. *Draft Rule*, § 101.110(b)(1),(2). Texas does not have any areas that are extreme nonattainment areas.

EMISSION BASELINE FOR FEE CALCULATION

The penalty fee is based on tons of emissions exceeding eighty percent of a baseline amount. *Draft Rule*, § 101.140(b). Generally, the baseline amount is the lower of the amount of actual emissions in the attainment year or emissions allowed under permits for the source in the attainment year. *Draft Rule*, § 101.120(a). However, for entities whose emissions are irregular, cyclical, or vary significantly from year to year, the baseline amount may be calculated by averaging the annual emissions rate for a twenty-four consecutive month period within a designated period prior to the attainment year to create an average annual emissions rate. *Draft Rule*, § 101.120(b). For non-utilities, the twenty-four month period must be within ten years of the attainment date.

Draft Rule, § 101.120(b)(3). However, electrical utility steam generating units must choose a twenty-four consecutive month period within five years of the attainment year. *Draft Rule*, § 101.120(b)(4). This calculation method allows businesses to calculate the baseline amount from a full business cycle that represents the normal amount of emissions for that particular entity. *See* Memorandum from William T. Harnett, Director, EPA Air Quality Policy Div. to EPA Regional Air Quality Directors, Guidance on Establishing Emissions Baselines under Section 185 of the Clean Air Act (March 21, 2008), *available at* http://www.tceq.state.tx.us/assets/public/implementation/air/ie/pseiforms/epa_harnett0308.pdf. This baseline amount is determined separately for NOx and VOC and then submitted for approval by the executive director. *Draft Rule*, § 101.120(c)-(e). Once it has been approved, the baseline amount is fixed and cannot be changed without approval by the executive director. *Draft Rule*, § 101.120(e).

Aggregation

An entity may choose to aggregate VOC across multiple sites and NOx emissions across multiple sites or may choose to aggregate VOC and NOx at one site. However, a major source may not aggregate emissions of VOC and NOx at one site and then across multiple sites. If a source chooses to aggregate emissions at a single site, they must determine the baseline emission for each pollutant separately, aggregate them, and submit the baseline amount to the executive director for approval. *Draft Rule*, § 101.125(c)&(d). Once approved, this baseline is fixed and the nonattainment fee will be calculated from this aggregated baseline amount. *Draft Rule* § 101.125(d). For entities that wish to aggregate emissions across multiple sites, emissions must be calculated at each site over the same time period and then aggregated and submitted to the director for approval. *Draft Rule*, § 101.127.

Fee Determination

A baseline amount is determined for those entities that are classified as a major source of VOC or NOx in severe or extreme nonattainment areas. Regulated entities are responsible for paying a penalty fee per ton of actual emissions over eighty percent of the demonstrated baseline amount. *Draft Rule*, § 101.140. Section 185 of the Clean Air Act sets the fee at $5,000 per ton adjusted for inflation by the Consumer Price Index. Clean Air Act § 185, 42 U.S.C. § 7511(d) (2009).

Payment of Fees

Major sources in nonattainment areas will pay a penalty fee for all emissions over eighty percent of the baseline amount beginning the first calendar year following the attainment year. *Draft Rule*, § 101.150(c). Major sources will continue to pay a fee yearly until the nonattainment area has been re-designated by the EPA, found to be in attainment by the EPA, or three years of quality assured ambient monitoring data demonstrate attainment has been accepted by the EPA. *Draft Rule*, § 101.160.

Equivalent Obligations

Major sources have the opportunity to fulfill the failure to attain fee obligation with alternate equivalent obligations. *Draft Rule*, § 101.210(a). Rather than pay the fee, a major stationary source may retire an amount of emissions reduction credits equivalent to the tons of emissions on which the failure to attain fee was assessed, an equiva-

lent amount of discrete emission reduction credits, an equivalent amount of current or banked Highly Reactive VOC Emissions Cap and Trade program allowances, or an equivalent amount of Mass Emissions Cap and Trade program allowances. *Draft Rule*, § 101.210(a)(1)-(4). For those sources that aggregated pollutants at one site or across multiple sites, equivalent emission reductions for the aggregated baseline amount must be retired. *Draft Rule*, § 101.210(b)&(c).

New EPA Guidance and TCEQ Request for Exemption

On January 5, 2010, the EPA issued new guidance on developing Section 185 fee programs. *See* Memorandum from Stephen D. Page, Director, EPA Office of Air Quality Planning and Standards to EPA Regional Air Division Directors, Guidance on Developing Fee Programs Required by Clean Air Act Section 185 for the 1-hour Ozone NAAQS (Jan. 5, 2010), *available at* http://www.tceq.state.tx.us/assets/public/implementation/air/ie/pseiforms/guidance_feeprog185.pdf. The memorandum indicates that if an area satisfies "either the 1-hour or 8-hour ozone NAAQS, based on permanent and enforceable emissions reductions, the area would no longer be required to submit a fee program. . . ." *Id.* at 3.

The TCEQ is preparing documentation demonstrating that due to permanent and enforceable emission reductions, the HGB area was monitoring attainment of the 8-hour standard from 2007 to 2009. *See* TEX. COMM'N ENVTL. QUALITY, EXECUTIVE SUMMARY: REQUEST FOR DETERMINATION REGARDING TERMINATION OF THE ONE-HOUR OZONE SECTION 185 FEE OBLIGATION, *available at* http://www.tceq.state.tx.us/assets/public/implementation/air/ie/pseiforms/hgbTDrequest.pdf. Because the HGB 1-hour nonattainment area satisfies the 8-hour ozone NAAQS, the TCEQ is submitting the information for confirmation from the EPA that, based on the January 2010 guidance, the Section 185 fee program is not needed for the HGB area. *Id.* at 4.

Conclusion

The Executive Director's proposed request to the EPA for a Section 185 termination determination was presented at the Commissioner's Work Session on May 14, 2010. *See* David Brymer, Proposed Section 185 Fee Termination Determination 9 (Apr. 28, 2010), *available at* http://www.tceq.state.tx.us/assets/public/implementation/air/ie/pseiforms/proposed_td.pdf. The request has been submitted to the EPA and, pending determination and response by the EPA, the TCEQ has placed the Section 185 Fee rule on hold.

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Natural Resources

Barnett Shale Under Pressure: Will Congress Enact Further Restrictions?

Refinements in horizontal drilling and hydraulic fracturing, combined with high gas prices in recent years, made oil and gas recovery from restrictive shale formations a viable option. US Department of Energy, Modern Shale Gas Development in the United States: A Primer ES-1 (2009), http://www.rrc.state.tx.us/doeshale/Shale_Gas_Primer_2009.pdf. The amazing success of the Barnett Shale in North Texas, combined with estimates placing U.S. shale oil reserves at 1.5 trillion barrels (that is nearly five times larger than Saudi Arabia's estimated oil reserves!), *See* Dan Denning, *Oil Shale Reserves: Stinky Water, Sweet Oil, A Daily Reckoning White Paper Report*, The Daily Reckoning, http://www.dailyreckoning.com/rpt/OilShale.html (last visited Jul.15, 2009), ignited a race to find and develop other similar deposits throughout the United States. Mark Davidson, *As Shale Gas Booms, Drilling 'Frackdown' Has Industry On Edge*, Platts, Jun. 30, 2009, http://www.platts.com/NewsFeature/2009/fracking09/index. This heightened development has led to greater scrutiny on the environmental front and the prospect of new legislation aimed at regulating the increasingly relied on techniques used to recover oil and gas from these prolific formations. *Id*. According to one *Fort Worth Star-Telegram* article, "the stakes are high because gas drilling is beginning to push into neighborhoods, near parks and next to water reservoirs in Tarrant County." Mike Lee, *Gas-Removal Method May Be Subject to More Rules*, Fort Worth Star-Telegram, Dec. 7, 2008, at B01, *available* at http://startelegram.typepad.com/files/gas-removal-method-may-be-subject-to-more-rules.htm.

To free the oil and gases trapped within shale formations, well operators drill, encase the well, lay cement, and then conduct hydraulic fracturing, also known as "fracing." Modern Shale Gas Development at ES-4. Fracing occurs when the operators inject a high pressure mixture that consists of approximately 98% water and a combination of chemical additives and sand. *Id*. These fluids break the shale and free the trapped gas and oil within. *Id*.

Three main environmental concerns have been raised relating to the fracing process. First, the large amount of water being used may strain local basins. Modern Shale Gas Development at ES-4. Although the 2-4 million gallons of water normally used to fracture a given well accounts for only about 0.1% to 0.8% of the average basin, the unexpected addition has the potential to cause water shortages. *Id*. A history of drought in and around the Fort Worth area has reduced available water supplies and exacerbated public anxiety over this type of water usage. Elizabeth Dotson, *Drilling a Hole in the Water Supply: Regulation of Injection Wells in Texas*, 10 TXTALJ 267, 269 (2008). Furthermore, although the more than 10,000 oil and gas wells in the Barnett Shale currently use the average small percent of basin water stated above and only about 3% of the available groundwater, estimates state that groundwater usage by 2025 will climb to between 7-13%. *Id.* at 284.

Second, concerns have been raised about the potential for surface contamination as a result of fracing. Modern Shale Gas Development at ES-4. After the fracing process, gas and a mixture of both the water used and water already present often return

to the surface. *Id.* This water usually has a higher salinity than ocean water and contains the chemicals used in the mixture as well as other heavy metals that are naturally found underground. *Drilling a Hole in the Water Supply* at 270. As wells are added and production rises, the amount of wastewater produced will increase. *Id.* at 269. The water returning to the surface must be managed and, in Texas, this management is often done by either storing the water in portable tanks or injecting it into disposal wells. Mike Lee, *Gas-Removal Method May Be Subject to More Rules*, FORT WORTH STAR-TELEGRAM, Dec. 7, 2008. However, responding to surface spills and other accidents can be difficult. *Id.*

Third, concerns have been raised that the injected fluids may mix with underground drinking water supplies. *Id.* State regulations require that drill operators lay concrete before fracing and, in the Barnett Shale and most other places, thousands of feet of rock exist between the fracing operations and the closest drinkable water. *Id.* In addition, "if they're doing the operation properly, the majority of the water is coming back up, and that's being treated the right way." *Id.* Furthermore, the number of injection wells used to dispose of the wastewater is growing. *See Drilling a Hole in the Water Supply* at 284. In 2007, the Railroad Commission of Texas was tracking sixty-four commercial saltwater disposal wells and issued thirty-six additional well permits. *Id.* But, at either the fracing or wastewater injection stage, improper operations potentially could allow chemicals of concerns to enter fresh water supplies. *Id* at 270, 284.

Based in part on a 2004 study by the Environmental Protection Agency (EPA) that found fracing likely did not cause groundwater contamination, the Energy Policy Act of 2005 granted fracing an exemption from federal regulation under the Safe Drinking Water Act (SDWA). Mark Davidson, *Measure Ordering EPA to Study Fracking Advances*, PLATTS, Jun. 30, 2009, http://www.platts.com/Natural%20Gas/Resources/News%20Features/fracking09/epa.xml (subscription required). While fracing is regulated at the state levels, states vary in their approach to regulation and what information operator must provide about the chemicals used within the blend of fluids.. Mike Lee, *Gas-Removal Method May Be Subject to More Rules*, FORT WORTH STAR-TELEGRAM, Dec. 7, 2008. Most cities require that drilling companies list the chemicals kept on-site and the Railroad Commission of Texas tracks those chemicals used in each well. *Id.* However, companies have some latitude to decide the degree of specificity with which they list their chemicals. *Id.* According to Railroad Commission of Texas spokeswoman Ramona Nye, "there is no requirement for operators to report component materials. An example of what is listed...would be 2,019 barrels" slick water. *Id.* Such generality can be motivated by business interests in preserving the proprietary nature of formulas. *Id.*

According to a 2008 *Fort Worth Star-Telegram* article, over fifty chemicals listed were found on-site at various well locations within the Barnett Shale, including some with a potential for environmental concern.. The chemicals represent a small percentage of the fluids used in the fracing process, but the total volume when considering the total volume of fracing fluids used can be more significant. *Id.*

"Concerns about the integrity" of the 2004 report that led to the fracing exemption led Representative Maruice Hinchey (D-NY) to propose legislation ordering a new study in 2009. *Id.* The EPA expects to conduct a new study in 2011 and 2012 on drinking water issues associated with fracing operations. EPA, Hydraulic Fracturing, http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/index.cfm

(last accessed Sept. 2, 2010). Meanwhile, federal lawmakers are independently investigating the contents of fracing fluids used by major drilling companies. *See* Memorandum from Henry A. Waxman and Edward J. Markey to Members of the Subcommittee on Energy and Environment regarding Examining the Potential Impact of Hydraulic Fracturing (Feb. 18, 2010).

In addition, on June 9, 2009, four democratic lawmakers in the House and Senate introduced companion bills known as the "FRAC Act" or Fracing Responsibility and Awareness of Chemicals Act. Mark Davidson, *Bill Would Federally Regulate Hydraulic Fracturing*, PLATTS, Jun. 30, 2009, http://www.platts.com/Natural%20Gas/Resources/News%20Features/fracking09/bill.xml (subscription required). The FRAC Act would extinguish fracing's exemption from the SDWA and allow the federal government to begin regulating fracing and the fluids used in the process. *Id.* Among the provisions of the FRAC Act is one thatt would require companies to list chemicals for state agencies and post the information online for public review. *Id.* Fracing regulation is also included in Senator Harry Reid's (D-NV) "Clean Energy Jobs and Oil Company Accountability Act of 2010" (S. 3663).

The drilling industry has generally opposed the legislation on the basis that it would impose heavy burdens and sizeable costs on the industry without providing significant environmental benefits. *See* Mark Davidson, *Measure Ordering EPA to Study Fracking Advances*, PLATTS, Jun. 30, 2009. One of the proposed requirements would force companies to use freshwater in their injection mixture, imposing an additional burden on local communities from companies that had previously shipped saltwater into the area to avoid strain on the local water supply. *Id.* In addition, according to a study by IHS Global Insight, the number of wells drilled within the U.S. may fall by as much as 1/5 within the next five years, reducing natural gas production by as much as 10% by 2014. *Id.* "Jobs could be lost, government revenues would fall and the US would be less energy secure." *Id.*

These predictions come at a critical moment for the domestic drilling industry. Texas Railroad Commissioner Victor Carrillo optimistically stated, "I have witnessed tremendous changes in the Texas energy sector, including a remarkable oil price swing resulting in a peak price of over $147 per barrel in the summer of 2008." *Recent Developments in Texas, United States, and International Energy Law*, 4 TJOGEL 111, 118 (2008-2009). Since then, crude oil and natural gas prices have dropped precipitously. International companies began investing heavily in U.S. shale projects. Benoit Faucon, Jason Womack, *2nd UPDATE: U.K.'s BG Enters U.S. Shale Sector With EXCO Stake*, WALL STREET JOURNAL, Jun. 30, 2009 U.S. companies have sold land to reduce large amounts of debt incurred and financial troubles experienced because of "the sharp downturn in prices and the tightening of credit markets." *Id.*

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SOLID WASTE

ENVIRONMENTAL PROTECTION AGENCY (EPA) ALLOCATION OF STIMULUS MONEY FOR SUPERFUND

On February 17, 2009, in the face of the country's worst economic crisis since the Great Depression, President Obama signed into law the American Recovery and Reinvestment Act of 2009 (ARRA). The $787 billion ARRA, commonly referred to as the Stimulus Bill, was enacted to jump start the national economy through substantial government spending and extensive tax cuts. To date, the federal government has paid out $282 billion and has obligated $7.2 billion to the U.S. Environmental Protection Agency (EPA). The Recovery Accountability and Transparency Board, Recovery.gov, http://www.recovery.gov. Though comprising less than three percent of the current stimulus obligations, this amount equals the EPA's entire $7.2 billion FY 2008 budget. Although most of this allotment has been earmarked for Clean Water and Drinking Water Infrastructure, the EPA has set aside $600 million to support the Federal Superfund program. These new resources are particularly significant for a program that has lacked sufficient funding for years. Sara Stefanini, *Underfunded Superfund Draws Calls for Reform*, ENERGY (Law 360, New York, N.Y.), Oct. 12, 2007.

To date, the EPA has obligated over 99% of this total amount, with outlays at over $3.3 billion. Of those outlays, the EPA has provided nearly $6 million of new funding for the Garland Creosoting Superfund site in Longview, Texas, to construct and install an interceptor collector trench and a groundwater treatment system remedy. This announcement represents a positive step forward for the Garland site and the Superfund program as a whole. Environmental Protection Agency, Superfund Program Implements the Recovery Act: Garland Creosoting, http://www.epa.gov/superfund/eparecovery/garland_creosoting.html.

SUPERFUND

Superfund is the common name for the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), which was designed to clean up uncontrolled or abandoned hazardous-waste sites that pose unacceptable risks to human health and the environment. The list of hazardous waste sites in the United States eligible for long-term remedial action financed under the Superfund program is formally called the National Priorities List (NPL). EPA regulations outline a formal process for assessing hazardous waste sites and placing them on the NPL. *See* 40 C.F.R. pt. 300. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation. As of December 7, 2010, 1,280 sites were listed on the NPL, an additional 347 have been delisted, and 62 new sites are proposed to be listed. Environmental Protection Agency, National Priority List Site Totals by Status and Milestone, http://www.epa.gov/superfund/sites/query/queryhtm/npltotal.htm. Among the 1,280 currently listed sites is the Garland Creosoting site in Longview, Texas, which was officially listed on the NPL in October of 1999.

A fundamental principle of CERCLA was that those responsible for toxic pollution should pay for it. EPA officials have said the agency spends millions of dollars a year investigating Superfund polluters in an attempt to make them financially liable

for the cleanup of pollution for which they are responsible. Despite these efforts, the "polluter pays" principle is often inapplicable when either a responsible party has not been found or money from the original polluter has been exhausted. In the case of these so-called orphan sites, funding for clean-up activities must come from the Superfund program. However, the program has increasingly been unable to meet the costly funding requirements for many of these sites. John M. Broder, *Without Superfund Tax, Stimulus Money Helps Pay for Cleanups*, N.Y. TIMES, Apr. 25, 2009, http://www.nytimes.com/2009/04/26/science/earth/26superfund.html?_r=1.

EPA officials and environmentalists say the Superfund program has been chronically underfinanced since a tax that supported it expired in 1995. *Id.* Until 1995, cleanups at orphan sites were paid in part from a trust fund based on taxes from the regulated community. But that year, Congress, in response to industry complaints, refused to reauthorize the Superfund tax, which once collected hundreds of millions of dollars a year. *Id.* In 2009, the program completed 19 sites compared to 89 in 1999. Juliet Eilperin, *Obama, EPA to Push for Restoration of Superfund Tax on Oil, Chemical Companies*, WASHINGTON POST, June 25, 2010. http://www.washingtonpost.com/wp-dyn/content/article/2010/06/20/AR2010062001789.html?hpid=topnews. Two bills were introduced into the House of Representatives in early 2009 to reinstate the Superfund tax. H.R 564, H.R. 832, 111th Cong. (2009). Both were referred to the House Ways and Means Committee and were never reported out of committee. Similar bills were also introduced into the Senate in 2010 and stalled in Committee. S. 3125, S. 3164, 111th Cong. (2009). On June 21, 2010, EPA Administrator Lisa Jackson sent a letter to House and Senate leaders with an attached draft Superfund tax bill reinstating the Superfund tax, with oil refiners and chemical manufacturers primarily responsible for the tax. Letter from Lisa Jackson, EPA Administrator to Nancy Pelosi, Speaker of the House, June 21, 2010. EPA Administrator Jackson predicts that from 2011 to 2020, the tax would collect roughly $19 billion with approximately $1.2 billion collected in 2011.

Given this history of underfunding, the $600 million in stimulus funding is a relative boon to the program. The EPA has allocated stimulus funds to only 51 of the more than 1,600 NPL sites. EPA officials have said the 51 sites receiving stimulus money were chosen because their cleanups had progressed considerably. Therefore, the new money will be directed to sites closer to completion but that are not necessarily the most dangerous sites. *Broder, supra.*

GARLAND SUPERFUND SITE

The Garland Creosoting site encompasses the approximately 12-acre property formerly used by the Garland Creosoting Company for the manufacture of creosote-treated wood products. Garland Creosoting Company began wood treating operations at the facility in 1960 and filed for Chapter 7 bankruptcy in February 1997. Investigations conducted while the facility was operational and subsequent to its closure indicate that hazardous substances used in the wood treating process have contaminated on-site soil, groundwater underlying the site, and nearby surface waters. Environmental Protection Agency, *NPL Site Narrative for Garland Creosoting*, October 22, 1999, http://www.epa.gov/superfund/sites/npl/nar1569.htm.

In May 1997, following Garland Creosoting's bankruptcy filing, the Texas Natural Resources Conservation Commission (TNRCC), now the Texas Commission on

Environmental Quality (TCEQ), inspected the facility. The inspection revealed that the groundwater treatment system had ceased operation, and a dark oily substance was observed flowing downhill from the groundwater collection trench sump into an intermittent creek running along the southern border of the site. TNRCC inspectors observed a 1,400-square-foot area of soil saturated with creosote between the sump and the intermittent creek. Stressed vegetation, stained soil, and creosote seeps were noted along the bank of the intermittent creek. Ten 55-gallon drums with labels indicating hazardous wastes were found in an unlocked building. The TNRCC initiated an emergency response action in May 1997 to abate ongoing discharges and stabilize the site. *Id.*

Superfund-financed removal activities have officially been underway at the site since 2003. However, the EPA defines "removal" as simply a short-term cleanup intended to stabilize or clean up a site that poses an imminent and substantial threat to human health or the environment. What would generally be referred to as "cleanup activities" finally began in the summer of 2009 – nearly a decade after the site was added to the NPL. These cleanup activities will include excavating contaminated soil and placing it into a new protective onsite landfill. Also, contaminated ground water will be extracted and treated using an on-site water treatment system.

The EPA began new cleanup and construction activities in November 2009, which includes excavation of contaminated creosote soil exceeding the remedial action level, installation of an interceptor collector trench, and installation of a groundwater treatment system to prevent the movement of contaminated groundwater into an intermittent creek. The EPA expects the work to be completed during late summer 2010. Environmental Protection Agency, Superfund Program Implements the Recovery Act: Garland Creosoting.

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WATER RIGHTS

TEXAS AND OKLAHOMA CONTINUE TO LITIGATE OVER OKLAHOMA WATER

In 2004, Oklahoma imposed a moratorium that barred the out-of-state sale of water. OKLA. STAT. tit. 82, § 1B (2004). The moratorium was to be in effect until the earlier of November 1, 2009, or until a study of Oklahoma's long-term needs is complete. *Id.* The moratorium was lifted on November 1, 2009, and the study is scheduled to be completed in 2011. Michael McNutt & Julie Bisbee, *Oklahoma Lawmakers Try to Reach*

Deal to Sell Resource, Bring in Funds, NewsOK, May 10, 2009, at 1, *available at* http://newsok.com/ oklahoma-lawmakers-try-to-reach-deal-to-sell-resource-bring-in-funds/article/3368193. A number of cities in North Texas, most notably those in Tarrant County, which includes the City of Fort Worth, are seeking rights to Oklahoma's water. Eric Aasen, *Parched Texas Looks to Oklahoma for Water*, THE DALLAS MORNING NEWS, August 5, 2007, at 1, *available at* http://www.dallasnews.com/sharedcontent/dws/news/localnews/stories/080507dnmetoklawater.28025a2.html. The Upper Trinity District and the North Texas Municipal Water District have also expressed interest in Oklahoma's water supply. *Id.*

A very recent Drought Information Statement for Dallas/Forth Worth, Texas, issued by the National Weather Service, shows that May and June of 2009 were among the driest on record in Central Texas, and that North Texas experienced a moderate drought in 2009. *Drought Information Statement*, National Oceanic and Atmospheric Administration's National Weather Service – Dallas/Forth Worth, TX, July 2, 2009, *available at* http://www.crh.noaa.gov/product.php?site=NWS&product=DGT&issuedby=FWD. The area has recovered from severe droughts in the past, but maintaining an adequate long-term water supply remains an important concern for North Texas.

Texas entities are eyeing three locations just north of the Red River in Oklahoma where water can be captured before it flows into the Red River, which is too salty to be economically viable. McNutt & Bisbee, *supra*, at 1. Texas is willing to pay Oklahoma a large amount of money for their water and have made several multi-million dollar offers. *Id.* The Tarrant Regional Water District (TRWD) wants a water rights permit to water that it claims is not going to be needed by Oklahomans and which currently leaves the state. The TRWD has argued that the moratorium is invalid and unconstitutional as a violation of the Commerce Clause under the Constitution of the United States. North Texas water officials claim that Oklahoma is practically "soaking in water" and has "plenty to spare." Aasen, *supra*, at 1.

With the moratorium still in effect in January 2007, the TRWD sued the State of Oklahoma in federal court, claiming that certain Oklahoma laws, including the moratorium, unconstitutionally prevented it from appropriating or purchasing water in Oklahoma. *Tarrant Regional Water Dist. v. Herrmann*, 2007 WL 3226812 at *1 (W.D. Okla. 2007). The Oklahoma Water Resources Board (OWRB) filed a motion to dismiss on the basis of no case or controversy, Eleventh Amendment immunity, lack of indispensible parties, and abstention. *Id.* at *1. Preliminary rulings favored the TRWD; the court denied the OWRB's claims in support of their motion to dismiss. *Id* at *7.

The OWRB appealed to the Tenth Circuit, and oral argument was set for May 12, 2008. The Tenth Circuit ruled in favor of the TRWD in *Tarrant Regional Water Dist. v. Sevenoaks*, 545 F.3d 906, 915 (10th Cir. 2008). The court explained that, even if the TRWD won the case on the merits, it would not be able to begin immediately collecting Oklahoma water; the ruling would only declare certain Oklahoma statutes unconstitutional. *Id.* at 911-912. "[T]he judgment would only put TRWD on the same footing as in-state applicants seeking water appropriations [in Oklahoma]. TRWD's application for water would remain pending, and the defendants would have the discretion to determine whether TRWD's application meets other state statutory and regulatory standards." *Id.* at 913.

Although the Tenth Circuit ruling stopped the OWRB on several counts, it still had several claims outstanding that could dispose of the case.

The City of Dallas joined the lawsuit in October 2008 and the case was scheduled to go to trial in early December 2009. McNutt & Bisbee, *supra*, at 1. However, on November 18, 2009, Judge Heaton of the Western District of Oklahoma granted the OWRB's motion for summary judgment as to the TRWD's Commerce Clause and Supremacy Clause claims, thus negating the need for a trial. In the same order, the judge dismissed the TRWD's further claims on the basis of ripeness with leave to file an amended complaint to address the deficiencies. *Tarrant Regional Water Dist. v. Herrmann*, No. CIV-07-0045-HE, 2009 WL 3922803, at *8 (W.D. Okla. Nov. 18, 2009). After the TRWD filed its amended complaint, the OWRB filed another motion to dismiss on the basis of standing and ripeness, which Judge Heaton granted, setting up the case for appeal. *Tarrant Regional Water Dist. v. Herrmann*, No. CIV-07-0045-HE, 2010 WL 2817220, at *4 (W.D. Okla. July 16, 2010).

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CASENOTES: FEDERAL

ELEVENTH CIRCUIT HOLDS THAT NEW EPA REGULATION ADOPTING THE UNITARY WATERS THEORY IS ENTITLED TO DEFERENCE

Recently, the Eleventh Circuit Court of Appeals examined whether a new Environmental Protection Agency (EPA) regulation clarifying the Clean Water Act's definition of "discharge of a pollutant" was entitled to deference. *Friends of the Everglades v. S. Fla. Water Mgmt. Dist.*, 570 F.3d 1210 (11th Cir. 2009

SUMMARY OF THE FACTS

Located in South Florida, Lake Okeechobee had a history of flooding on its southern shore. *Id.* at *1. Over time, the Army Corps of Engineers built Herbert Hoover Dyke and a series of pumping stations along this shore in an effort to control the flow of water. *Id.*

South of the lake was an area designated the Everglades Agricultural Area. *Id.* at *2. There, the Corps dug canals that collected rainwater and runoff from the surrounding sugar plantations and industrial and agricultural areas. *Id.* The water in these canals contained chemical contaminants and was filled with floating, dissolved solids. *Id.* Operated by the South Florida Water Management District, the pumps on the lake's southern shore moved water from these canals a distance of around sixty feet uphill into the lake. *Id.* In the process, these pumps did not further contaminate the canal water. *Id.*

Two organizations, Friends of the Everglades and the Fishermen Against the Destruction of the Environment filed suit against the Water District in 2002 seeking an injunction to force the Water District to get a permit under the Clean Water Act's National Pollution Discharge Elimination System (NPDES) program before pumping the contaminated canal water into the lake. *Id.* at *2.

The Clean Water Act prohibits the "discharge of a pollutant" without a permit. *Id.* at *4. "Discharge" means "any addition of any pollutant to navigable waters from any point source." Clean Water Act, 33 U.S.C. §§ 1311, 1342(a)(1) (2001). "Navigable waters" means the "waters of the United States." *Id.* § 1362(7).

After a two-month trial in 2006, the United States District Court for the Southern District of Florida found that the Water District's operation of the pumping stations without a NPDES permit violated the Clean Water Act. *Friends of the Everglades*, at *2.

The Unitary Waters Theory, the Meaningfully Distinct Body of Water Theory, and the EPA's New Regulation

The Eleventh Circuit Court of Appeals began by noting that the sole question in the case was "whether moving an existing pollutant from one navigable body of water to another is 'an addition . . . to navigable waters' of that pollutant." *Id.* at *4. The court also pointed out that in the absence of the EPA's new regulation, its might have decided differently. *Id.* at *6.

The Water District argued that "addition . . . to navigable waters" should be construed according to the unitary waters theory. *Id.* at *4. According to this theory, "addition . . . to navigable waters" refers to the moment when pollutants first enter navigable waters as a unitary whole from a point source, not when they move from one navigable body of water to another. *Id.* at *5. Under this theory, then, movement of polluted water from the canals into Lake Okeechobee would not have been an addition to navigable waters, and the Clean Water Act would not require an NPDES permit for this movement of water. *Id.*

The Friends of the Everglades, however, contended that "addition . . . to navigable waters" meant an addition of a pollutant to each individual body of water, and that the statute, thus, required the Water District to obtain an NPDES permit before moving the polluted canal water into the lake. *Id.* at *2, 11.

In rejecting the unitary waters theory, all existing precedent and statements in the Eleventh Circuit favored the interpretation that the Friends of the Everglades espoused. *Id* at *6. The court had taken the view that the movement of pollutants from one meaningfully distinct navigable body of water to another was an "addition . . . to navigable waters" for purposes of permits under the Clean Water Act. *Id.*

But, all of these precedents came down prior to the EPA's adopting its new regulation. *Id.* This regulation now:

> clarifies that water transfers are not subject to regulation under the National Pollution Discharge Elimination System (NPDES) permitting program. This rule defines water transfers as an activity that conveys or connects waters of the United States without subjecting the transferred water to intervening industrial, municipal, or commercial use.

40 C.F.R. § 122.3(i) (2008). This regulation effectively adopts the unitary waters theory. *Friends of the Everglades*, at *7.

A court gives a regulation deference if it is a reasonable construction of an ambiguous statute. *Id.* at *6 (citing *Chevron U.S.A., Inc. v. Natural Res. Defense Council*, Inc., 467 U.S. 837, 842-43, 104 S. Ct. 2778, 2781 (1984)). The court explained that the fact that a regulation was proposed and issued after the beginning of a lawsuit does not have any bearing on the determination of whether deference is to be given. *Id.* (citing *Smiley v. Citibank*, 517 U.S. 735, 740-41, 116 S. Ct. 1730, 1734 (1996); *United States v. Morton*, 467 U.S. 822, 835 n.21, 104 S. Ct. 2769, 2776 n.21 (1984)). Thus, it fell to the court to determine whether to give this new EPA regulation deference under *Chevron*. *Id.*

CHEVRON ANALYSIS

Accordingly, the court began by determining whether the statute's "addition . . . to navigable waters" language was ambiguous. *Id.* at *7. The Water District argued that the statutory language was in fact ambiguous and that the EPA's regulation was a reasonable interpretation of the statute. *Id.* Meanwhile, the Friends of the Everglades maintained that the statutory language was unambiguous and inconsistent with the new EPA regulation. *Id.*

Both sides cited cases in support of their respective positions as to whether the statutory language was ambiguous, but the court deemed all of these cases unhelpful in making its determination. *Id.* at 10. To support its position, the Water District cited *National Wildlife Federation v. Consumer Power Co.*, 862 F.2d 580 (6th Cir. 1988), and *National Wildlife Federation v. Gorsuch*, 693 F2d 156 (D.C. Cir. 1982). *Id.* at *8. These two cases, however, addressed polluted water that flowed where it would it would have gone anyway, unlike the case at hand in which the Water District pumped the polluted water uphill into Lake Okeechobee. *Id.* at *9. Because the water in these cases did not flow between meaningfully distinct bodies of water, the courts did not have occasion to determine whether the statutory language was ambiguous as to whether it supported the unitary waters theory or the meaningfully distinct body of water theory. *Id.* Similarly unhelpful were the cases the Friends of the Everglades cited, in that each of them came down before the EPA regulation, and each had left undecided whether a regulation supporting the unitary waters theory would be entitled to *Chevron* deference. *Id.*

Having found these cases unhelpful, the court next examined the statutory language to determine whether it was inherently ambiguous. *Id.* at *11. It held that the term "'addition . . . to navigable waters' could encompass any addition to a single body of navigable water regardless of source (like water pumped from one navigable body of water to another), or it could mean only an addition to the total navigable waters from outside of them (like a factory pumping pollutants into a navigable stream)." *Id.* Because the language of the statute could support both parties' interpretations, the court next turned to the context of the statutory language. *Id.*

In examining the context of the statute, the court again noted that "discharge" is defined as "[a]ny addition of any pollutant to navigable waters from any point source. *Id.* at *12. The Water District argued that the absence of "any" before "navigable waters" supports the unitary waters theory because it shows that Congress intended the

statute to apply to *all* navigable waters as a whole rather than *any* navigable water. *Id.* On the other hand, the Friends of the Everglades in essence argued that the "any" should be inserted before "navigable waters." *Id.*

While the court pointed out that it was not allowed to rewrite a statute and that Congress knows how to, and has in fact, used the term "any navigable waters" elsewhere in the Clean Water Act, it also acknowledged that some uses of "navigable waters" in the statute mean "any navigable waters." *Id.* at *13 (quoting "designated uses of navigable waters involved" from 33 U.S.C. § 1313(c)(2)). Thus, it held that the statutory context showed that sometimes the term "navigable waters" was used in either sense. *Id.*

When examining the broader context of the statute as a whole, the ambiguity still could not be resolved. *Id.* at *14. The court recognized that the stated goal of the Clean Water Act was "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." *Id.* (quoting 33 U.S.C. § 1251(a)). The Senate Conference Report on the Act expressed the intention that "navigable waters" be given the broadest possible scope. *Id.* In light of this background, the Friends of the Everglades argued that it would be absurd to read the Clean Water Act as not requiring an NPDES permit for pollutants that are moved from one navigable body of water to another. *Id.*

First, the Friends of the Everglades maintained that the NPDES permitting system was meant to protect individual bodies of water. *Id.* For instance, if a water body failed to meet state water quality standards, the federal government changed the terms of NPDES permits held by the contributing point sources to lower the pollutants pumped into that water body. *Id.* Lake Okeechobee was classified as drinking water under state water quality standards. *Id.* Allowing the Water District to pump dirty canal water into the lake without a NPDES permit would make it more difficult to meet the lake's water quality standards and thus undermine the goals of the NPDES program. *Id.*

Second, the Friends of the Everglades contended that giving deference to a regulation adopting the unitary waters theory "would require no permit for a project to pump the most loathsome navigable water in the country into the most pristine one." *Id.*

While agreeing that this hypothetical was frightening, the court held that other provisions in the Clean Water Act did not advance the broad goals of restoring and maintaining the Nation's waters. *Id.* at *15. For instance, the NPDES permitting program did not address non-point source pollution, a serious water quality problem. *Id.* Moreover, Congress specifically excepted from the definition of "point source" agricultural storm water discharges and return flows from irrigation, which were similarly known to be harmful to water quality. *Id.* While the unitary waters theory might seem inconsistent with the broad goals stated by the preamble of the Clean Water Act, it was no more so that than the issues that the Act failed to address or that it specifically excepted from its scope. *Id.*

After examining all of these factors, the court held that the statutory language was ambiguous. *Id.* Having already held that the unitary waters theory adopted by the EPA regulation was a permissible interpretation of the statute, the court determined that

it must defer to the new regulation. *Id.* at *16-17. The court thus reversed the District Court's judgment. *Id.* at *17.

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CASENOTES: STATE

BLUE SKIES ALLIANCE V. TEX. COMM'N ENVTL. QUALITY, 283 S.W.3D 525 (TEX. APP.—AMARILLO 2009, NO PET.) (OP. ON REH'G)

The Seventh District Amarillo Court of Appeals recently denied a motion for rehearing in a case involving a state air quality flexible permit that the Texas Commission on Environmental Quality (TCEQ) issued for the proposed 800 megawatt Sandy Creek pulverized coal power plant in McLennan County, Texas. The permit, required by the Federal Clean Air Act (FCAA), stated that the plant met federal air quality standards and authorized the plant's construction and operation. *Blue Skies Alliance v. Tex. Comm'n Envtl. Quality*, 283 S.W.3d 525 (Tex. App.—Amarillo 2009, no pet.) (op. on reh'g).

The appellants, Texans Protecting Our Water, Environment, and Natural Resources (TPOWER) and Environmental Defense, Inc. (EDI), challenged the trial court's ruling that affirmed the TCEQ's permit on three points: (1) that the TCEQ should not have applied a *de minimis* level for increased ozone in the downwind nonattainment areas of Dallas and Fort Worth ("DFW area"); (2) that the record contained insufficient evidence to support the grant of the permit; and, (3) that the TCEQ improperly excluded evidence relating to the scope of the best-available control technology (BACT) analysis. *Id.* at 529. The court of appeals overruled appellants on each ground.

The Federal Clean Air Act (FCAA) requires proposed facilities that qualify as a "major source of emissions," such as Sandy Creek, to obtain an air permit certifying they meet federal requirements for national ambient air quality standards (NAAQS). *Id.* at 528. States may be granted the authority to issue air permits through the FCAA, which provides for states to hold primary regulatory status when the Environmental Protection Agency (EPA) approves their State Implementation Plans (SIPs) for the "implementation, maintenance, and enforcement" of NAAQS. *Id.* at 530. Also pursuant to the FCAA, the EPA lists emissions and sets NAAQS for ozone and other pollutants. The EPA then evaluates whether counties comply with the NAAQS and classifies

them as "nonattainment," meaning they exceed NAAQS, or "attainment," meaning they fall within NAAQS. *Id.* at 529.

Appellants' first argument concerned Sandy Creek's contribution to ozone levels downwind in the DFW non-attainment area. Ozone forms when volatile organic compounds (VOC) and oxides of nitrogen (NO_X) combine in the atmosphere, *i.e.*, it is not a direct stack emission. For that reason, determining how much ozone a proposed facility will create is difficult to estimate. *Id.* at 530. On that basis, the EPA's NAAQS for ozone "rebuttably presumes that no single source of the ozone precursor VOC will cause or contribute to ozone exceedances." *Id.* The TCEQ, in turn, assumed in its Air Quality Modeling Guidelines that if the "VOC to NO_X ratio is 2:1 or less, no significant increase of ozone would be expected." *Id.* at 530-31. Following this assumption, TCEQ determined that if the facility's emission "is NO_X -dominated, then local ozone impacts will be insignificant" and that therefore complies with the NAAQS. *Id.* at 531. In the case Sandy Creek, TCEQ found that the permit applicant adequately demonstrated that its facility would be NO_X -dominated, and based on its assumptions, the TCEQ determined that the plant would "have no significant ozone impact." *Id.* at 531.

The court declined to follow appellants' argument against a *de minimis* standard for ozone levels in nonattainment zones such as the DFW area. Appellants contended that if a facility is found to contribute at all to ozone levels in nonattainment areas, an air quality permit is prohibited, and since Sandy Creek's emissions would contribute to emissions exceedances downwind in the DFW's nonattainment zone, the TCEQ improperly issued the permit. *Id* at 529. Applying deference to administrative agency interpretations of their own rules, the court of appeals rejected appellants' argument observing that both the EPA and the TCEQ "interpret the 'cause or contribute to' standard as allowing some contribution to an NAAQS violation, provided that the contribution is determined to be insignificant or to have virtually no effect on the nonattainment area." *Id.* at 531.

On the appellants' substantial evidence challenge, the court found that appellants did not identify record evidence of "the tangible effects of Sandy Creek's contributing to DFW's ozone levels" and thatthe court therefore did not have any basis for questioning the TCEQ's determination that the plant's ozone contribution was "legally insignificant." *Id.* at 533.

The court of appeals also rejected the appellants' argument that the TCEQ should not have excluded evidence of gasification/combined cycle (IGCC) emissions control technology in its analysis of the best available control technology (BACT) as applied to the air quality permit. *Id.* at 533-34. Appellants argued that the applicable BACT analysis, which required the TCEQ to determine whether "the proposed facility [would]use the best available control technology. . . [for] reducing or eliminating the emissions resulting from the facility," required the TCEQ to examine IGCC as an emissions-control option. *Id.* The EPA defined best available control technology as "an application of production process or available methods, systems, and techniques, including...innovative fuel combustion techniques for control..." of pollutants. *Id.* at 534. The TCEQ differed, contending that the definition requires that an applicant's BACT analysis looks at each control technology that "can be *applied* to the proposed major stationary source." *Id.* at 534. Since IGCC would necessitate "a complete redesign of the Sandy Creek facility," the appellees contended it was not a technology that

could be *applied* to the proposed facility and did not require the applicant to examine it in its BACT analysis. *Id.* at 534-35.

The court of appeals found that the IGCC definition "clearly provide[d] that only those control technologies that can be applied to the proposed major source [must] be considered in the BACT analysis." *Id.* at 535. Therefore, according to the court, the statute did not require the applicant to consider a technology that would require a complete redesign of its proposed facility. *Id.* at 535-36.

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PUBLICATIONS

SAM NAPOLITANO, *A MULTI-POLLUTANT STRATEGY: AN INTEGRATED APPROACH COULD PROVE MORE EFFECTIVE FOR CONTROLLING EMISSIONS*, PUBLIC UTILITIES FORTNIGHTLY, JANUARY 2009, AT 34.

In his article, U.S. Environmental Protection Agency (EPA) Clean Air Division Director Sam Napolitano examines the past, present and future of multi-pollutant control strategies. Sam Napolitano, *A Multi-Pollutant Strategy: An integrated approach could prove more effective for controlling emissions*, Public Utilities Fortnightly, January 2009, at 34. Particularly, Napolitano advocates market-based solutions including, but not limited to, cap and trade systems. In 2005, the EPA achieved a significant first by promulgating the Clean Air Interstate Rule (CAIR), Clean Air Mercury Rule (CAMR) and Clean Air Visibility Rule (CAVR). *Id.* at 35. As the first coordinated multi-pollutant regulations, they were to play an important role in helping solve the severe emissions problem until the United States Court of Appeals for the District of Columbia Circuit vacated both CAIR and CAMR in 2010, thus throwing the immediate future of power-sector emissions reductions into question. *Id.* Napolitano spends much of his article attempting to clarify this now muddled outlook. *Id.*

According to Napolitano, further emission reductions of SO_2, NO_X, mercury, and possibly CO_2 must occur in the power sector to address the health and environmental impacts of air pollution as required by the Clean Air Act (CAA). *Id.* Napolitano further asserts that power sector reductions can indeed be cost effective. *Id.* In fact, the most recent National Ambient Air Quality Standard revisions have found the power sector to be a major contributor of emissions and the source of some of the most cost-effective controls to reduce emissions. *Id.* Further, EPA studies have found the power sector to be the greatest source of emissions reductions to achieve the goals of economy-wide CO_2 reduction requirements. *Id.*

The Clean Air Power Initiative (CAPI), which began in 1995, was the first attempt to pursue an integrated strategy to address electric power generators' emissions of SO_2, NO_x, and mercury over a 15-year planning horizon. CAPI brought together stakeholders from industry, states, and environmental groups in an effort to "reinventing the EPA's regulatory approach to reduce the number, administrative complexity and cost of its requirements while improving the likelihood of achieving environmental results. *Id.* The EPA analyzed emission reductions and costs resulting from six different national cap-and-trade scenarios to reduce SO_2 and NO_x, and also did some limited analysis of mercury controls. *Id.* These studies found that a traditional command-and-control approach for these pollutants was twice as costly to implement as the cap-and-trade scenarios. *Id.* at 36. However, without a regulatory driver for additional controls in 1996, the CAPI process wound down. *Id.*

In 1999, spurred on by the 1997 NAAQS revision, the Kyoto Protocol, and the increasing awareness of the mercury problem, the EPA again reevaluated the multi-pollutant analysis. *Id.* The resulting proposal called for an extended cap and trade program for SO_2 and NO_x, created a new cap-and-trade program for CO_2 and established mercury maximum achievable control technology (MACT) standards. *Id.* In the late 1990s and early 2000s, Congress got involved proposing a number of bills aimed at multi-pollutant emissions reductions by the power sector. Most of these bills proposed in this time period relied on emission caps and trading. *Id.* at 37. The most prominent of these was the Bush administration's Clear Skies Act, which despite much debate, ultimately failed like the other bills. *Id.*

While many of these bills were being discussed in Congress, the EPA began promulgating three significant regulations that would act in concert as a multi-pollutant program under the auspices of the Clean Air Act. *Id.* at 38. Napolitano points out that CAMR was notable as the world's first rule to begin to reduce the emissions of mercury from existing coal-fired power plants. *Id.* These regulations were predicted to significantly reduce emissions of the targeted pollutants (60%-70% in the affected areas) and allow states to achieve the PM2.5 ground-level ozone NAAQS. *Id.* However, with the failure of the various multi-pollutant bills in Congress and the court's vacatur of CAIR and CAMR, the void of a U.S. multi-pollutant emission reduction program for the power sector remains unfilled. *Id.*

In light of these recent developments with respect to the court's decision on CAIR, Napolitano says the EPA is pursuing action through all branches of government in order to work expeditiously with states and other stakeholders to get back on track towards efficient, effective means to reduce power-sector emissions and achieve the health and environmental goals of the Clean Air Act. *Id.*

In the next portion of the article, Napolitano describes the major lessons to be gleaned from the recent experiences that will be helpful moving forward. First among these lessons is that despite widespread support, significant challenges still remain for reaching an agreement on a multi-pollutant control strategy. *Id.* at 39-40. The article points to a number of persistent areas of contention in the effort towards a Congressional and/or regulatory solution, including: whether CO_2 belongs in a multi-pollutant control program; whether mercury should be traded; and whether certain provisions of the current CAA should be streamlined in response to large emission reductions provided by emission caps. *Id.* The second lesson the article emphasizes is that clean-coal technologies, including IGCC and carbon capture and sequestration,

could allow coal-fired generation to remain competitive even with significant CO_2 reductions. *Id.* According to Napolitano, the third lesson to be derived from recent EPA experiences is that SO_2 reductions provide the most "bang for the buck". EPA studies suggest that a ton of SO_2 emissions reduced from electric power generation has over seven times the benefit of a ton of NO_x. *Id.* The fourth lesson described in the article concerns the substantial mercury co-benefit that can be obtained from the application of particular SO_2 and NO_x controls. *Id.*

The final lesson, which Napolitano discusses at great length, asserts that cap-and-trade can work, but it is not the only regulatory tool. *Id.* In this discussion, Napolitano examines the four primary benefits of cap-and-trade systems. *Id.* at 40-41. These benefits include regulatory certainty for the power sector coupled with environmental certainty that reductions will be achieved and sustained. *Id.* at 41. Further, control with cap and trade costs much less than more prescriptive command-and-control regulations. *Id.* Additionally, since trading places a direct economic value on emission reductions, it provides a reward for innovations that result in more efficient pollution-reducing technologies. *Id.* Finally, large emission reductions under cap-and-trade programs are spread over a broad area and the greatest reductions tend to occur in areas of greatest emissions, where reductions are most needed. *Id.*

In conclusion, the article stresses that to realize the tremendous promise of a meaningful market-based multi-pollutant control strategy, all of the stakeholders must recognize the commonalities in the competing proposals and bridge the gaps on the remaining issues. *Id*

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WASHINGTON UPDATE

THE EPA, INDUSTRY, AND ENVIRONMENTAL GROUPS AWAIT THE COURT'S FINAL RULING ON THE CLEAN AIR ACT'S SSM EXEMPTION

On December 19, 2008, the U.S. Court of Appeals for the District of Columbia vacated the U.S. Environmental Protection Agency's (EPA) rules contained within title 40 of the Code of Federal Regulations, Sections 63.6(f)(1) and (h)(1), which exempted hazardous air pollutant sources from Section 112(d) of the Clean Air Act, Title 42 of the U.S. Code. Section 7412(d), during start up, shut down, and malfunction (SSM) periods. *See Sierra Club v. Environmental Protection Agency*, 551 F.3d 1019, 1028 (D.C. Cir. 2008). The court held that the SSM exemption violates the plain language of the Clean Air Act because it allows sources to comply with the general duty standard to minimize emissions, but "the Clean Air Act requires that some section 112 standard apply continuously." *Id.* at 1028.

Since the court vacated the SSM exemption rule, the issue has gone in two different directions. First, the final outcome of the case is unclear. Industry is petitioning for a rehearing of the case, while the EPA and environmental groups are petitioning to let it stand. Second, the EPA is proceeding as though the SSM exemption rule will remain vacated and its new regulations reflect the holding of the case.

The Final Outcome of *Sierra Club v. EPA*

On April 3, 2009, Industry submitted a petition for a rehearing of *Sierra Club en banc* and warned that the court's ruling will have many negative consequences. Industry asked the D.C. Circuit to either stay its vacatur or at a minimum remand the rule to the EPA. *See* Petition of Respondent-Intervenors for Rehearing or Rehearing *En Banc*, *supra*, at 15.

First, Industry warns that the ruling opens up many EPA maximum achievable control technology (MACT) air toxics standards to legal challenge because they currently do not include any standards for SSM periods. *Id.* at 12. Industry argues that MACT standards have been created for steady state operations and "are neither *achieved* nor *achievable* during SSM periods." *Id.* at 13. Therefore, the EPA will have to set numerical limits that are much higher than those used for steady state operations. *Id.* In addition, Industry claims that vacatur will not result in any environmental benefit because excess emissions during SSM periods are unavoidable and "the absence of the exemption will not make those emissions go away unless sources choose not to operate. In the end, vacatur will simply serve to create enforcement risk for industrial sources that have justifiably relied on the rules as written." *Id.* at 14-15.

Furthermore, Industry claims that a rehearing *en banc* is warranted because the D.C. Circuit Majority went against court precedent and incorrectly held that the EPA "constructively" reopened the entire SSM rule. *Id.* at 7-9. The court further erred in vacating the SSM exemption without discussion of why it chose vacatur over remand. *Id.* If the court still finds that vacatur was appropriate, Industry argues that at a minimum, it should stay the mandate until the EPA can revise MACT standards to establish limits for SSM periods. *Id.* at 15.

The EPA filed a response to Industry's petition on May 29, 2009. Although the EPA and Industry argued against vacating the SSM exemption in *Sierra Club*, the EPA does not believe that a rehearing *en banc* is necessary or appropriate. *See* EPA Response to Petitions for Rehearing *En Banc*, *supra*, at 1.

First, the EPA argues that Industry is overstating the impact of the vacatur because it "immediately and directly affects only the subset of section 112(d) standards that incorporate [the SSM exemption] by reference, and that contain no other regulatory text exempting or excusing SSM events." *Id.* at 7. Many MACT standards include their own SSM provisions and the vacatur does not have an impact on them because they were not challenged before the D.C. Circuit. *Id.*

Furthermore, the EPA rejects the arguments of dire consequences if Industry is liable for excess emissions during SSM periods because the Clean Air Act's State Implementation Plan (SIP) efforts have not run into any serious problems. *Id.* at 9. SIPs are not allowed to implement a SSM exemption, and neither a massive amount of litigation nor problems with industry compliance have resulted from the vacatur. *Id.*

The EPA also rejects Industry's arguments that the court went against court precedent and should not have reopened the SSM exemption for review. *Id.* at 3-5. The

EPA claims that the D.C. Circuit has held that incorporation by reference of "new and potentially more onerous provisions" into a rule constructively opens the rule. Here, "the new SSM plan provisions are 'potentially more onerous' to environmental groups, because the new provisions make it more difficult for such entities to obtain SSM plans." *Id.* at 5. The EPA further argues that Industry's request for a stay of the vacatur mandate is inappropriate in the context of a petition for a rehearing and all parties need a proper opportunity to respond to the request. *Id.* at 10-11.

On May 29, 2009, the Sierra Club and other environmental groups also responded to Industry's petition for a rehearing. *See* Environmental Petitioners' Opposition to Petitions by Respondent-Intervenors for Rehearing *En Banc*, *supra*, at 1. The environmentalists' response made many of the same arguments as the EPA to support their position that the court correctly vacated the SSM exemption. The response emphasizes that "[Industry does] not provide any evidence that sources would be unable to control their emissions sufficiently to avoid violations or even that compliance would be onerous." *Id.* at 8.

Regulations Since the Vacatur of the SSM Exemption

The court has not yet responded to the petition for a rehearing made by Industry and the responses from the EPA and environmental groups. If the decision is upheld, it will impact requirements during SSM periods for at least some of the MACT standards. It is also possible for the Supreme Court to grant a writ of certiorari and hear the case. In the meantime, the EPA is pushing forward with regulations that incorporate the D.C. Circuit's vacatur of the SSM exemption. Environmentalists have also gotten involved by petitioning the EPA to "delete the SSM exemption from all regulations in which it appears" because any regulation that includes the SSM exemption violates the Clean Air Act. *See* Letter from Earthjustice and Sierra Club, to Stephen L. Johnson, Administrator, Environmental Protection Agency at 34 (Jan. 14, 2009).

On March 5, 2009, the EPA proposed national emission standards for reciprocating internal combustion engines. National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines, 74 Fed. Reg. 42 (proposed March 5, 2009)(to be codified at 40 C.F.R. pt. 63)[Hereinafter "RICE proposal"]. In the RICE proposal, the EPA acknowledges *Sierra Club* and notes that emissions during SSM periods have differences when comppared to periods of normal operation. *Id.* at 9710. Taking *Sierra Club* into account and noting that "the time for appeal of that decision has not yet run," the EPA proposes two options for emissions standards during RICE SSM periods: (1) to have the same standards apply during both normal operation and SSM periods; or (2) emissions limitations that would apply to a stationary RICE during SSM periods, compared to periods of normal operation. *Id.* Since the EPA lacks data regarding emissions levels during SSM periods, it is requesting that Industry submit SSM period data as well as any comments on the proposal. *Id.* at 9711.

The EPA also acknowledges *Sierra Club* on its May 6, 2009 proposal for national emissions standards for the Portland Cement Manufacturing Industry. National Emissions Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry, 74 Fed. Reg. 86 (proposed May 6, 2009)(to be codified at 40 C.F.R. pts. 60 and 63). The current Portland Cement emissions standards contain the now vacated SSM exemption and only require the general duty standard. *Id.* at 21,161. To comply with current law, the EPA proposes to eliminate the SSM exemption and apply

the same standards for normal operations as well as SSM periods because they have "no data showing that emissions during [SSM periods] are different than during normal operation." *Id.* at 21,162. The EPA requests comments on this new proposal, as well as SSM period emissions data for cement kilns, because they are not certain that the proposed standards are feasible. *Id.*

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