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Cooperative NRDA & New Governance

GETTING TO RESTORATION IN THE HUDSON RIVER, THE GULF OF MEXICO, AND BEYOND

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INTRODUCTION

In December 2010, General Electric Company (GE) announced that it would proceed to Phase Two of a two-part plan to remove toxic polychlorinated biphenyls, or PCBs, from the Hudson River. The company had released the toxins into a forty-mile stretch of the river over thirty years earlier.¹ After decades of fighting, GE finally decided to use its innovative drive, technical expertise, and economic resources to clean and restore the pollution's damage.²

Less than a year earlier, and fifteen hundred miles away, British Petroleum (BP) was making initial preparations to respond to a massive oil spill. Starting in April 2010, the spill yielded eighty-six days of nearly uncontrolled gushing.³

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¹ Editorial, *A Great Day for the River*, N.Y. TIMES, Dec. 27, 2010, at A22, available at <http://www.nytimes.com/2010/12/28/opinion/28tue2.html> [hereinafter *Great Day*].

² *Id.*

³ For recent law review articles that analyze the Deepwater Horizon disaster, see, for example, Oliver A. Houck, *Worst Case and the Deepwater Horizon Blowout: There Ought to Be a Law*, 24 TUL. ENVTL. L.J. 1 (2010) (considering why three laws—the National Environmental Policy Act (NEPA), the Outer Continental Shelf Leasing Act (OCSLA), and the Oil Pollution Act (OPA)—failed “to prevent and cope with the explosion of the drilling rig, Deepwater Horizon”). Houck highlights “the power of negative thinking,” or worst-case analysis. *Id.* at 17-18; see also Sam Kalen et al., *Lingering Relevance of the Coastal Zone Management Act to Energy Development in Our Nation's Coastal Waters?*, 24 TUL. ENVTL. L.J. 73 (2010) (considering the role of the states “to influence energy development occurring off their coasts” under the Coastal Zone Management Act); Stanley A. Millan, *Escaping the “Black Hole” in the Gulf*, 24 TUL. ENVTL. L.J. 41 (2010) (“explor[ing] the reaches of the Oil Pollution Act of 1990,” and how this law and state analogues address oil disasters and consequent damages).

This disaster in the Gulf of Mexico made clear that while BP had invested billions into sophisticated drilling technologies,⁴ it had failed to invest in the technologies necessary to deal with what ultimately became the largest oil spill in U.S. history—a spill that continues to threaten marine life and adjacent wetlands in the Gulf.⁵

Federal laws strive to hold polluters accountable. In particular, Congress has enacted laws that make polluters liable for the injury, destruction, or loss of natural resources resulting from hazardous substances' release into the environment. For instance, the Comprehensive Environmental Response, Compensation, and Liability Act⁶ (CERCLA, or Superfund⁷) concerns waste sites, and the 1990 Oil Pollution Act⁸ (OPA)

For recent, more journalistic articles that anticipate the legal fallout from the Deepwater Horizon spill, see, for example, Allison Torres Burtka, *Ripple Effect*, TRIAL, Aug. 2010, at 42; Stephen Gidiere, Mike Freeman & Mary Samuels, *The Coming Wave of Gulf Coast Oil Spill Litigation*, 71 ALA. LAW. 374 (2010).

⁴ Katie Howell, *Oil Spill Containment, Cleanup Technology Has Failed to Keep the Pace*, N.Y. TIMES (Apr. 30, 2010), <http://www.nytimes.com/gwire/2010/04/30/greenwire-oil-spill-containment-cleanup-technology-has-f-95687.html>.

⁵ See generally Carrie Presnall, Laura López-Hoffman & Marc L. Miller, *Can the Deepwater Horizon Trust Take Account of Ecosystem Services and Fund Restoration of the Gulf?*, 40 ENVTL. L. REP. NEWS & ANALYSIS 11,129 (2010). Presnall, López-Hoffman, and Miller encourage Mr. Feinberg, administrator of the Deepwater Horizon Oil Spill Trust and the Gulf Coast Claims Facility (GCCF), "to account for ecosystem services when assessing . . . harms," and they describe strategies and mechanisms for assessing harms. *Id.* at 11,130-31. "Ecosystem services are the benefits humans receive from functioning ecosystems and the species that comprise them." *Id.* at 11,130. These services include "seafood, flood control, carbon sequestration, habitat for resident and migrating wildlife, hunting, sport fishing, wildlife watching and other outdoor recreation, a rich local culture, and more." *Id.*

⁶ CERCLA provides for the cleanup of sites contaminated by hazardous substances. It: (1) authorizes the federal government to clean up sites using the Hazardous Substance Superfund, (2) imposes liability for cleanup on responsible parties, (3) requires responsible parties to perform the cleanup and reimburse others or the fund for the costs of cleanup, and (4) requires responsible parties to pay damages to state and federal governments for injury to natural resources, including compensation for destruction or loss. Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675 (2006).

⁷ For more information on the Superfund, see Kathleen Chandler Schmid, *The Depletion of the Superfund and Natural Resource Damages*, 16 N.Y.U. ENVTL. L.J. 483 (2008) (explaining how the depletion of the Superfund has impacted CERCLA remediation and describing how some states have created programs to recover natural resource damages).

⁸ OPA imposes liability for removal costs and damages resulting from an incident in which "oil is discharged . . . into . . . navigable waters or adjoining shorelines or the exclusive economic zone." 33 U.S.C. § 2701 (2006). Like CERCLA, OPA establishes liability for damages for injuries, or loss of, natural resources, and outlines liability limits in specific circumstances. *Id.* §§ 2701-2761.

For an article that explores some of the history of OPA, see Lawrence I. Kiern, *Liability, Compensation, and Financial Responsibility Under the Oil Pollution Act of 1990: A Review of the First Decade*, 24 TUL. MAR. L.J. 481 (2000) (critiquing OPA, while recognizing the statute's contribution to modern oil pollution law in the

concerns oil spills. Both acts authorize a form of environmental cleanup and restoration called natural resource damage assessment (NRDA).⁹ NRDA is a legal process that determines the type and degree of restoration in which a polluter must engage to compensate the public for environmental pollution's harm to natural resources.¹⁰

The NRDA process is inherently adversarial. Companies—often called Responsible Parties (RPs) or Potentially Responsible Parties (PRPs)—represent the interests of their shareholders; Natural Resource Trustees (Trustees) act on behalf of the public. But each of these parties engages in NRDA with an eye toward litigation under the assumption that the courts will ultimately decide on required remedial action and compensation.

Neither CERCLA nor OPA requires *cooperative* NRDA, a particular approach to NRDA that emphasizes the RPs' and Trustees' need to join together and work toward the common goal of restoring natural resources quickly and efficiently¹¹—to *get to restoration*.¹² Three decades of adversarial Hudson River cleanup and restoration efforts evidence a need for cooperative NRDA approaches, the necessity of which is further underscored by the work awaiting BP in the Gulf of Mexico.

United States); see also J. Terence Ryan, *The Evolution of Natural Resource Damage Assessments Under the Oil Pollution Act and the Comprehensive Environmental Response, Compensation, and Liability Act*, 6 FORDHAM ENVTL. L.J. 29 (1994) (providing a synopsis of CERCLA and OPA, description of methodologies used to calculate penalties, and summary of judicial decision-making in the context of NRDA).

⁹ The federal Clean Water Act (CWA) and common law principles also authorize NRDA. *NRDA 101: FAQ's*, MISS. DEP'T OF ENVTL. QUALITY, NAT. RESOURCE DAMAGE ASSESSMENT, <http://www.mdeqnrda.com/faqs.html> (last visited Aug. 21, 2011).

¹⁰ *Id.*

¹¹ Bill Conner & Ron Gouguet, *Getting to Restoration*, ENVTL. F., May-June 2004, at 18, 22.

¹² *Id.* at 19.

Companies are liable for restoring natural resource injuries beyond normal cleanups under Superfund and the Oil Pollution Act. But they can cause their financial exposure to skyrocket by instinctively using legal and scientific defenses to avoid liability. Instead, industry can reduce costs and government trustees can achieve restoration more quickly by joining together in a cooperative natural resource damage assessment.

Id.; see also Carol A. Jones, Theodore D. Tomasi & Stephanie W. Fluke, *Public and Private Claims in Natural Resource Damage Assessments*, 20 HARV. ENVTL. L. REV. 111 (1996) (promoting increased understanding of legal and economic principles that underlie public and private NRDA claims under CERCLA and OPA); Jason R. Bentley, Note, *Examining the Role of Potentially Responsible Parties in Assessing Natural Resource Damages*, 23 VT. L. REV. 431 (1998) (urging potentially responsible parties—PRPs—under CERCLA to be active participants in the NRDA process in an attempt to expedite the process, reduce overall costs, and contribute to fair, equitable settlements).

The purpose of this article is to examine NRDA's current shortcomings and recommend reforms to incentivize cooperative NRDA and broader New Governance principles in the future. This article proceeds in four parts. Part I delineates the article's theoretical underpinnings by placing cooperative NRDA in the context of New Governance. New Governance is a concept that encompasses various contemporary techniques of law and regulation that foster cooperation among public and private actors, including industries, corporate social responsibility (CSR) advocates, and shareholders.¹³ Part II considers the facts and relevant NRDA processes of two distinct cases: GE's release of PCBs into the Hudson River and the BP oil spill in the Gulf of Mexico. Part III applies a particular New Governance theory, Professor Edward M. Epstein's model of New Governance, to the GE and BP cases. Epstein's model highlights six modes of social control—law, affinity group regulation, self-regulation, ethical precepts, the media, and an

¹³ *New Governance*, UNIV. WIS.-MADISON: CTR. FOR WORLD AFF. & GLOBAL ECON., <http://wage.wisc.edu/research/collaboratives/governance> (last visited Aug. 21, 2011); Orly Lobel, *The Renew Deal: The Fall of Regulation and the Rise of Governance in Contemporary Legal Thought*, 89 MINN. L. REV. 342 (2004). Characterizing the inclusive and dynamic nature of New Governance approaches, Lobel explains:

Rather than oppositional, [this approach] aims for an appreciative positive stance, pulling together disparate ingredients and synthesizing elements from opposing schools of thought. Through new governance approaches, contemporary thinkers can bring together in their research unlikely pairs, such as privatization and democratic theory. The theory itself is thus reflexive, in the sense that it calls for integration in legal practice and correspondingly exemplifies hybridization in the academic field. Indeed, the theoretical basis for [this] vision mirrors its practical application in its inclusive spirit.

Id. at 449; see also Susan Sturm, *Gender Equity Regimes and the Architecture of Learning*, in *LAW AND NEW GOVERNANCE IN THE EU AND THE US* 323, 328 (Gráinne de Búrca & Joanne Scott eds., 2006); Cristie L. Ford, *New Governance, Compliance, and Principles-Based Securities Regulation*, 45 AM. BUS. L.J. 1, 5 (2008); Helen Hershkoff & Benedict Kingsbury, *Crisis, Community, and Courts in Network Governance: A Response to Liebman and Sabel's Approach to Reform of Public Education*, 28 N.Y.U. REV. L. & SOC. CHANGE 319, 321-24 (2003); David Hess, *Social Reporting and New Governance Regulation: The Prospects of Achieving Corporate Accountability Through Transparency*, 17 BUS. ETHICS Q. 453, 455 (2007); Michael B. Runnels, *Dispute Resolution & New Governance: Role of the Corporate Apology*, 34 SEATTLE U. L. REV. 481, 486-87 (2011); William H. Simon, *Solving Problems vs. Claiming Rights: The Pragmatist Challenge to Legal Liberalism*, 46 WM. & MARY L. REV. 127, 173-75 (2004). See generally *THE TOOLS OF GOVERNANCE: A GUIDE TO THE NEW GOVERNANCE* (Lester M. Salamon ed., 2002); Michael C. Dorf & Charles F. Sabel, *A Constitution of Democratic Experimentalism*, 98 COLUM. L. REV. 267, 345-56 (1998); Bradley C. Karkkainen, "New Governance" in *Legal Thought and in the World: Some Splitting as Antidote to Overzealous Lumping*, 89 MINN. L. REV. 471 (2004); James S. Liebman & Charles F. Sabel, *A Public Laboratory Dewey Barely Imagined: The Emerging Model of School Governance and Legal Reform*, 28 N.Y.U. REV. L. & SOC. CHANGE 183 (2003); Orly Lobel, *Setting the Agenda for New Governance Research*, 89 MINN. L. REV. 498 (2004).

engaged civil society—that encourage corporations to engage in socially responsible behavior.¹⁴ Applying and analyzing Epstein's New Governance model yields three recommendations that advance cooperative NRDA and improve corporate behavior beyond the GE and BP cases. In Part IV, this article therefore recommends the following: (1) reforming CERCLA and OPA, (2) reframing Epstein's model to include science as a mode of social control, and (3) increasing corporate disclosure requirements. In addition to incentivizing more cooperative NRDA, these reforms will contribute to the transparency and accountability¹⁵ the public has come to expect in the post-Enron era.

I. COOPERATIVE NATURAL RESOURCE RESTORATION, IN CONTEXT

This section integrates New Governance theory with cooperative NRDA. Part A considers business reform, in general, and ways to encourage positive corporate behavior. Highlighting Epstein's theory of New Governance, this section explains movements that advocate CSR and New Governance principles. Part B explains trends in environmental policymaking that mirror business reform, especially those that embody collaborative rather than adversarial approaches to environmental protection. This section then considers NRDA and ultimately integrates the policy of cooperative NRDA with New Governance principles, highlighting trends toward collaboration among stakeholders.

A. *Business Reform and New Governance*

New Governance has emerged in response to CSR's inadequacies in incentivizing ethical corporate behavior. Scholars often focus on the CSR movement and how its maxims may be incorporated into the business-decision-making process.¹⁶ CSR advocates encourage corporations to broaden

¹⁴ Edwin M. Epstein, *The Good Company: Rhetoric or Reality? Corporate Social Responsibility and Business Ethics Redux*, 44 AM. BUS. L.J. 207, 212-16 (2007) (arguing that CSR is inherently insufficient in achieving the Good Company). Epstein provides his own framework and describes corporations, by virtue of their economic and political power, as the most efficient proxies through which his framework can encourage the actualization of the Good Company. *Id.* at 210-12.

¹⁵ See generally Amiram Gill, *Corporate Governance as Social Responsibility: A Research Agenda*, 26 BERKELEY J. INT'L L. 452, 465 (2008).

¹⁶ *Id.* at 463-66; see also George Cheney, Juliet Roper & Steve May, *Overview*, in THE DEBATE OVER CORPORATE SOCIAL RESPONSIBILITY 3, 4 (Steve May, George

relationships with multiple stakeholders, engage in meaningful and sustained efforts to improve communities,¹⁷ and conform to society's laws and ethical customs.¹⁸ Increasingly, however, scholars recognize that the CSR movement's goals are fundamentally flawed. Though some argue that corporations ought to do good for goodness's sake,¹⁹ several view such duties, if not tethered to the corporate bottom line, as hopelessly naïve.²⁰ Moreover, critics argue that corporate marketing

Cheney & Juliet Roper eds., 2007) (explaining that conversations about unchecked corporate power are central to conversations about how to “probe in an informed and systematic way the potentials for positive social change in, through, and around the modern corporation”); John M. Conley & Cynthia A. Williams, *Engage, Embed, and Embellish: Theory Versus Practice in the Corporate Social Responsibility Movement*, 31 J. CORP. L. 1, 37-38 (2005) (describing CSR as “a complex communication network among public and private actors,” which, “[a]t its best, promises a corporate decision making process in which managers think and talk openly about social and environmental issues and then tell the world what they did and why”).

¹⁷ Cheney, Roper & May, *supra* note 16, at 3.

¹⁸ Milton Friedman, *The Social Responsibility of Business Is to Increase Its Profits*, N.Y. TIMES, (Magazine), Sept. 13, 1970, at 33, reprinted in BUSINESS ETHICS 17 (Tamara L. Roleff ed., 1996) (describing the responsibility of the corporate executive). Friedman argues that this responsibility “is to conduct business in accordance with [the shareholder's] desires, which generally will be to make as much money as possible while conforming to the basic rules of the society, both those embodied in law and those embodied in ethical custom.” *Id.* While Friedman articulates this point as a response to the CSR movement, he fails to consider how ethical custom and the law interact. Indeed, he fails to consider that ethical custom and the law are, in fact, interdependent. See Cyrus Mehri, Andrea Giampetro-Meyer & Michael B. Runnels, *One Nation, Indivisible: The Use of Diversity Report Cards to Promote Transparency, Accountability and Workplace Fairness*, 9 FORDHAM J. CORP. & FIN. L. 395, 407 (2004).

¹⁹ See, e.g., M. Todd Henderson & Anup Malani, *Corporate Philanthropy and the Market for Altruism*, 109 COLUM. L. REV. 571, 581 (2009) (characterizing the philosophical underpinnings of the CSR movement as based on the view that corporations have a moral duty to do good for others, even at the expense of the bottom line); see also David P. Baron, *The Positive Theory of Moral Management, Social Pressure, and Corporate Social Performance* 5 (Rock Ctr. for Corporate Governance, Working Paper No. 36, 2006), available at <http://ssrn.com/abstract=913808> (arguing that one of the principles underlying the CSR movement is that corporations have an abstract “moral duty” to do good).

²⁰ See Elizabeth F. Brown, *No Good Deed Goes Unpunished: Is There a Need for a Safe Harbor for Aspirational Corporate Codes of Conduct?*, 26 YALE L. & POL'Y REV. 367, 399 (2008) (explaining the reason why certain corporations do not engage in CSR). Brown argues corporate reluctance is partly due to the fact that following CSR principles is more expensive than not, and corporations cannot always pass the costs to the consumer. *Id.* Moreover, Brown argues that “[p]art of those added costs are the costs associated with increased risk of litigation that corporations adopting codes that embody CSR principles face.” *Id.*; see also Janet E. Kerr, *The Creative Capitalism Spectrum: Evaluating Corporate Social Responsibility Through a Legal Lens*, 81 TEMP. L. REV. 831, 839 (2008) (characterizing CSR as profit-centric). Kerr explains that since the effects of CSR on the bottom line have become quantifiable, the law supports, if not requires, corporate managers to “investigate and consider whether CSR can impact the bottom line.” *Id.* Kerr further argues that a corporate manager who does not consider such linkages—who does not weigh profits as a consideration—could be considered derelict in her duty. *Id.*

strategists have effectively co-opted the CSR movement as a tool to preserve branding and public image.²¹

Principles of New Governance can incentivize the responsible behavior society expects. There is no single model of New Governance; rather, several evolving models have been developed and tried in various industries around the globe.²² The underlying premise of New Governance is that corporate-governance mechanisms, if they are to be responsive to public expectations of responsible corporate behavior, must have greater flexibilities. Furthermore, those flexibilities ought to be animated by outcomes—not processes.²³

New Governance promotes systems that “use innovative, pragmatic, information-based, iterative, and dialogic mechanisms to gather, distill, and leverage industry learning in the service of a still-robust but better designed—that is, more effective and less burdensome—public regulatory mandate.”²⁴ In every respect, deliberation among stakeholder

²¹ See, e.g., S. PRAKASH SETHI, SETTING GLOBAL STANDARDS: GUIDELINES FOR CREATING CODES OF CONDUCT IN MULTINATIONAL CORPORATIONS 45-63 (2003) (regarding the marketing benefits from CSR and the widespread practice of insufficient or inconsistent implementation); Ruth V. Aguilera et al., *Putting the S Back in Corporate Social Responsibility: A Multilevel Theory of Social Change in Organizations*, 32 ACAD. MGMT. REV. 836, 838 (2007) (arguing that “some companies introduce CSR practices at a superficial level for window-dressing purposes”); Joe W. (Chip) Pitts, III, *Corporate Social Responsibility: Current Status and Future Evolution*, 6 RUTGERS J.L. & PUB. POL’Y 334, 373-82 (2009) (finding credible the critiques that consider “CSR as, at best, toothless and marketing-oriented, and at worst a malevolent strategy to co-opt or render powerless the critical forces hoping to tame corporations with the more meaningful constraints of law”); Betsy Atkins, *Is Corporate Social Responsibility Responsible?*, FORBES (Nov. 28, 2006, 12:00 PM), http://www.forbes.com/corporatecitizenship/2006/11/16/leadership-philanthropy-charity-lead-citizen-cx_ba_1128directorship.html (detailing the disingenuousness of corporate CSR campaigns). Atkins writes that “[t]here are practical reasons why corporations should cloak themselves in the politically correct rhetoric of social responsibility. But marketing should not be confused with significant deployments of corporate assets.” *Id.*; see also Gill, *supra* note 15, at 462 (arguing that “CSR has become a business-sensitive, if not business-driven practice”). Gill notes that many critics consider the CSR’s original motive to have been effectively subordinated to corporate marketing strategies. *Id.*

²² See *New Governance*, *supra* note 13.

²³ See *supra* note 13 and accompanying text. See generally Epstein, *supra* note 14.

²⁴ See Ford, *supra* note 13, at 5 (describing the B.C. (British Columbia, Canada) model as an example of the New Governance). Ford defines the linchpin of this model as a “substantially [altered] relationship between regulators and industry”—a relationship not defined by inflexible regulators mandating rules that are often incompatible with fast-paced business environments, but a relationship defined by a shared responsibility and a pragmatic responsiveness to “complex real-life social systems.” *Id.* at 27. Ford goes on to describe this New Governance as the “most effective mechanism for making decisions in complex organizational structures.” *Id.* at 27-28. This, Ford argues, is an “opportunity for dialogic and transparent securities regulation,” viewed from the perspective of industry, regulators, shareholders, stakeholders, and CSR advocates. *Id.* at 27-28, 60.

groups is central to New Governance approaches.²⁵ Rather than emphasize checklist-style compliance with prescriptive legal rules—which often incentivizes corporate actors to discover and abuse loopholes²⁶—New Governance principles encourage groups to orient themselves in the underlying policy priorities of those rules. In turn, New Governance approaches continually revise both means and ends to solve problems as they arise.²⁷ New Governance approaches also strive to foster transparency and accountability; envision corporate decision making as a collaborative, rather than an adversarial, process; and “provide[] a rational, systemic alternative to draconian rule-making and [its] often adverse effects on business.”²⁸

Statute and policy reform (in the environmental arena and elsewhere) have emerged as a result of New Governance principles. For example, British Columbia’s Bill 38 offers a principle-based and outcome-oriented approach to securities regulation.²⁹ One part of Bill 38 replaces detailed, compliance-based rules governing dealers and advisors with rules arranged under broader standards.³⁰ These broader standards motivate dealers and advisors to exercise sound judgment, whereas the compliance approach motivated mere adherence to rules that might have been misconstrued.³¹

Political scientists Christopher McGrory Klyza and David Sousa, in their review of American environmental policy, recounted two further examples of collaborative approaches in environmental protection.³² Quincy Library Group in Northern California brought a variety of participants together—local politicians, environmentalists, and members of the timber industry—to create a logging plan that better supports the

²⁵ See *supra* note 13 and accompanying text.

²⁶ See Ford, *supra* note 13, at 29 (arguing that while corporations strictly adhering to the letter of the law may appear ideal, such strict adherence, paradoxically, may generate the very moral hazards that undermine corporate governance objectives—through incentivizing the corporate discovery and abuse of regulatory loopholes).

²⁷ *Id.* at 29-30.

²⁸ Michael B. Runnels, Elizabeth J. Kennedy & Timothy B. Brown, *Corporate Social Responsibility and the New Governance: In Search of Epstein’s Good Company in the Employment Context*, 43 AKRON L. REV. 501, 534 (2010).

²⁹ Ford, *supra* note 13. British Columbia passed Bill 38, and is currently implementing principles-based securities regulation. *History of the 2004 BC Securities Legislation*, BRIT. COLUM. SEC. COMMISSION, <http://www.bsc.bc.ca/instruments.aspx?id=1894> (last visited Aug. 21, 2011).

³⁰ Ford, *supra* note 13, at 17-18.

³¹ *Id.* at 19.

³² CHRISTOPHER MCGRORY KLYZA & DAVID SOUSA, AMERICAN ENVIRONMENTAL POLICY, 1990-2006: BEYOND GRIDLOCK 244 (2008).

environment.³³ Another group of ranchers and environmentalists, the Quivara Coalition, collaborated on an environmentally conscious cattle-ranching plan.³⁴ These examples illustrate mechanisms that deemphasize draconian-rule making, which often typifies inflexible regulation. Instead, these examples emphasize cooperation among business, government, and additional stakeholder groups as a means to improve decision making. These examples are typical of the New Governance movement.³⁵

In one application of New Governance theory, Epstein considered factors that induce corporations to become “Good Companies”—companies that act as ethical corporate citizens.³⁶ In particular, Epstein found, six “modes of social control”³⁷ encourage corporations to engage in socially responsible behavior—law, affinity group regulation, self-regulation, ethical precepts, the media, and an engaged civil society.³⁸ Epstein’s model provides a practical framework with which scholars can systematically develop—and redevelop—methods to galvanize positive corporate behavior.

In brief, Epstein defined the modes of social control as follows: Law is the articulation of public policy enforced by government.³⁹ Affinity group regulation refers to standards of behavior established by members of a particular profession,

³³ *Id.* at 233-36.

³⁴ *Id.* at 236-40.

³⁵ While New Governance taxonomies are often contested, a core element in virtually all the theory’s formulations is that private-public associations and networks animated by a series of new regulatory frameworks may achieve social and public good. See generally Colin Scott, *Regulation in the Age of Governance: The Rise of the Post-Regulatory State*, in *THE POLITICS OF REGULATION: INSTITUTIONS AND REGULATORY REFORMS FOR THE AGE OF GOVERNANCE* 145 (Jacint Jordana & David Levi-Faur eds., 2004) (exploring theoretical approaches to regulation and providing a foundation for New Governance scholarship); see also Ford, *supra* note 13, at 28 (conceptualizing a New Governance framework for securities regulation, Ford explains that it would entail a regulatory structure that “spans the so-called public/private divide, pulls industry experience into regulatory decision making, and establishes robust ongoing communication mechanisms (rather than an information-hoarding, adversarial relationship) between industry and regulator”).

³⁶ See Epstein, *supra* note 14, at 210-13 (arguing that the modern corporate social responsibility movement is inherently insufficient in encouraging ethical corporate behavior, Epstein provides his own framework as the means by which one can incentivize the actualization of the *Good Company*).

³⁷ *Id.* at 210-12.

³⁸ *Id.* at 212-16 (arguing that CSR is inherently insufficient in achieving the *Good Company*). Epstein provides his own framework and describes corporations, by virtue of their economic and political power, as the most efficient proxies through which his framework can encourage the actualization of the *Good Company*. *Id.*

³⁹ *Id.* at 210.

such as medicine.⁴⁰ Self-regulation is the voluntary adherence to issue-specific standards (such as standards concerning climate change) set by nongovernmental organizations (NGOs).⁴¹ Companies that self-regulate are expected to comply with standards voluntarily and in good faith.⁴² Ethical precepts are beliefs “derive[d] from religion, humanistic philosophy, social customs, mores, and traditions.”⁴³ Ethics often inform or inspire laws.⁴⁴ Vigilant and responsible media respond to corporate malfeasance by reporting material that renders corporate behavior transparent.⁴⁵ Finally, an engaged civil society refers to direct-citizen action through the leveling of pressure on government officials.⁴⁶

While law has traditionally served as the centerpiece to control corporate behavior, legal and CSR scholars increasingly recognize that corporate malfeasance is highly context-specific. For example, in a given situation some modes may work better than others to encourage socially beneficial corporate behavior.⁴⁷ Epstein’s model will be applied below in Part III.

B. Environmental Policymaking, NRDA, and Cooperative NRDA

The rise of New Governance in business brought with it an attempt to create new cooperative approaches to environmental regulation. Legal scholars have noted that the shift from *command-and-control* approaches was concomitant with business reform’s shift to New Governance.⁴⁸ Regulators

⁴⁰ *Id.* at 210-11.

⁴¹ *Id.* at 211.

⁴² *Id.*

⁴³ *Id.*

⁴⁴ *Id.* at 211-12.

⁴⁵ *Id.* at 212.

⁴⁶ *Id.*

⁴⁷ See generally Runnels, Kennedy & Brown, *supra* note 28. Epstein lists his modes of social control in descending order of importance: law, affinity group regulation, self-regulation, ethical precepts, the media, and an engaged civil society. Epstein, *supra* note 14, at 210. In addition to arguing that the modes be used in a prescribed order of importance, he also contends that each mode must be used to galvanize ethical corporate behavior. *Id.* at 212. Runnels, Kennedy, and Brown discount Epstein’s argument that his modes must be both considered in a precise order and in concert. They suggest instead that context matters in terms of which, and how, the modes are applied. Runnels, Kennedy & Brown, *supra* note 28, at 513.

⁴⁸ Lisa Blomgren Bingham, *The Next Generation of Administrative Law: Building the Legal Infrastructure for Collaborative Governance*, 2010 WIS. L. REV. 297, 300. Blomgren Bingham describes developments in statutory administrative law. She indicates that “[c]ollaborative governance represents an emerging alternative to traditional command-and-control approaches to making, implementing, and enforcing

that utilize command-and-control approaches *command* particular environmental goals and issue instructions, or *controls*, detailing how to reach those goals.⁴⁹ Collaborative approaches, however, bring stakeholders together to share information and seek solutions that support a *both-and* agenda.⁵⁰ Similar to a “win-win” situation, a both-and agenda seeks to *both* achieve environmental goals *and* factor in economic concerns.⁵¹ Today, a range of environmental policy areas endorse problem solving that is consistent with the both-and policy—collaborative, voluntary, and transparent (e.g., collaborative watershed management⁵² and collaborative energy management).⁵³

CERCLA and OPA, however, rest on the outdated approaches of yesteryear. Congress passed CERCLA in 1980 at the end of the Environmental Era—the golden era of environmental lawmaking, from 1964 to 1980.⁵⁴ Congress passed OPA in 1990⁵⁵ as the shift from command-and-control to collaborative approaches was beginning.⁵⁶ Not surprisingly, the

policy.” *Id.* She also notes that collaborative governance relates to new governance, “which includes the use of policy tools that involve privatization of previously public work and devolution of responsibility from unitary bureaucracies to networks and contracts.” *Id.*

⁴⁹ Command and control rules impose detailed limits on industrial operations with the goal of controlling companies that pollute. Rena I. Steinzor, *Reinventing Environmental Regulation: The Dangerous Journey from Command to Self-Control*, 22 HARV. ENVTL. L. REV. 103, 104 (1998). Command-and-control approaches mandate behavior, are generally inflexible, and specify “compliance strategies for achieving a rigidly defined environmental benchmark.” Laurie A. Wayburn & Anton A. Chiono, *The Role of Federal Policy in Establishing Ecosystem Service Markets*, 20 DUKE ENVTL. L. & POL’Y F. 385, 403-04 (2010).

⁵⁰ Highlights of the Collaboration Era are: “(1) the replacement of traditional consultative agency practices with much more collaborative and consensus-based approaches, (2) the large range of governmental and nongovernmental actors involved, and (3) the recognition that decision making should not be left to bureaucratic experts.” PAUL A. SABATIER ET AL., *SWIMMING UPSTREAM: COLLABORATIVE APPROACHES TO WATERSHED MANAGEMENT* 50-51 (2005). Decision-making processes should reflect scientific and local knowledge. Additionally, processes should be responsive to a range of stakeholders. *See id.*

⁵¹ KLYZA & SOUSA, *supra* note 32, at 5. Creative problem-solving can take away the notion of *either-or*—that a group can respond to *either* environmental concerns *or* economic concerns, not both.

⁵² SABATIER ET AL., *supra* note 50.

⁵³ For example, the U.S. Energy Star program, a government-backed program that helps businesses and individuals protect the environment through superior energy efficiency, relies on collaboration with stakeholder groups, especially industry. *About ENERGY STAR*, ENERGY STAR, http://www.energystar.gov/index.cfm?c=about.ab_index (last visited Aug. 21, 2011).

⁵⁴ KLYZA & SOUSA, *supra* note 32, at 1.

⁵⁵ Oil Pollution Act, 33 U.S.C. §§ 2701-2761 (2006).

⁵⁶ KLYZA & SOUSA, *supra* note 32, at 3.

NRDA processes outlined in both statutes and their accompanying regulations exemplify the command-and-control approach.⁵⁷

Recall that CERCLA outlines legal requirements for cleanup and restoration after releases of hazardous substances at waste sites,⁵⁸ while OPA outlines legal requirements for cleanup and restoration after oil spills.⁵⁹ Both CERCLA and OPA define *natural resources* broadly—fish, wildlife, drinking water supplies, land, and other such resources that the United States somehow controls (e.g., property it manages or holds in trust).⁶⁰ Though CERCLA and OPA tailor responses to different environmental needs, the NRDA processes under both statutes are similar.

In NRDA, state and federal natural-resource agencies, such as the Department of the Interior (DOI) and the National Oceanic and Atmospheric Administration (NOAA), serve as Trustees. During restoration, the RP replaces the resources or acquires equivalent resources. Additionally, RPs may compensate the public for the interim loss of natural resources contaminated by the incident. Trustees achieve natural-resource restoration by negotiating with RPs or forcing RPs to act through litigation.⁶¹ Scientists, engineers, economists, and

⁵⁷ Although OPA includes the word *cooperative*, RPs and Trustees still assume an adversarial relationship in practice under OPA's NRDA process. See *infra* notes 218-22 and accompanying text.

⁵⁸ CERCLA was enacted in response to the Love Canal disaster. *Basic Information: What Is Superfund?*, U.S. ENVTL. PROT. AGENCY, <http://www.epa.gov/superfund/about.htm> (last visited Sept. 30, 2011). For an article exploring aspects of the complicated CERCLA process, which are beyond the scope of this article, see Jason J. Czarnezki & Adrienne K. Zahner, *The Utility of Non-Use Values in Natural Resource Damage Assessments*, 32 B.C. ENVTL. AFF. L. REV. 509 (2005). Czarnezki and Zahner urge CERCLA trustees to advance public interest by engaging in proper valuation of natural resource damages. In particular, they urge trustees to include "non-use" values in NRDA. *Id.* at 512. Non-use value includes "the simple knowledge that something exists . . . , the potential for its use . . . , or the expectation that it will be of use to future generations." *Id.* at 511. These attributes are existence, option, and bequest value. *Id.*

⁵⁹ OPA was enacted in response to the Exxon Valdez oil spill. *Oil Pollution Act Overview*, U.S. ENVTL. PROT. AGENCY, <http://www.epa.gov/osweroe1/content/lawsregs/opaover.htm> (last visited Sept. 30, 2011). For an interesting article that explores the complex, uncertain NRDA process that followed the Valdez spill, see Sanne Knudsen, *A Precautionary Tale: Assessing Ecological Damages After the Exxon Valdez Oil Spill*, 7 U. ST. THOMAS L.J. 95 (2009).

⁶⁰ Both CERCLA and OPA define "natural resources" broadly to include "land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources." 42 U.S.C. § 9601(16) (2006); 33 U.S.C. § 2701(20) (2006). See generally *Natural Resource Damages: A Primer*, U.S. ENVTL. PROT. AGENCY, <http://www.epa.gov/superfund/programs/nrd/primer.htm> (last visited Sept. 30, 2011) [hereinafter *NRD Primer*].

⁶¹ Conner & Gouguet, *supra* note 11, at 20.

regulatory specialists join Trustees and RPs as they follow the DOI and NOAA methodologies of NRDA.⁶²

The CERCLA NRDA Process includes four phases: (1) preassessment screening, (2) assessment planning, (3) assessment implementation, and (4) postassessment.⁶³ During preassessment, Trustees determine whether natural resources have been injured.⁶⁴ In the second stage, the assessment plan, Trustees confirm that pollutants have affected trust resources. They then develop an assessment plan that outlines the procedures Trustees will use to assess damages.⁶⁵ During assessment implementation, Trustees gather data to quantify injuries and determine damages.⁶⁶ Scientists conduct field and laboratory studies to evaluate injuries to natural resources.⁶⁷ Trustees then compare information from injury investigations to baseline conditions in order to develop resource or service loss estimates.⁶⁸ The final phase, postassessment, identifies restoration options and establishes monitoring protocols to ensure the success of the selected restoration projects.⁶⁹

The OPA NRDA Process includes three phases: (1) preliminary assessment, (2) injury assessment, and (3) restoration implementation.⁷⁰ During preliminary assessment, Trustees determine the impacts of pollutants on natural resources.⁷¹ Scientists collect time-sensitive data and review scientific literature to determine how a particular hazardous substance has affected trust resources.⁷² If Trustees determine that resources are injured, they proceed to the second phase.⁷³

⁶² *NRD Primer, supra* note 59 (outlining the details of NRD assessments under both CERCLA and OPA). The Primer outlines the DOI's methodologies with regard to NRD under CERCLA. It also outlines the NRDA methodologies under OPA.

⁶³ *Natural Resource Damage Assessment*, U.S. ENVTL. PROT. AGENCY, <http://www.epa.gov/superfund/programs/nrd/nrda2.htm> (last visited Sept. 30, 2011).

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ 15 C.F.R. §§ 990.40-60 (2010); *see also* *Damage Assessment: How Natural Resource Damage Assessment Works*, NOAA: GULF SPILL RESTORATION: DAMAGE ASSESSMENT, REMEDIATION & RESTORATION PROGRAM, <http://www.gulfspillrestoration.noaa.gov/assessment/> (last visited Feb. 19, 2011).

⁷¹ 15 C.F.R. § 990.42.

⁷² Mathematical models designed to help predict the fate and effects of the spill on trust resources may also be used. *Pre-Assessment: Phase One: Studying the Impacts*, NOAA: GULF SPILL RESTORATION: DAMAGE ASSESSMENT, REMEDIATION & RESTORATION PROGRAM, <http://www.gulfspillrestoration.noaa.gov/assessment/pre-assessment/> (last visited Feb. 19, 2011).

⁷³ *Id.*

In this phase, injury assessment, Trustees quantify the scope of the injuries and “identify possible restoration projects.”⁷⁴ Trustees rely on both economic and scientific studies to assess the injuries to natural resources and the impact on the public use of those resources.⁷⁵ Additionally, Trustees use these studies to develop a restoration plan that details ways to work toward quick recovery of the injured resources and payment to parties who suffered losses due to natural resource injuries.⁷⁶ Trustees then evaluate the restoration options and ask the public to comment on a draft of the restoration plan.⁷⁷

The Trustees move on to the final phase of OPA’s NRDA process once the injury assessment is complete.⁷⁸ In this phase, restoration, the restoration plan is implemented while NOAA and other Trustees monitor its effectiveness.⁷⁹ The Trustees first identify the full spectrum of injuries and determine the optimal restoration procedures.⁸⁰ The Trustees, working in tandem with the public, then select and implement the restoration projects.⁸¹ The costs of assessment and restoration are borne by the RPs, who work cooperatively with the Trustees.⁸² If the RPs refuse to bear these costs, the Trustees may file a lawsuit or submit a claim of damages to the Oil Spill Liability Trust Fund.⁸³ The United States may then seek to recover the costs paid out by the fund from the RPs.⁸⁴ The restoration that Trustees implement may fall into any or all of the following categories: emergency restoration,⁸⁵ primary restoration,⁸⁶ compensatory restoration,⁸⁷ or early restoration.⁸⁸

⁷⁴ *Injury Assessment: Phase Two: Focusing on Injuries*, NOAA: GULF SPILL RESTORATION: DAMAGE ASSESSMENT, REMEDIATION & RESTORATION PROGRAM, <http://www.gulfspillrestoration.noaa.gov/assessment/injury-assessment/> (last visited Feb. 23, 2011).

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ *Restoration: Final Phase: Restoring Resources*, NOAA: GULF SPILL RESTORATION: DAMAGE ASSESSMENT, REMEDIATION & RESTORATION PROGRAM, <http://www.gulfspillrestoration.noaa.gov/assessment/restoration/> (last visited Feb. 23, 2011) [hereinafter *Restoration: Final Phase*].

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *Id.*

⁸³ For additional information, see *The Oil Spill Liability Trust Fund*, NAT’L POLLUTION FUNDS CENTER: FUNDING TODAY FOR A CLEANER TOMORROW, http://www.uscg.mil/npfc/About_NPFC/osltf.asp (last visited Feb. 19, 2011).

⁸⁴ See *infra* note 88.

⁸⁵ *Restoration: Final Phase*, *supra* note 79. NOAA defines “emergency restoration” to include “actions that are taken by the trustees prior to the completion of the damage assessment and restoration planning process to prevent or reduce

NRDA can be both time-consuming and expensive.⁸⁹ And despite the seemingly collaborative nature of the process, in the end, RPs and Trustees are poised to litigate, not negotiate. Cooperative NRDA processes, however—where Trustees and RPs voluntarily work together to resolve natural resource liability⁹⁰—reduce costs and increase restoration’s efficiency. In cooperative NRDA, Trustees and RPs engage in strategic collaboration to generate accurate information and share that information with an eye toward restoration.⁹¹

Michael Ammann, a Staff Environmental Scientist at ChevronTexaco Energy Technology Company, explained that cooperative NRDA is more likely when Trustees and RPs develop a commonly held vision of what a successful restoration project would look like.⁹² Ammann described an example of a specific pollution incident, an oil spill that occurred in Bay Point, California, when a Chevron pipeline ruptured.⁹³ Ammann indicated that, when NRDA for the oil spill began, a representative of California’s Department of Fish and Game’s Office of Spill Prevention and Response suggested a specific restoration project the parties could use.⁹⁴ This representative’s suggestion laid the foundation for what

continuing natural resource impacts and prevent potential irreversible loss of natural resources.” *Id.*

⁸⁶ *Id.* NOAA defines “primary restoration” as those actions that “return[] the impacted resources to the condition that would have existed if the incident had not occurred.” *Id.*

⁸⁷ *Id.* NOAA defines “compensatory restoration” as those actions that address the “losses from the date of injury until recovery is completed.” *Id.*

⁸⁸ *Id.* NOAA describes “early restoration” as “a form of compensatory restoration, [which] can be implemented prior to the completion of the NRDA process, when opportunities arise, to achieve restoration faster.” *Id.*

⁸⁹ Conner & Gouguet, *supra* note 11, at 20. The parties share a “commitment to identifying a fair and appropriate amount of restoration for the oil spill or waste site under consideration.” *Id.* at 24. NRD includes the reasonable costs of a damage assessment. In practice, this means RPs or PRPs (Potentially Responsible Parties) engaged in a NRDA are liable for the Trustees’ assessment costs as well as the natural resource restoration costs. *Id.* at 20. The damage assessment can take five years or more. If the case ends in litigation, the process could take five to ten additional years. Moreover, parties (Trustees and RPs) are sometimes reluctant to share data. “[L]itigation quality” NRDA is especially expensive, and RPs end up paying for it. *Id.*

⁹⁰ *Id.* at 24.

⁹¹ *Id.* at 24-25. Conner and Gouguet indicate that the following would be indicative of cooperative NRDA: parties would share information, guide the NRDA process with the best scientific research, involve the principals, conduct an open process, and deal effectively with disagreement. *Id.* at 26.

⁹² Michael Ammann, *Shared Vision. Sounds Obvious. Can We Make It Happen?*, ENVTL. F., May-June 2004, at 21.

⁹³ *Id.*

⁹⁴ *Id.* The Trustee was a representative of the California Department of Fish and Game’s Office of Spill Prevention and Response. *Id.*

successful restoration would look like; the RP and Trustees would work towards a common goal.⁹⁵ Moving forward with the shared vision, the RP (Chevron) and Trustees voluntarily reached agreements regarding injuries and how to respond to future risks.⁹⁶ The parties settled the NRDA in three meetings⁹⁷: “By focusing on restoration, managing uncertainty, and avoiding unnecessary studies, restoration was achieved faster and all parties realized savings in transactions costs, especially consultant and legal fees.”⁹⁸

From the opposing perspective of a community organization, Mark Davis, Executive Director of the Coalition to Restore Coastal Louisiana in Baton Rouge, recounted a story of public and private actors who worked together to protect and restore Bayou Trepagnier.⁹⁹ The process involved a coalition of stakeholders, including Shell Oil Company (the RP), state Trustees (including the Louisiana Department of Environmental Quality, or DEQ) and federal Trustees (the National Oceanic and Atmospheric Administration, or NOAA). The parties worked with the Coalition to Restore Coastal Louisiana (which represented local interests) to resolve complex, contentious issues.¹⁰⁰ In evaluating the NRDA process, Davis wrote, “[W]hat NRDA did was provide a forum and enough compulsion to begin to work issues through.”¹⁰¹ The parties reached a settlement, and Davis highlighted the importance of community groups in bringing about the cooperative process.¹⁰²

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.* Cooperative NRDA can be highly technical. It includes these two features: (1) restoration-based assessments, and (2) integration of NRDA processes and cleanup. Conner & Gouguet, *supra* note 11, at 22. Restoration-based assessments allow Trustees and RPs to focus on “restoration of the injured resources rather than on valuation of the lost resources and services.” *Id.* The focus is on “getting to restoration,” and seeking “the cost of carrying out the restoration as the measure of damages rather than the value of the injured resources and lost services.” *Id.* Similarly, “prospective restoration” refers to processes that consider restoration at the beginning of an NRDA claim. Prospective restoration allows for some natural resources to be restored, providing ecological services and saving costs, while the formal NRDA process unfolds over the course of several years. Stephen K. Davis, Lawrence D. Malizzi & Nel Yoskin, How Prospective Restoration and Planning Can Be Use in the Settlement of Dredging Natural Resource Damage Cases (unpublished manuscript) (on file with authors).

⁹⁹ Mark Davis, *Community Organizations Can Make the Process Work*, ENVTL. F., May-June 2004, at 25.

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.*

As these examples illustrate, cooperative NRDA provides the collaborative, consensus-based approach that promises to work more effectively than command-and-control approaches. Unfortunately, the cooperative NRDA examples this section has described remain the ideal. The next two cases illustrate adversarial NRDA—the reality.

II. GE, BP, AND NRDA PROCESSES UNDER CERCLA AND OPA

A. *GE, PCBs, and the Hudson River*

In 1942, GE began using polychlorinated biphenyls, or PCBs, in its capacitors.¹⁰³ As part of the manufacturing process for electrical transformers and capacitors,¹⁰⁴ GE discharged PCBs into the Hudson River,¹⁰⁵ among other locations.¹⁰⁶ In 1977, the EPA banned the direct discharge of PCBs into U.S. waters.¹⁰⁷ At that time, the synthetic compounds were described as a “highly toxic . . . chemical”¹⁰⁸ that resists biological degradation and is, consequently, “one of the most serious of the . . . environmental contamination problems prevalent today.”¹⁰⁹ The Environmental Defense Fund, a Washington-based environmental law firm, led the actions that challenged PCB discharges and asked the EPA to rule on the proposed ban.¹¹⁰

¹⁰³ See FRANCES F. DUNWELL, *THE HUDSON: AMERICA'S RIVER* 301 (2008); see also AUSTL. & N.Z. ENV'T & CONSERVATION COUNCIL, *IDENTIFICATION OF PCB-CONTAINING CAPACITORS* (1997), available at <http://www.environment.gov.au/settlements/publications/chemicals/scheduled-waste/pubs/pcbld.pdf>.

¹⁰⁴ Bayard Webster, *E.P.A. Bans Discharge of PCB's Directly into the Nation's Waters*, N.Y. TIMES, Jan. 20, 1977, at 22. Monsanto Industrial Chemicals Company was, as of 1977, the only American maker of PCBs. PCBs were also used in metal casting plants and in the recycling of wastepaper. *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ GE “is a responsible party in 52 active Superfund sites across the country.” Andrew C. Revkin, *Dredging of Pollutants Begins in Hudson*, N.Y. TIMES, May 15, 2009, at A1, available at <http://www.nytimes.com/2009/05/16/science/earth/16dredge.html?pagewanted=all>.

¹⁰⁷ Webster, *supra* note 104.

¹⁰⁸ *Id.* PCBs were identified as “a close relative of DDT,” which had already been “found in scientific studies to cause deformities in fetuses, changes in liver function, nervous disorders, and cancer in animals.” *Id.*

¹⁰⁹ *Id.* In 1970, during hearings about Con Edison's proposed hydroelectric project in Cornwall, New York—Storm King Mountain—a leading federal marine biologist, John R. Clark, first raised concerns about PCBs in the Hudson. See DUNWELL, *supra* note 103, at 301.

¹¹⁰ See DUNWELL, *supra* note 103, at 301. The same firm had also led the actions that yielded the DDT ban in 1972. Webster, *supra* note 104, at 22.

By the time the EPA banned the discharge of PCBs into U.S. waters, GE had already released approximately 1.3 million pounds of PCBs into the Hudson.¹¹¹ In 1976, commercial fishing in the Hudson River was banned due to the PCB releases.¹¹² Scientists determined that Hudson River fish ingested much more than the permissible level of the chemical to be safe for human consumption.¹¹³ In particular, scientists believed that consuming fish from the upper Hudson could increase the risk of cancer.¹¹⁴ GE negotiated a settlement with the State Department of Environmental Conservation wherein GE agreed to cease PCB dumping, pay \$3 million toward cleansing the river, and provide \$1 million for PCB research.¹¹⁵ This settlement was significant because, after it, New York citizens no longer had recourse against GE under state law.

In 1980, Congress passed CERCLA, which required GE to clean or neutralize PCBs in the river.¹¹⁶ In the early 1980s, talk of dredging the river bottom began.¹¹⁷ GE relied on scientists and lawyers to create and implement strategies to avoid dredging.¹¹⁸ GE accused the EPA of “shoddy science” and argued that tightening the spigot at or near the polluting plants was sufficient for restoration.¹¹⁹ GE maintained that sediments from the past were stagnant and no cause for concern.¹²⁰ By this point, an environmental group, Scenic Hudson, emerged as the primary advocate for the public regarding the natural resources in and around the Hudson River.¹²¹

The EPA issued a report detailing the status of the Hudson in 1997. Although GE had managed to stop new PCB leaks, heavy concentrations of PCBs remained at the bottom of Thompson Island Pool, a six-mile stretch of river downstream from GE’s plants in Ford Edward and Hudson Falls.¹²² But more

¹¹¹ Revkin, *supra* note 106.

¹¹² DUNWELL, *supra* note 103, at 312.

¹¹³ SHELDON KAMIENIECKI, CORPORATE AMERICA AND ENVIRONMENTAL POLICY: HOW OFTEN DOES BUSINESS GET ITS WAY? 144 (2006).

¹¹⁴ *Id.*; see also Editorial, *The PCB War Heats Up*, N.Y. TIMES, Mar. 2, 1997, § 4, at 14, available at <http://www.nytimes.com/1997/03/02/opinion/the-pcb-war-heats-up.html> (last visited Aug. 21, 2011) [hereinafter *PCB War*].

¹¹⁵ DUNWELL, *supra* note 103, at 312.

¹¹⁶ *Id.*

¹¹⁷ KAMIENIECKI, *supra* note 113, at 144.

¹¹⁸ *Id.* at 145.

¹¹⁹ *PCB War*, *supra* note 114.

¹²⁰ *Id.*

¹²¹ *Id.*

¹²² *Id.*

importantly, PCBs had not biodegraded or detoxified.¹²³ Undegraded, PCBs that were buried for decades entered the food chain where they could biomagnify to toxic concentrations.¹²⁴

In 2000, after studying PCBs and health hazards, the EPA ordered GE to spend a half-billion dollars over five years to dredge toxic PCBs embedded in the river bottom north of Albany.¹²⁵ In particular, the EPA determined that PCB levels in the upper Hudson's fish were still unacceptably high.¹²⁶ Carol Browner, the EPA administrator at the time, asserted, "This river needs to be cleaned up. It will not clean itself."¹²⁷ New York Governor George Pataki endorsed the strategy of forcing GE to dredge and pay for the dredging.¹²⁸

In protest, GE argued that "someone would have to eat a half-pound of fish a week for forty years to run even a remote cancer risk."¹²⁹ Moreover, GE issued a reminder of the state's catch-and-release policy, which required fisherman to return caught fish to the water.¹³⁰ The EPA and environmental groups responded simply that the river should be cleaned.¹³¹ GE then launched a public relations campaign to argue that dredging the river would "devastate the lives of upriver communities."¹³² From the mid-1990s to the early 2000s, GE conducted a multimillion-dollar campaign aimed at both politicians and citizens, highlighting the dangers of removing PCBs from the river.¹³³ GE also asserted that the dredging would "disrupt river life for a generation."¹³⁴

The EPA issued a record of decision in 2002 that laid out a legally binding cleanup plan.¹³⁵ The decision—devised

¹²³ *Id.*

¹²⁴ Editorial, *Plausible Plan for the Hudson*, N.Y. TIMES, Dec. 8, 2000, at A38, available at <http://www.nytimes.com/2000/12/08/opinion/plausible-plan-for-the-hudson.html> [hereinafter *Plausible Plan*].

¹²⁵ DUNWELL, *supra* note 103, at 312.

¹²⁶ Charlie Cray, *Toxins on the Hudson: The Saga of GE, PCBs and the Hudson River*, 22 MULTINATIONAL MONITOR, July/Aug. 2001, available at <http://www.multinationalmonitor.org/mm2001/01july-august/julyaug01corp1.html>.

¹²⁷ *Id.*

¹²⁸ *Plausible Plan*, *supra* note 124.

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *See id.*

¹³² *Id.*

¹³³ KAMIENIECKI, *supra* note 113, at 145.

¹³⁴ John M. Glionna, *Dredging Up Ill Will on the Hudson*, L.A. TIMES, Oct. 1, 2001, at 17, available at <http://articles.latimes.com/2001/oct/01/news/mn-52036>.

¹³⁵ Editorial, *Waiting for G.E.*, N.Y. TIMES, Mar. 26, 2006, at 14WC, available at <http://query.nytimes.com/gst/fullpage.html?res=9A01E0D71630F935A15750C0A9609C8B63> [hereinafter *Waiting*].

under the Clinton administration and ratified by President Bush's EPA administrator, Christine Todd Whitman—was considered “a mix of politics and science.”¹³⁶ In April 2002, after exhausting nearly all avenues to appeal the decision, GE changed its position and offered to clean the Hudson River.¹³⁷

In 2005, after years of denying responsibility, GE signed a consent decree committing itself to the removal of PCBs from the Hudson River.¹³⁸ The plan called for dredging to begin in 2007,¹³⁹ but environmental groups wondered whether GE would continue “a timeworn pattern of grinding delay.”¹⁴⁰ The decree called for two phases of cleanup and bound GE to just the first phase—a year-long, \$100 million project to remove the thickest PCB deposits, 2.65 million yards of tainted mud.¹⁴¹ Phase Two—a five-year, \$500 million project—calls for the dredging of the remaining 90 percent of sediment.¹⁴² The second phase covers sediment spread over a much larger, though less heavily contaminated, area.¹⁴³

In 2006, GE submitted a detailed cleanup plan to the EPA and announced that the company could start dredging in 2008 at the earliest.¹⁴⁴ On May 16, 2009, GE began the Phase One dredging.¹⁴⁵ Mile-long freight trains carried the dredged sediment to a hazardous-waste landfill in Texas.¹⁴⁶ The plan requires the company to replace the sediment with uncontaminated soil and native plants.¹⁴⁷ In the meantime, GE continued to fight, this time challenging CERCLA's constitutionality.¹⁴⁸

¹³⁶ Revkin, *supra* note 106.

¹³⁷ DUNWELL, *supra* note 103, at 150. For an article arguing against dredging of the Hudson, see generally Erik Claudio, Comment, *How the EPA May Be Selling General Electric Down the River: A Law and Economics Analysis of the \$460 Million Hudson River Cleanup Plan*, 13 FORDHAM ENVTL. L.J. 409 (2002) (arguing that, under a cost-benefit analysis, dredging is an improper solution to the Hudson River cleanup).

¹³⁸ CMTY. ADVISORY GRP., HUDSON RIVER PCBs SUPERFUND SITE: SUMMARY OF CONSENT DECREE WITH GENERAL ELECTRIC COMPANY (2005), available at <http://www.hudsoncag.ene.com/files/CAG%20presentation.v2..pdf>.

¹³⁹ Editorial, *A Commitment on PCB's*, N.Y. TIMES, Oct. 16, 2005, at 14WC, available at http://www.nytimes.com/2005/10/16/opinion/nyregionopinions/WE_EPA.html?pagewanted=print.

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.*; see *supra* note 1 and accompanying text.

¹⁴⁴ *Waiting*, *supra* note 135.

¹⁴⁵ Revkin, *supra* note 106.

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ In June 2010, GE lost this case in a federal appeals court. Brent Kendall, *Appeals Court Rejects GE Challenge to Superfund Law*, WALL ST. J. (June 30, 2010), <http://online.wsj.com/article/SB10001424052748704103904575336813411467390.html>.

Like the cleanup process, the NRDA process is also underway. The Hudson River National Resource Trustees are the DOI, NOAA, and New York State Department of Environmental Conservation.¹⁴⁹ The EPA coordinates with the Trustees per CERCLA requirements.¹⁵⁰

The Trustees released the Hudson River Preassessment Screen in October 1997¹⁵¹ and subsequently undertook injury assessment.¹⁵² They have planned or completed numerous studies, including wildlife injury, water- and air-quality injury, and pathway determination (e.g., floodplain evaluation).¹⁵³ On September 16, 2002, the Trustees issued the assessment plan for the Hudson River. The plan identifies procedures that the Trustees must use to evaluate injuries to natural resources caused by PCBs.¹⁵⁴ The Trustees are currently in the process of implementing the Assessment Plan.¹⁵⁵ As part of this process, the Trustees continue to engage in studies on biological resources (such as fish, birds, amphibians, reptiles, and mammals) and other natural resources (such as surface water).¹⁵⁶ During the implementation phase, the Trustees engage in ongoing monitoring of actions related to the Hudson cleanup. On May 7,

¹⁴⁹ HUDSON RIVER NATURAL RES. TRS., RESPONSIVENESS SUMMARY FOR THE HUDSON RIVER NATURAL RESOURCE DAMAGE ASSESSMENT PLAN (2003), available at <http://www.darrp.noaa.gov/northeast/hudson/pdf/hrressum.pdf> [hereinafter RESPONSIVENESS SUMMARY].

¹⁵⁰ 42 U.S.C. § 9601 (2006).

¹⁵¹ *Natural Resource Damage Assessment*, U.S. FISH & WILDLIFE SERVICE: N.Y. FIELD OFFICE, <http://www.fws.gov/northeast/nyfo/ec/nrda.htm> (last updated May 5, 2010) [hereinafter *Natural Resource Damage Assessment: N.Y. Field Office*].

¹⁵² U.S. DEP'T ENERGY, NATURAL RESOURCE DAMAGES UNDER CERCLA (1993), available at <http://homer.ornl.gov/sesa/environment/guidance/cercla/nrda.pdf>.

¹⁵³ HUDSON RIVER NATURAL RES. TRS., HUDSON RIVER NATURAL RESOURCE DAMAGE ASSESSMENT: SUMMARY OF THE DAMAGE ASSESSMENT PLAN (2002), available at <http://www.fws.gov/contaminants/restorationplans/HudsonRiver/docs/HudsonRiverNRDAFactSheet.pdf> (last visited Feb. 24, 2011) [hereinafter HUDSON RIVER NATURAL RESOURCE DAMAGE ASSESSMENT].

These preliminary investigations include an avian egg exposure investigation, floodplain soil and biota screening, an assessment of mink, muskrat and otter for PCB exposure, a snapping turtle egg exposure investigation and an assessment of contaminant levels in bullfrog and snapping turtle tissue, preliminary investigations of Eastern screech owl eggs and peregrine falcon eggs, and a preliminary investigation of frogs and sediments.

Natural Resource Damage Assessment: N.Y. Field Office, *supra* note 151.

¹⁵⁴ RESPONSIVENESS SUMMARY, *supra* note 149, at 9.

¹⁵⁵ *See id.*

¹⁵⁶ HUDSON RIVER NATURAL RESOURCE DAMAGE ASSESSMENT, *supra* note 153.

2010, for example, the Trustees offered support for the EPA's decision to enforce dredging of the Hudson River.¹⁵⁷

B. BP, the Deepwater Horizon Oil Spill, and the Gulf of Mexico

While BP brands itself “Beyond Petroleum,” an environmentally conscientious energy company, its reputation is now stained¹⁵⁸ by the April 2010 explosion of its Deepwater Horizon drilling rig.¹⁵⁹ The explosion, forty miles from the ecologically fragile Louisiana coast,¹⁶⁰ killed eleven people and released millions of barrels of oil into the Gulf of Mexico.¹⁶¹ After the explosion, oil gushed from a cracked BP pipeline a mile beneath the ocean's surface.¹⁶² At first, BP claimed 1000 barrels of oil were released per day¹⁶³ but later changed its estimate to 5000.¹⁶⁴ BP maintained that the 5000-barrel figure was accurate¹⁶⁵ even as outside scientists protested that BP deliberately low-balled the actual figure.¹⁶⁶ Despite BP's purported estimates, Congressperson Edward J. Markey, Chair of the House Energy and Environment Subcommittee, sought and secured the release of an internal BP document that revealed BP's damage analysis and actual estimation—a worst-

¹⁵⁷ Press Release, U.S. Fish & Wildlife Serv., Hudson River Trustees Support EPA Stand on Dredging River (May 7, 2010), available at <http://www.fws.gov/news/newsreleases/showNews.cfm?newsId=74BE077C-EC03-0EB9-45BF36771CBE4CC0>.

¹⁵⁸ Krissah Thompson, *BP's Long Road to Regaining Consumer Confidence in Its Brand*, WASH. POST, Aug. 18, 2010, at A2, available at <http://www.washingtonpost.com/wp-dyn/content/article/2010/08/18/AR2010081803063.html>; Clifford Krauss, *Oil Spill's Blow to BP's Image May Eclipse Costs*, N.Y. TIMES, Apr. 30, 2010, at B1, available at <http://www.nytimes.com/2010/04/30/business/30bp.html>.

¹⁵⁹ Campbell Robertson, *Search Continues After Oil Rig Blast*, N.Y. TIMES, Apr. 22, 2010, at A13, available at <http://www.nytimes.com/2010/04/22/us/22rig.html>.

¹⁶⁰ Clifford Krauss, *Overhead and on the Ground, Waiting for a Potential Environmental Disaster to Hit*, N.Y. TIMES, May 1, 2010, at A11, available at <http://www.nytimes.com/2010/05/01/us/01spill.html> (describing the coastal region of Louisiana, which includes the Mississippi River Delta, as ecologically sensitive and explaining the disaster that would result if the oil lands onshore).

¹⁶¹ Frank James, *Deepwater Horizon's 11 Dead Remembered*, TWO-WAY: NPR'S NEWS BLOG, (May 25, 2010, 9:57 PM), http://www.npr.org/blogs/thetwo-way/2010/05/deepwater_horizon_11_dead_reme.html.

¹⁶² Tom Eley, *One Year Since the BP Oil Spill: Covering Up a Catastrophe*, WORLD SOCIALIST WEB SITE (Apr. 20, 2011), <http://www.wsws.org/articles/2011/apr2011/bps1-a20.shtml>.

¹⁶³ Justin Gillis, *Size of Oil Spill Underestimated, Scientists Say*, N.Y. TIMES, May 14, 2010, at A1, available at <http://www.nytimes.com/2010/05/14/us/14oil.html>.

¹⁶⁴ Eley, *supra* note 162.

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

case scenario of 100,000 barrels per day.¹⁶⁷ Ultimately, the government declared the flow rate to be 62,000 barrels a day.¹⁶⁸ To date, the Deepwater Horizon oil spill, beyond question, is the worst oil spill in U.S. history.¹⁶⁹

Soon after the rig explosion, BP executives faced harsh questioning from Congress regarding the foreseeability of the disaster.¹⁷⁰ “The leaders of the House Committee on Energy and Commerce cited five areas in which the company had made decisions that increased the danger of a catastrophic well¹⁷¹: the well’s design,¹⁷² improper maintenance of the blowout preventer,¹⁷³ inadequate preparation and testing of the well casing’s cement job,¹⁷⁴ misleading assurances that the well was properly sealed,¹⁷⁵ and the lackadaisical preparation of a government-mandated oil-spill-response plan.¹⁷⁶

President Obama appointed a commission to explore the causes of the BP oil spill. The commission confirmed the findings of the House Committee on Energy and Commerce—

¹⁶⁷ Andrew C. Revkin, *Early BP Worst Case on Flow: '100,000 Barrels Per Day'*, N.Y. TIMES DOT EARTH BLOG (June 20, 2010, 12:57 PM), <http://dotearth.blogs.nytimes.com/2010/06/20/early-bp-worst-case-on-flow-100000-barrels-per-day/> (noting the striking difference between BP’s public statements and internal assessments regarding the estimated flow of oil).

¹⁶⁸ Joel Achenbach & David A. Fahrenthold, *Oil Spill Dumped 4.9 Million Barrels into Gulf of Mexico, Latest Measure Shows*, WASH. POST (Aug. 3, 2010), <http://www.washingtonpost.com/wp-dyn/content/article/2010/08/02/AR2010080204695.html> (addressing the governments revision of earlier spill estimates).

¹⁶⁹ Bob Herbert, *An Unnatural Disaster*, N.Y. TIMES, May 29, 2010, at A25, available at <http://www.nytimes.com/2010/05/29/opinion/29herbert.html>.

¹⁷⁰ Dan Barry, *Looking for Answers, Finding One*, N.Y. TIMES, June 18, 2010, at A14, available at <http://www.nytimes.com/2010/06/18/us/18land.html> (describing the impassioned questioning of former BP CEO Tony Hayward by Congressional Representatives).

¹⁷¹ Henry Fountain, *Documents Show Risky Decisions Before BP Blowout*, N.Y. TIMES (June 14, 2010), <http://www.nytimes.com/2010/06/15/science/earth/15rig.html> (internal quotation marks omitted).

¹⁷² *Id.*

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ *Id.*

¹⁷⁶ The categorization of walrus as “sensitive biological resources” in need of protection in the Gulf of Mexico is illustrative of this lackadaisical preparation: walrus have not existed in the Gulf for over three million years. See Andrew C. Revkin, *A Series of Lapses Preceded Oil Gusher*, N.Y. TIMES DOT EARTH BLOG (June 6, 2010, 9:08 AM), <http://dotearth.blogs.nytimes.com/2010/06/06/a-series-of-lapses-preceded-oil-gusher> (noting the inclusion of walrus in the BP’s Gulf oil-spill response plan as an absurdity); Robert Mackey, *Live Blogging Congressional Testimony From Oil Executives*, N.Y. TIMES LEDE BLOG (June 15, 2010, 11:36 AM), <http://thelede.blogs.nytimes.com/2010/06/15/live-blogging-oil-executives-in-congress/> (noting the pointed questioning regarding walrus from Rep. Markey, Chair of the House Committee on Energy and Commerce, to BP executives).

the disaster was ultimately avoidable.¹⁷⁷ Specifically, the commission's report found that (1) mistakes, both governmental and private, onshore and on the Deepwater Horizon rig itself, increased the risk of a well blowout; (2) the cumulative risk resulting from these decisions and actions was as unreasonably large as it was foreseeable; and (3) the risk of a catastrophic blowout manifested on April 20 and several of the cited mistakes were contributing factors to the blowout.¹⁷⁸ Ultimately, the disaster resulted from clear mistakes made in the first instance by BP, Halliburton, and Transocean, and, subsequently, by U.S. government officials. These officials, relying heavily on the oil industry's assertions regarding the safety of their operations, failed to create and apply a program of sufficient regulatory oversight to minimize the risks associated with deepwater drilling.¹⁷⁹

By mid-July 2010, BP's incurred costs reached nearly \$4 billion.¹⁸⁰ Under pressure from the Obama administration,¹⁸¹ BP, to compensate victims of the spill, pledged an additional \$20 billion to an escrow account—an account administered by a BP-appointed and Obama-administration-approved arbiter.¹⁸² As late as February 2011, however, BP objected to the settlement terms between the arbiter and victims, claiming that the terms were too generous.¹⁸³ Regardless of these costs, the ultimate cost to restore the natural resources in the Gulf will be far higher.

In addition to the cleanup process,¹⁸⁴ the NRDA process has begun.¹⁸⁵ NOAA coordinates with the Trustees per OPA

¹⁷⁷ NAT'L COMM'N ON THE BP DEEPWATER HORIZON OIL SPILL & OFFSHORE DRILLING, *DEEP WATER: THE GULF OIL DISASTER AND THE FUTURE OF OFFSHORE DRILLING* 122-27 (2011), available at <http://www.gpoaccess.gov/deepwater/deepwater.pdf> [hereinafter NATIONAL COMMISSION].

¹⁷⁸ *Id.* at 115.

¹⁷⁹ *Id.* at 127.

¹⁸⁰ Times Topics, *BP Plc.*, N.Y. TIMES, http://topics.nytimes.com/top/news/business/companies/bp_plc/index.html (last updated May 4, 2011).

¹⁸¹ David E. Sanger, *Twisting Arms at BP, Obama Sets Off a Debate on Tactics*, N.Y. TIMES, June 18, 2010, at A1, available at <http://www.nytimes.com/2010/06/18/us/18assess.html>.

¹⁸² Jackie Calmes & Helene Cooper, *BP Chief to Express Contrition in Remarks to Panel*, N.Y. TIMES, June 17, 2010, at A1, available at <http://www.nytimes.com/2010/06/17/us/politics/17obama.html>.

¹⁸³ John Schwartz, *BP Says Spill Settlement Terms Are Too Generous*, N.Y. TIMES, Feb. 18, 2011, at A19, available at <http://www.nytimes.com/2011/02/18/us/18bp.html>.

¹⁸⁴ Joseph Berger, Brian Knowlton & Henry Fountain, *Dispersal of Oil Means Cleanup to Take Years, Official Says*, N.Y. TIMES (June 7, 2010), <http://www.nytimes.com/2010/06/08/us/08spill.html>.

¹⁸⁵ See generally FRAMEWORK FOR EARLY RESTORATION ADDRESSING INJURIES RESULTING FROM THE DEEPWATER HORIZON OIL SPILL (2011), available at

requirements.¹⁸⁶ The Deepwater Horizon Trustees include the U.S. Fish and Wildlife Service, the National Park Service, the DOI, the Department of Commerce, the Bureau of Land Management, and designated state trustee agencies for the states of Alabama, Florida, Louisiana, Mississippi, and Texas.¹⁸⁷ As of February 2011, NOAA is engaged in the preliminary assessment phase.¹⁸⁸ While both Trustees and RPs provide oil-exposure data to the public, which hastens the restoration process,¹⁸⁹ “they reserve the right to withhold information from [those] studies” in which either party contests the results.¹⁹⁰ Withholding information is clearly inconsistent with standard scientific investigation.¹⁹¹ The practice of withholding

<http://www.restorethegulf.gov/sites/default/files/documents/pdf/framework-for-early-restoration-04212011.pdf>.

¹⁸⁶ 15 C.F.R. § 990 (2010).

¹⁸⁷ Matthew P. Coglianesi, *The Importance of Determining Potential Chronic Natural Resource Damages from the Deepwater Horizon Accident*, 40 ENVTL. L. REP. NEWS & ANALYSIS 11,100, 11,101 (2010). Coglianesi points out that “efforts to understand chronic, sublethal, and cumulative effects have only begun.” *Id.* at 11,100. He introduces the legal and regulatory framework that will allow the government to hold parties responsible for the natural resource damage in the Gulf of Mexico. *Id.* With regard to the current federal assessment, and the Damage Assessment, Remediation, and Restoration Program (DAARP), “[i]ndependent researchers have claimed that the ‘big money’ for NRDA research, access to information, and information dissemination are controlled too tightly by the federal government and by BP.” *Id.* at 11,104. One researcher stated:

The problem is that researchers for BP and the government are kept quiet, and their data is unavailable to the rest of the community. When damages to the Gulf are assessed in court or Congress, there might not be enough objective data to make a fair judgment. Transparency is vital to successful science: researchers must subject their proposals to the scrutiny of colleagues, and publications require peer review.

Id.

¹⁸⁸ See *BP Oil Spill: About the Deepwater Horizon Oil Spill*, NOAA: GULF SPILL RESTORATION: DAMAGE ASSESSMENT, REMEDIATION & RESTORATION PROGRAM, <http://www.gulfspillrestoration.noaa.gov/oil-spill/> (last visited Feb. 23, 2011); *NRDA Trustees Announce \$1 Billion Agreement to Fund Early Gulf Coast Restoration Projects*, RESTORETHEGULF.GOV (Apr. 21, 2011, 12:05 PM), <http://www.restorethegulf.gov/release/2011/04/21/nrda-trustees-announce-1-billion-agreement-fund-early-gulf-coast-restoration-proj>.

¹⁸⁹ Linda Hooper-Bui, Op-Ed, *A Gulf Science Blackout*, N.Y. TIMES, Aug. 24, 2010, at A21, available at <http://www.nytimes.com/2010/08/25/opinion/25hooper-Bui.html> (discussing the importance of transparency in scientific studies concerning the spill as critical to a speedy restoration of the Gulf).

¹⁹⁰ Laura Petersen, *Murky Relationships Mark Scientific Efforts to Assess Gulf Spill's Impacts*, N.Y. TIMES (Aug. 18, 2010), <http://www.nytimes.com/gwire/2010/08/18/18greenwire-murky-relationships-mark-scientific-efforts-to-31002.html?pagewanted=all>; see also Amanda Mascarelli, *Freedom of Spill Research Threatened: Scientists Call for Impartial Funding and Open Data as BP and Government Agencies Contract Researchers*, NATURE NEWS (July 28, 2010), <http://www.nature.com/news/2010/100728/full/466538a.html>.

¹⁹¹ Petersen, *supra* note 190 (Noting the importance of the withheld scientific data, Tom Brosnan, an environmental scientist with NOAA, argues that “[t]his is a

information stems from the myriad lawsuits the disaster prompted¹⁹²—much of the data will provide material support for the Trustees' and RPs' legal strategies. These legal strategies hinge on the retention of scientific expert witnesses¹⁹³ (many of whom also engage in the NRDA process), and result in the systematic withholding of essential information. Only after the NRDA restoration plan is approved, or litigation is exhausted, will the parties disclose oil-exposure data.¹⁹⁴ Paradoxically, “[m]itigating the long term impact of the oil spill . . . require[s] an open exchange of scientific data and analysis.”¹⁹⁵ Keeping such data confidential will likely result in delaying Gulf restoration.¹⁹⁶ As the BP case illustrates, in the Environmental Era that is supposed to be collaborative, any move toward cooperation is strained, at best.

III. EPSTEIN'S NEW GOVERNANCE MODEL, GE, AND BP

This section applies Epstein's modes of social control to the GE and BP cases. The analysis in this section lays the groundwork for the recommendations in Part IV, which support the narrow goal of incentivizing cooperative NRDA and affirming broader New Governance principles, especially increased transparency and accountability.

In an open and democratic society, an engaged civil society, working in tandem with a vigilant and responsible media, is critical in highlighting unethical corporate behavior and spurring change. These two modes are essential forms of social control in both the GE and BP cases. In the GE case, environmentalists' engagement has pressured government

very pointed investigation into what has been injured, what has been lost and what is required to compensate the public.”)

¹⁹² *Id.*; Robert B. Gagosian & Christopher F. D'Elia, *Research on Gulf Oil Spill Shouldn't Take a Backseat to Litigation*, WASH. POST (July 27, 2010), <http://www.washingtonpost.com/wp-dyn/content/article/2010/07/26/AR2010072604443.html> (discussing the link between filing lawsuits against BP and the withholding of scientific data).

¹⁹³ See Gagosian & D'Elia, *supra* note 192. Stan Stenner, the director of conservation science at the Ocean Conservancy, noted the typicality of hiring experts following an ecological disaster. He explained that this is “par for the course . . . [a]nytime you have an event like this, everyone goes out and recruits experts.” Petersen, *supra* note 190. Noting the 1989 Exxon Valdez oil spill in Alaska and Exxon's aggressive campaign to hire experts, Senner offered that the expert's “mission was not to find out what the harm was from the spill; their mission was to cast doubt on any conclusions drawn about harm from the spill.” *Id.*

¹⁹⁴ Gagosian & D'Elia, *supra* note 192.

¹⁹⁵ Petersen, *supra* note 190.

¹⁹⁶ Gagosian & D'Elia, *supra* note 192.

actors to force GE's cleanup and restoration.¹⁹⁷ Scenic Hudson, Friends of a Clean Hudson, New York Public Interest Research Group, The Riverkeepers, and the local chapter of the Sierra Club have been especially tenacious.¹⁹⁸

The media, including the *New York Times*, have exhibited both vigilance and responsibility in providing information. Reporters exposed deficiencies in GE's cleanup and restoration efforts. Journalists have also been willing to highlight GE's illegal and unethical behavior,¹⁹⁹ including GE's continually obstinate and adversarial behavior. For example, GE launched a public relations campaign arguing "that the risk of leaving PCBs in the silt was very low, while the cost of dredging the contaminated bottom would be very high, possibly costing as much as several hundred million dollars."²⁰⁰ This media campaign garnered some support, which meant that some members of an engaged, albeit misinformed, civil society stood with GE and wanted to prevent dredging.

Regarding BP, an engaged conglomeration of regional elected officials,²⁰¹ concerned citizens,²⁰² environmentalists,²⁰³ and myriad others spoke through a vigilant media to pressure BP and government actors into mounting a transparent and sustained cleanup effort. For example, concerned by a "disinformation campaign" BP waged to underestimate the impacts of the spill and the United States' lethargic response to it,²⁰⁴ James Carville, a former strategist for President Clinton

¹⁹⁷ See *supra* text accompanying note 121.

¹⁹⁸ KAMIENIECKI, *supra* note 113, at 147.

¹⁹⁹ Epstein, *supra* note 14.

²⁰⁰ KAMIENIECKI, *supra* note 113, at 147.

²⁰¹ See, e.g., Drew Jubera, 'America's Bubba': Is Nungesser an Oil Folk Hero or an Opportunist?, CNN (Aug. 3, 2010), <http://www.cnn.com/2010/US/08/03/billy.nungesser.oil.disaster/index.html> (depicting Louisiana Plaquemines Parish President Billy Nungesser's zealous advocacy for his constituents). Historian Douglas Brinkley notes that

[w]hat [Nungesser] brings to the table is something visceral and raw and brave and at times unhinged. . . . He has an umpire's skill of calling balls and strikes—he calls it the way he sees it. He's able to go after BP and the Obama administration with equal fury. People are counting on him to be the last uncompromised man in Louisiana.

Id.

²⁰² Campbell Robertson, *Scope and Pace of Gulf Cleanup Is Criticized*, N.Y. TIMES, Jan. 8, 2011, at A10, available at <http://www.nytimes.com/2011/01/08/us/08spill.html> (detailing the efforts of individuals to keep the limelight on BP's cleanup efforts).

²⁰³ *Id.*

²⁰⁴ James Carville, *Louisiana Demands Justice, Not Charity*, CNN (June 13, 2010), http://articles.cnn.com/2010-06-13/opinion/carville.louisiana.justice_1_sediment-wetlands-barrier-islands?_s=PM:OPINION.

and current Gulf resident,²⁰⁵ famously challenged the Obama administration on *Good Morning America*. He stated: “Man, you got to get down here and take control of this! Put somebody in charge of this thing and get this moving. We’re about to die down here!”²⁰⁶ When making one of several appearances on *Anderson Cooper 360*, Billy Nungesser, the combative Parish President from Louisiana,²⁰⁷ illustrated the mutually reinforcing nature of media and society. Recounting a conversation with President Obama, Mr. Nungesser indicated that the White House took note of Mr. Cooper’s vigilant presence and broadcasts in the Gulf. Mr. Nungesser stated, “[The President] made me commit and I agreed that, if we have the same mess-up in chain of command, or things not getting done, that I will give him a call at the White House before I call you, Anderson.”²⁰⁸ Weeks later, Mr. Carville wrote an op-ed piece noting the much-improved and vigorous government response:

We need our government to remain vigilant in addressing this. We need a lot of research into the science of the effects of the spill. And in the words of Interior Secretary Ken Salazar, we need to continue to have the heel of our boot on the neck of BP. . . . [We] need to stay vigilant and aggressive in being sure that the inevitable “It’s time to move on” mentality does not set in. Trust me. The last thing we need to do is move on until our precious coastline is both restored and renewed.²⁰⁹

²⁰⁵ James Carville was chief strategist for Bill Clinton’s 1992 presidential campaign. Carville is a resident of New Orleans, Louisiana, where he teaches political science at Tulane University. Press Release, Tulane University, James Carville Joins Faculty (Nov. 8, 2008), available at <http://admission.tulane.edu/livecontent/news/28-james-carville-joins-faculty.html>; see also Peter Baker, *These Days, Carville Praises Oil Response*, N.Y. TIMES CAUCUS BLOG (Aug. 6, 2010, 1:27 PM), <http://thecaucus.blogs.nytimes.com/2010/08/06/these-days-carville-praises-oil-spill-response/> (“Mr. Carville’s exasperated criticism proved devastating to the White House, letting loose a storm of criticism from other liberals and emboldening conservatives. That particularly pained the White House, where Mr. Carville has many friends from the Clinton campaigns and presidency, most notably, of course, the White House chief of staff, Rahm Emanuel.”).

²⁰⁶ Jake Tapper & Huma Khan, *Political Stupidity: Democrat James Carville Slams Obama’s Response to BP Oil Spill*, ABC NEWS (May 26, 2010), <http://abcnews.go.com/GMA/Politics/bp-oil-spill-political-headache-obama-democrats-slam/story?id=10746519>.

²⁰⁷ See Robertson, *supra* note 202 (characterizing the combative style of Nungesser and describing him as “pugnacious”).

²⁰⁸ Brian Stelter, *Cooper Becomes Loud Voice for Gulf Residents*, N.Y. TIMES, June 18, 2010, at A19, available at <http://www.nytimes.com/2010/06/18/us/18cooper.html>.

²⁰⁹ James Carville, Op-Ed, *Obama Played His Cards Right on BP*, CNN (Aug. 5, 2010), http://articles.cnn.com/2010-08-05/opinion/carville.obama.bp_1_bp-disaster-obama-administration-president-obama?_s=PM:OPINION.

Mr. Carville also commended the President's successful negotiation with BP that resulted in a \$20 billion fund to compensate the spill's victims.²¹⁰

Accepting Mr. Carville's overture, the White House sent a copy of Mr. Carville's essay to reporters.²¹¹ To this day, an engaged civil society and a vigilant and responsible media, working in tandem, continue to keep Gulf cleanup and restoration issues in the limelight.

Law, the articulation of public policy enforced by government,²¹² provided the foundation for environmentalists' and journalists' work in both the GE and BP cases. CERCLA, as a mode of social control, was designed to address just the kind of scenario the GE case presents²¹³: to hold RPs accountable for cleaning hazardous-waste areas and restoring natural resources.²¹⁴ But law is complex. GE's adversarial stance on cleanup and restoration is consistent with the incentives built into CERCLA's design.²¹⁵ CERCLA, at its foundation, assumes an adversarial relationship between Trustees and RPs. Moreover, GE used law to delay its response to the PCB discharges and to challenge the constitutionality of CERCLA.²¹⁶ Though that litigation strategy ultimately ended in failure in 2010,²¹⁷ legal mechanisms provided GE with the opportunity to both deny its responsibility for polluting the Hudson River and then defend its pollution for decades.

Similarly, law constitutes a necessary foundation to restore the Gulf. Like CERCLA, Congress tailored OPA to respond to the precise scenario the Deepwater Horizon incident presents.²¹⁸ Although OPA, in contrast to CERCLA, incorporates "cooperation" in its text, the specter of litigation is real. Consequently, restoration processes under OPA are best described as adversarial. As mentioned, the RPs and Trustees are now locked in a "battle of the experts"²¹⁹ whereby both sides

²¹⁰ *Id.*

²¹¹ *See id.*

²¹² *See* Epstein, *supra* note 14, at 210.

²¹³ *See supra* Part I.B.

²¹⁴ *See supra* Part I.B.

²¹⁵ *See supra* notes 129-37 and accompanying text.

²¹⁶ *See supra* note 148 and accompanying text.

²¹⁷ *See supra* note 148 and accompanying text.

²¹⁸ *See* Stanley A. Millan, *Escaping the "Black Hole" in the Gulf*, 24 TUL. ENVTL. L.J. 41, 42-43 (2010) (explaining the rationale and provisions of OPA).

²¹⁹ Sharon D. Herzberger, *Social Science Contributions to the Law: Understanding and Predicting Behavior*, 25 CONN. L. REV. 1067, 1073-74 (1993) (depicting the "battle of the experts" phenomena).

will rely on experts to prove their case. Trustees will attempt to maximize financial damages and RPs will attempt to minimize them.²²⁰ This predictable dynamic, which the systematic withholding of scientific data compounds, all but eviscerates the cooperative elements of OPA. Counterintuitively, these “cooperative” efforts delay Gulf restoration.²²¹ Legislative changes to OPA that incentivize genuine cooperation may change the dynamic between RPs and Trustees.²²²

Epstein’s three remaining modes—affinity group regulation, self-regulation, and ethical precepts—did little to harness responsible corporate behavior from GE or BP. Recall that affinity group regulation refers to standards of behavior established by members of a particular profession, such as medicine.²²³ The case studies noted above evoke no sign of professional influence. In the GE case, managers developed a stonewalling strategy.²²⁴ In the BP case, managers decided how the company would engage with Trustees and the public. Management is a practice, not a profession.²²⁵ Management has not yet formally recognized a duty to serve the greater good, nor has management adopted an ethics code.²²⁶ Not surprisingly, then, managers in the two industries considered here, electrical manufacturing and oil, have not developed professional codes to articulate how their work will consider the stakeholders’ needs.

Self-regulation is the voluntary adherence to standards set by NGOs concerned with specific issues, such as climate change.²²⁷ In the GE case, consider a scenario where Scenic Hudson had created standards for hazardous-waste disposal and GE had voluntarily complied with those standards in good faith. This would have been an act of self-regulation. In the real scenario, though, environmentalists seemed to know they

²²⁰ KAMIENIECKI, *supra* note 113, at 147 (describing the incentives at play when litigation looms).

²²¹ *Id.*

²²² *Id.*

²²³ See Epstein, *supra* note 14, at 210-11.

²²⁴ See *supra* text accompanying notes 118-20.

²²⁵ Henry Mintzberg, *The MBA Menace*, FASTCOMPANY.COM (June 1, 2004), <http://www.fastcompany.com/magazine/83/mbamenace.html>. Arguing that “no one can become a manager in the classroom,” Mintzberg notes that management is a “craft” tempered by experience. *Id.*

²²⁶ Thomas Kostigen, *The Business Oath: Commentary—Let’s Strive for a More Ethical 2011*, MARKETWATCH (Dec. 31, 2010), <http://www.marketwatch.com/story/heres-to-more-ethical-business-practices-2010-12-31>. Professions such as law and medicine have recognized their duty to contribute to society. Moreover, they have adopted and enforced codes of conduct. *Id.*

²²⁷ See Epstein, *supra* note 14, at 211.

were in for a long fight from the start.²²⁸ They did not seek voluntary compliance with guidelines.

“Ethics” highlights beliefs derived from religion, humanistic philosophy, social customs, mores, and traditions.²²⁹ Ethical precepts can harness excellence in corporate behavior. Today, for instance, GE’s Ecomagination campaign inspires “the brightest minds to collaborate, invest and innovate” in clean energy.²³⁰ Although business interests necessarily provide the primary foundation for the campaign, GE’s statements about clean energy suggest that the company values the environment, and that GE has an obligation to consider the needs of future generations.²³¹ These statements, at a minimum, reflect GE’s ethical awareness. Unfortunately, GE’s Ecomagination is entirely forward-looking: the plan disregards the Hudson River disaster.²³² In fact, GE’s restoration strategy is decidedly unimaginative. From CERCLA’s passage, in 1980, to 2002, GE stonewalled and continually avoided action that would restore the natural resources the corporation damaged or destroyed.

Ironically, during the stonewalling years, Jack Welch’s rationalizations for stall tactics were peppered with words that hint at an awareness of CSR principles. In essence, he asserted that GE was “doing the right thing” by doing nothing. Welch stood his ground against natural resource restoration by stating that he wanted the “truth” to win out.²³³ Regrettably, Welch’s truth was that GE had a right to refrain from restoration because PCBs were not harmful.²³⁴ After Welch retired in 2001, GE’s new CEO, Jeffrey R. Immelt, changed strategies and

²²⁸ See *supra* notes 116-34 and accompanying text.

²²⁹ See Epstein, *supra* note 14, at 211-12.

²³⁰ Press, GE: ECOMAGINATION, <http://206.155.64.41/news/press-page/#content> (last visited Feb. 12, 2011).

²³¹ *Id.*

²³² Although the company did agree to go ahead with Phase 2.

²³³ JACK WELCH & JOHN A. BYRNE, JACK: STRAIGHT FROM THE GUT 283 (2003) (“But I take great pride . . . our people get up every morning all over the world and compete like hell with absolute integrity . . . [Our people] see no conflict between taking on the world’s best, every day, all over the globe, giving 110 percent and more—to compete and win and grow—and at the same time maintain an instinctive, unbendable, commitment to absolute integrity in everything we do.”).

²³⁴ *Id.* at 283-94. Welch noted:

Nothing is more important than a company’s integrity It not only means that people must abide by the letter and spirit of the law, it also means doing the right thing and fighting for what you believe is right. . . . On PCBs, we’ve assured ourselves that they are not harmful to our employees or our neighbors.

Id. at 284.

moved towards ending the dispute.²³⁵ Perhaps as a more neutral outsider, Immelt could see that the stonewalling would have to end because it became clear that PCBs were, in fact, harmful.²³⁶

Self-regulation and ethical precepts were similarly unhelpful modes of social control in BP's case. Certain company actions do suggest that BP has at times had self-regulation or ethical precepts in mind. For example, under former BP CEO John Browne, the company unveiled a new motto, "Beyond Petroleum." The motto accompanies an "insignia of a blooming flower," an image meant "to portray the company as one . . . responsive to growing public concerns [regarding] climate change."²³⁷

Unfortunately, though, BP's new motto and logo seem more about marketing than responsible behavior. In reality, BP "has a worse health, environment[,] and safety record than many other major oil companies";²³⁸ the Deepwater Horizon oil spill is only the latest costly blunder in a larger series. The company does not demonstrate the proactive stance inherent in corporations that self-regulate and act ethically. Indeed, despite a catalog of crises and near catastrophes in recent years, BP demonstrates a chronic inability or unwillingness to learn from its mistakes.²³⁹ Three incidents are especially significant.

In 2005, an explosion at a BP refinery in Texas City, Texas, killed fourteen workers and injured many more.²⁴⁰ In its investigation, the government discovered more than 300 safety

²³⁵ Revkin, *supra* note 106.

²³⁶ GE demonstrated an escalating commitment to a losing course of action. It is possible GE decided to stick with its stance on PCBs because acknowledging that PCBs are harmful would have made Welch's initial decision seem incorrect or bad. See LINDA K. TREVINO & KATHERINE A. NELSON, *MANAGING BUSINESS ETHICS: STRAIGHT TALK ABOUT HOW TO DO IT RIGHT* 91 (5th ed. 2011) (discussing decision makers' tendency to consider sunk costs in determining whether to escalate a commitment).

²³⁷ See Krauss, *supra* note 158.

²³⁸ Jad Mouawad, *For BP, a History of Spills and Safety Lapses*, N.Y. TIMES, May 9, 2010, at A22, available at <http://www.nytimes.com/2010/05/09/business/09bp.html>; see also Sarah Lyall, *In BP's Record, a History of Boldness and Costly Blunders*, N.Y. TIMES, July 13, 2010, at A1, available at <http://www.nytimes.com/2010/07/13/business/energy-environment/13bprisk.html>; Pierre Thomas et al., *BP's Dismal Safety Record*, ABC NEWS (May 27, 2010), <http://abcnews.go.com/WN/bps-dismal-safety-record/story?id=10763042>.

²³⁹ Robbie Brown, *Panel Presses BP on Its Safety Record*, N.Y. TIMES, Aug. 27, 2010, at A13, available at <http://www.nytimes.com/2010/08/27/us/27hearings.html> (Noting the serial safety violations in BP's history, Capt. Hung Nguyen of the Coast Guard, who is also part of a team of federal investigators questioning BP's record, commented to BP officials that "one dot is a point, two dots in a line, and three dots is a trend. . . . There's a trend there about the safety culture of BP. These things keep happening.")

²⁴⁰ *14 Die in Massive Explosion at Texas City Refinery*, CLICK2HOUSTON (Mar. 23, 2005), <http://www.click2houston.com/news/4311459/detail.html>.

violations,²⁴¹ and BP agreed to pay \$21 million in fines, which, at the time, was an industry record.²⁴² Telas Group, a consulting firm contracted to examine conditions at the facility, reported that they “ha[d] never seen a site where the notion ‘I could die today’ was so real.”²⁴³ After inspectors from the Occupational Safety and Health Administration (OSHA) revisited the Texas City facility in 2009, they discovered more than seven hundred safety violations and proposed a record fine of \$87 million.²⁴⁴ OSHA stated that many of the penalties stemmed from BP’s failure to meet its responsibilities under the previous Texas City settlement.²⁴⁵ Ultimately, in August 2010, BP agreed to pay \$50 million to settle penalties for its failure to correct safety issues between 2005 and 2009.²⁴⁶ This was another record fine for the industry.²⁴⁷

In another incident, Thunder Horse, a platform in the deepwater Gulf of Mexico, was vulnerable when Hurricane Dennis passed over the platform in 2005.²⁴⁸ Thunder Horse, a \$1 billion crowning glory in deepwater-drilling technology, listed (or tilted) precariously to one side and appeared to be sinking.²⁴⁹ Investigations later revealed that a backwards-installed valve caused the vessel to flood, imperiling the project before any oil was pumped.²⁵⁰

Finally, in 2006, a cracked BP oil pipeline in Alaska forced one of the nation’s largest oil fields, Prudhoe Bay, to shut down. BP was subsequently fined \$20 million after prosecutors demonstrated BP’s negligent maintenance of the pipeline.²⁵¹ Prudhoe Bay Oil Field remains vulnerable to an

²⁴¹ *Federal Contractor Misconduct Database: BP P.L.C. Workplace Safety Violations*, POGO.ORG, <http://www.contractormisconduct.org/index.cfm/1,73,222,html?CaseID=387> (last visited Sept. 30, 2011).

²⁴² *Id.*

²⁴³ See Lyall, *supra* note 238.

²⁴⁴ See Elana Schor, *Twin BP Disasters Complicate Push for Safety*, N.Y. TIMES (July 2, 2010), <http://www.nytimes.com/gwire/2010/07/02/02greenwire-twin-bp-disasters-complicate-push-for-safety-59116.html?pagewanted=all>.

²⁴⁵ *Id.*

²⁴⁶ Steven Greenhouse, *BP to Pay Record Fine for Refinery*, N.Y. TIMES, Aug. 13, 2010, at B1, available at <http://www.nytimes.com/2010/08/13/business/13bp.html?gwh=E44A44C76A9B69CEBAEBB3F5669BEE8D>.

²⁴⁷ *Id.*

²⁴⁸ See Lyall, *supra* note 238.

²⁴⁹ *Id.*

²⁵⁰ *Id.*

²⁵¹ See Krauss, *supra* note 158.

accident that industry insiders believe could rival the Deepwater Horizon spill.²⁵²

Given BP's continuing struggle to comply with current laws, there remains little to suggest that the company is capable of adopting any heightened standard, whether derived from NGOs or affinity groups (which have yet to exist). Moreover, BP's accident history makes unlikely the possibility that the company will avail itself of any argument that it ought to behave ethically. To date, Epstein's final three modes have proven ineffective at incentivizing BP to engage in responsible corporate behavior.²⁵³

As we think beyond GE and BP, it is useful to consider what typically incentivizes positive corporate behavior.²⁵⁴ Generally, corporations with an international presence tend to prefer reputation-saving self-regulation to government intervention.²⁵⁵ GE and BP are exceptions to this generalization. When thinking about Epstein's modes of social control and New Governance in general, these principles are best considered in the context of a particular company's history—its record of success and failure, and its past responses to failure, in particular.²⁵⁶ Although both GE and BP have resisted government intervention and made attempts to create a positive environmental reputation, any self-imposed strategies have lacked substance. Further, for both companies, the stakes of owning up to real problems are high. GE has several Superfund sites waiting to be restored.²⁵⁷ Any self-imposed regulation obligates the company to continue cleaning and restoring with no limit to the corporate spending necessary to become a solid environmental citizen.²⁵⁸ BP has already

²⁵² *The Spill: BP's Vast Prudhoe Bay Oil Field*, GLOBAL RES. TV (Oct. 26, 2010), <http://tv.globalresearch.ca/2010/10/spill-bps-vast-prudhoe-bay-oil-field>.

²⁵³ It is possible the ethics and self-regulation modes will work in the years ahead.

²⁵⁴ See *supra* note 47.

²⁵⁵ Kevin R. Jackson, *Global Corporate Governance: Soft Law and Reputational Accountability*, 35 BROOK. J. INT'L L. 41, 48 (2010) (arguing "that corporate governance must focus on the role of soft law in today's global environment"); see also Simon Chesterman, *The Turn to Ethics: Disinvestment from Multinational Corporations for Human Rights Violations—the Case of Norway's Sovereign Wealth Fund*, 23 AM. U. INT'L L. REV. 577, 603 (2008) (proposing that international corporations prefer to engage in voluntary compliance with labor and environmental standards).

²⁵⁶ Some companies can face an environmental disaster and it can serve as a wake-up call to change the organization's culture.

²⁵⁷ Gabriel Nelson, *EPA Cleanup Tactic to Face GE Challenge in D.C. Circuit*, N.Y. TIMES (May 13, 2010), <http://www.nytimes.com/gwire/2010/05/13/greenwire-epa-cleanup-tactic-to-face-ge-challenge-in-dc-69214.html?scp=7&sq=G.E.%20number%20of%20Superfund%20sites&st=cse>.

²⁵⁸ According to the EPA, GE is an RP in 52 Superfund sites in the country. Revkin, *supra* note 106.

invested so much in one particular strategy—aggressive cost cutting combined with aggressive moves to increase market share by capitalizing on its expertise in deepwater drilling—that even the Deepwater Horizon disaster is unlikely to inspire a major shift in corporate culture.

IV. GETTING TO RESTORATION: LOOKING BEYOND THE HUDSON AND GULF

Ideally, GE would have voluntarily assumed responsibility to remedy natural-resource injuries in the Hudson River. If GE voluntarily engaged in cooperative NRDA, this behavior would have demonstrated a commitment to New Governance principles and, moreover, demonstrated corporate integrity.²⁵⁹ GE needed the courage of its convictions in sustainable value creation. The company waited too long to demonstrate a commitment to using its “Ecomagination” and resources to efficiently and sustainably restore the Hudson River. Similarly, BP is poised for adversarial, rather than cooperative, NRDA. The significance of BP’s decision to embrace adversarial strategies is that doing so prevents Trustees and RPs from getting to restoration. BP still has the power to demonstrate corporate integrity and a commitment to New Governance principles. Modeling a new approach would set an example for future work in responding to environmental disasters.²⁶⁰

²⁵⁹ Integrity has these three characteristics: (1) One must take pains to try to *discern* what is right or wrong; (2) One must be willing to shape one’s actions in accord with that *discernment*, even when it is difficult or painful to do so; and (3) One must be willing to *acknowledge* publicly what one is doing. STEPHEN L. CARTER, INTEGRITY 7 (1996).

²⁶⁰ For an excellent analysis of culture and accidents in the context of high risk technology, see DIANE VAUGHAN, THE CHALLENGER LAUNCH DECISION: RISKY TECHNOLOGY, CULTURE, AND DEVIANCE AT NASA (1996). Vaughan’s work is an appropriate lens through which to consider reviews of the Deepwater Horizon disaster. See NATIONAL COMMISSION, *supra* note 177. Also, CCRM Deepwater Horizon Study Group concluded that “those who worked on the Deepwater Horizon Macondo well project [failed to make] conscious ‘well informed’ decisions to trade safety for money . . . [T]here were perceived to be no downsides associated with the uncertain thing.” Letter from Robert Bea, Professor, Ctr. for Catastrophic Risk Mgmt. Deepwater Horizon Study Grp., to Nat’l Comm’n on the BP Deepwater Horizon Oil Spill & Offshore Drilling 1 (Nov. 24, 2010), *available at* http://www.eoearth.org/article/Deepwater_Horizon_study_group?topic=50364. The Study Group explains that

[t]he Macondo well permitting documentation clearly shows that both BP and the MMS believed the likelihood of a catastrophic blowout were not significant . . . [A]n organization’s safety culture takes time (several decades) to develop and has to be grown from within . . . [A]t the time of the Macondo blowout, BP’s corporate culture remained one that was embedded in risk taking and cost-cutting . . . Cultural influences that permeate an organization and an industry and manifest in actions that can either promote and nurture a high

The following section provides three concrete recommendations to make cooperative NRDA more likely. The first addresses cooperative NRDA directly. The second and third suggestions affirm broader New Governance principles. All three recommendations, however, rely on New Governance theory.

A. *Recommendation One: Amend CERCLA and OPA to Incentivize Cooperation*

Scientists and policymakers who advocate cooperative NRDA generally see OPA's statutory language as superior to CERCLA's because OPA incorporates the concept of "cooperation" in more than one provision of the statute.²⁶¹ Fundamentally, however, both CERCLA and OPA assume that decisions about NRDA and restoration will likely be made through, or as a consequence of, litigation. As mentioned, while both Trustees and RPs provide scientific data to the public, they reserve the right to withhold information from studies in which either party contests the results.²⁶² This practice results in the systematic withholding of data until litigation is exhausted. Consequently, restoration is delayed.²⁶³ Since NRDA takes place in the context of litigation as the default dispute-settling mechanism,²⁶⁴ the end game is still defined by victory for the opposing party, no matter the gloss of civility that opposing sides create during the NRDA process. That is, the cleanup and restoration of injured natural resources is not the primary motivation: attorneys dominate and control the NRDA

reliability organization with highly reliable systems, or actions reflective of complacency, excessive risk-taking, and a loss of situational awareness.

Id. app. A at 7 & 9.

Insularity is an additional culture problem. "[I]ll-advised [corporate] strategies are often the result of a company dialogue restricted to a narrow group of individuals who confer only with each other." Peter Firestein, *Insularity: The Hidden Killer of Corporate Reputation: BP Has Paid Dearly for Failure to See Its Actions in the Context of Broad Social Interests*, BLOOMBERG BUS. WK. (Sept. 7, 2010, 3:51 PM), http://www.businessweek.com/managing/content/sep2010/ca2010092_593603.htm.

²⁶¹ For example, OPA mandates citizens' councils for Prince William Sound and Cook Inlet. These councils are designed to promote partnership and cooperation among local citizens, industry, and government. See *Introduction*, PRINCE WILLIAM SOUND REG'L CITIZENS' ADVISORY COUNCIL, <http://www.pwsrca.org/about/index.html> (last updated July 14, 2011).

²⁶² See *supra* note 193 and accompanying text.

²⁶³ See *supra* note 193 and accompanying text.

²⁶⁴ See Franklin D. Strier, *Major Problems Endemic to the Adversary System and Proposed Reforms*, 19 W. ST. U. L. REV. 463, 464 (1992).

process.²⁶⁵ Partisan advocates are supposed to be diligent, productive contributors to finding the truth. However, scholars who study the costs and benefits of an adversarial system have established defects in the truth-finding process; most notably, lawyers hell-bent on victory are not incentivized to aid the court in discovering all the facts.²⁶⁶

Attorneys influence both Trustees and RPs,²⁶⁷ which means that both sides are incentivized to consider factors other than reaching restoration. Certainly, RPs are concerned with costs, and are therefore encouraged to use adversarial flaws to gain the lowest judgment possible. But Trustees are also equally vulnerable to flaws in the adversarial system. For example, Trustees are not clearly bound by fiduciary duties²⁶⁸ to protect natural resources even if that means revealing the complete truth (e.g., that some natural resources have not, in fact, been harmed by a hazardous release). Given the disincentives of seeking justice through the adversarial system, there is no wonder that critics of the current NRDA process blame its defects on dueling lawyers and their expert scientists, who demonstrate considerable skill at generating evidence with a particular objective in mind—a favorable outcome for the client.

One significant change to both CERCLA and OPA would set the stage to get to restoration faster and more efficiently. Congress, or the EPA in its regulatory capacity, should move the locus of control²⁶⁹ in evidence-gathering to a judge or other neutral party, rather than an attorney.²⁷⁰ Under this system, a

²⁶⁵ See Nicholas J. Lund & Niki L. Pace, *Deepwater Horizon Natural Resource Damages Assessment: Where Does the Money Go?*, 16 OCEAN & COASTAL L.J. 327, 351-53 (2011) (describing how lawyers are involved in the NRDA process (e.g., Trustees often retain outside legal counsel)).

²⁶⁶ See Strier, *supra* note 264, at 482.

²⁶⁷ In fact, Trustees and corporate executives are likely to be attorneys.

²⁶⁸ See generally Laura Rowley, *NRD Trustees: To What Extent Are They Truly Trustees*, 28 B.C. ENVTL. AFF. L. REV. 459 (2001).

²⁶⁹ Strier, *supra* note 264, at 466.

²⁷⁰ Another neutral party would be an arbitrator. Alternative dispute resolution (ADR) is another avenue that could lead to more effective NRDA. See Sarah L. Inderbitzin, Nicholas Targ, James L. Byrnes & Bruce A. Johnson, *The Use of Alternative Dispute Resolution in Natural Resource Damage Assessments?*, 20 WM. & MARY ENVTL. L. & POL'Y REV. 1, 28-29, 31 (1995). Inderbitzin, Targ, Byrnes, and Johnson urge agencies to use alternative dispute resolution, or ADR, when conducting assessments, especially to “reduce the amount of money spent on data collection, increase the data’s acceptability, and reduce litigation.” *Id.* at 28. These scholars emphasize the value of non-adversarial approaches to NRDA.

Other authors have suggested statutory change. For example, Klyza and Sousa state generally, that “[w]ithout statutory changes to protect . . . collaborative experiments, they will often be vulnerable in a political system that offers many points of access, many points of attack.” KLYZA & SOUSA, *supra* note 32, at 8.

judge or other neutral party would oversee (1) the selection of an independent panel of scientists to engage in NRDA and (2) the approval of a defined budget for the NRDA process. In other words, from the beginning, an objective party would set the parameters of the NRDA process. Shifting control from dueling attorneys to a process with judicial oversight supports the classic both-and agenda: it would achieve substantive improvements in environmental protection and accommodate all stakeholders' legitimate concerns in the economic and social costs of implementing both CERCLA and OPA.²⁷¹

B. Recommendation Two: Consider Science as a Mode of Social Control in New Governance Frameworks

Science, similar to vigilant and responsible media, could serve as a mode of social control to encourage positive corporate behavior.²⁷² As Jane Lubchenco has stated, “[O]ne of the most important roles of science is to inform, to provide information, so that decision makers can take that information into consideration and understand the full ramifications of a course of action.”²⁷³ Science as a mode of social control, used alone or in tandem with other modes, could incent ethical behavior by offering factual truth—truth that informs the public about the consequences of corporate behavior. Considering science as a mode of social control is consistent with the historical view of science as a producer of reliable knowledge.

The role of science in society historically focused on the production of “reliable knowledge” toward understanding the world and solving practical problems.²⁷⁴ According to Lubchenco, the relationship between science and society is predicated upon an unwritten social contract—a commitment that scientists will not only create new knowledge but also communicate knowledge broadly so citizens and policymakers

²⁷¹ See Patrick E. Tolan, Jr., *Natural Resource Damages Under CERCLA: Failures, Lessons Learned, and Alternatives*, 38 N.M. L. REV. 409 (2008) (exploring NRD litigation, alternatives to litigation, and corrective action that would allow NRD to realize its potential). Tolan sees tremendous promise in the idea of cooperative NRDA, but suggests that regulatory and legislative changes are necessary to set the stage for increased cooperation. *Id.* at 452.

²⁷² See Jane Lubchenco, *Earth's Unruly Tenant*, OPEN SPACES, <http://www.open-spaces.com/article-v2n1-lubchenco.php/> (last visited Feb. 24, 2011).

²⁷³ *Id.* Dr. Jane Lubchenco currently serves as the Under Secretary for Oceans and Atmosphere and Administrator of NOAA.

²⁷⁴ Michael Gibbons, *Science's New Social Contract with Society*, 402 NATURE C81, C84 (1999).

can use the knowledge to make informed decisions.²⁷⁵ Importantly, the form of research Lubchenco had in mind assumes that research will stay true to the ideals of inquiry, rather than advocacy.

Some scholars distinguish the “plain-and-simple inquirer” from the “advocacy researcher” and suggest that individuals view these two types of truth seekers as two extremes of a continuum.²⁷⁶ The inquirer seeks all evidence, looks for answers, and finds answers, no matter what the answers turn out to be. The inquirer is likely to generate reliable evidence.²⁷⁷ The advocacy researcher, by contrast, may “minimize the importance of unfavorable evidence he/she can ignore or explain away.”²⁷⁸ In other words, “[S]cientific work can be distorted and impeded when it gets entangled with litigation.”²⁷⁹ Advocacy research is inconsistent with disinterested research. Indeed, advocacy research is much more likely to be biased.²⁸⁰ Consequently, advocacy research is often termed “lawsuit science,” “junk science,” or “litigation-driven science.”²⁸¹ Any research “skewed by the desire to advance one side in litigation” raises legitimate issues of scientific integrity.²⁸²

Federal Rules of Evidence²⁸³ and state equivalents²⁸⁴ give courts the power to appoint experts at their discretion. In other

²⁷⁵ Lubchenco, *supra* note 272; see also Jane Lubchenco, *Entering the Century of the Environment: A New Social Contract for Science*, 279 SCI. 491, 494-95 (1998).

²⁷⁶ Susan Haack, *What's Wrong with Litigation-Driven Science? An Essay in Legal Epistemology*, 38 SETON HALL L. REV. 1053, 1072, 1074 (2008).

²⁷⁷ For more background on what “reliable” evidence means, see Ryan Hackney, *Flipping Daubert: Putting Climate Change Defendants in the Hot Seat*, 40 ENVTL. L. 255 (2010).

²⁷⁸ Haack, *supra* note 276, at 1070, 1072.

²⁷⁹ *Id.* at 1056.

²⁸⁰ *Id.* at 1075. Haack writes: “To describe research as ‘litigation-driven’ may mean either (a) that the need for this work arises out of litigation, or (b) that the work is undertaken for the purpose of finding evidence favoring one side in litigation, and explaining away or otherwise playing down evidence favoring the other side.” *Id.*

²⁸¹ See *id.*; see also Danielle Marie Stager, Comment, *From Kepone to Exxon Valdez Oil and Beyond: An Overview of Natural Resource Damage Assessment*, 29 U. RICH. L. REV. 751, 753 (1995) (focusing on environmental damage assessment, including the “emergence of litigation-driven science following the Exxon Valdez oil spill”). Stager noted that the Exxon Valdez litigation featured lawyers “in all post-spill activities,” which influenced the NRDA process. *Id.* at 785. Scientists raised concerns about the legitimacy of research generated by scientists Exxon hired—research the state of Alaska sealed. Additionally, evidence gathered by government actors was sealed. Stager pointed out that sealed evidence not only erodes public trust, but also adversely affects emerging oil spill law. *Id.* at 786.

²⁸² Haack, *supra* note 276, at 1081.

²⁸³ Keum J. Park, Note, *Judicial Utilization of Scientific Evidence in Complex Environmental Torts: Redefining Litigation Driven Research*, 7 FORDHAM ENVTL. L.J. 483, 502-03 (1996).

²⁸⁴ *Id.*

words, judges are not required to rely on experts presented by adversarial parties. For example, the Court-Appointed Scientific Experts Project of the American Academy for the Advancement of Science aids in the process of determining the truth.²⁸⁵ As the previous recommendation indicates, courts should convene independent panels of scientists to conduct the research needed to get to restoration effectively and efficiently. Together, these first two recommendations repair fundamental flaws in both CERCLA and OPA implementation, as both statutes currently incentivize Trustees and RPs to prepare for court battle.²⁸⁶

C. Recommendation Three: Increase Corporate Disclosure Requirements

Investors and consumers expect voluntary corporate disclosures about both environmental performance and green initiatives. These disclosures should be clear, accurate, and complete. Moreover, these disclosures should be internally consistent. For example, when BP ranks number twenty-five in the top 100 “toxic companies”²⁸⁷ while touting its commitment to sustainability, BP ought to explain this apparent inconsistency. New Governance principles provide guidance to remove these inconsistencies. In particular, ethical precepts require clear, accurate, and complete disclosure. When corporate actors fail to “walk the talk,” a vigilant and responsible media is likely to offer the transparency that corporations fail to provide. When patterns of secrecy and inconsistency become clear, investors and consumers act. In response, they expect state and federal legislators and regulators to intervene on their behalf.

Legal scholars should urge the Federal Trade Commission (FTC) and Securities Exchange Commission (SEC) to articulate and enforce public policy via laws and regulations that (1) prevent deception and unfairness in the marketplace²⁸⁸

²⁸⁵ AM. ASS'N FOR THE ADVANCEMENT OF SCI., COURT APPOINTED SCIENTIFIC EXPERTS: A HANDBOOK FOR EXPERTS (2002), available at <http://www.aaas.org/spp/case/handbookv2.pdf>.

²⁸⁶ Ian Yarett, *Weird Science*, DAILY BEAST (Aug. 30, 2010, 10:00 AM), <http://www.thedailybeast.com/newsweek/2010/08/30/is-research-into-the-oil-spill-s-impact-skewed.html>; see also Gagosian & D'Elia, *supra* note 192.

²⁸⁷ *Toxic 100 Air Polluters*, POL. ECON. RES. INST. (Mar. 2010), http://www.peri.umass.edu/toxic_index/.

²⁸⁸ See Elizabeth K. Coppolecchia, Note, *The Greenwashing Deluge: Who Will Rise Above the Waters of Deceptive Advertising?*, 64 U. MIAMI L. REV. 1353 (2010) (considering regulation and litigation in response to greenwashing claims).

and (2) encourage informed investment decisions.²⁸⁹ The FTC already guides marketers to refrain from using general terms such as “environmentally-friendly.”²⁹⁰ Currently, the FTC is proposing guidelines to marketers that want to use product certifications and seals of approval.²⁹¹ The FTC’s proposed regulations make clear that marketers cannot deceive consumers by implying that an independent third party certifies their products.²⁹² The FTC gives an example. If a company that places a label (a “GreenLogo for Environmental Excellence,” for instance) on a product, that company may mislead consumers to believe that an independent third party awarded the seal.²⁹³ In short, the FTC may provide effective tools to regulate transparency in corporations’ environmental policies. Unfortunately, the FTC’s power in this space does not extend beyond product marketing.

The SEC also requires accurate disclosure. The SEC asks companies to disclose material information to potential investors.²⁹⁴ When companies file reports with the SEC, they must include accurate information on environmental risks and liabilities.²⁹⁵ Generally, though, public companies have not been forthcoming about environmental risks.²⁹⁶

²⁸⁹ Mehri, Giampetro-Meyer & Runnels, *supra* note 18, at 413; see also Adam Sulkowski & Steven White, *Financial Performance, Pollution Measures and the Propensity to Use Corporate Responsibility Reporting: Implications for Business and Legal Scholarship*, 21 COLO. J. INT’L ENVTL. L. & POL’Y 491 (2010) (describing the history of regulation by disclosure and corporate responsibility reporting, and determining the impact that financial and environmental variables have on whether or not a company utilizes corporate responsibility reporting); Cynthia A. Williams, *The Geopolitical Significance of Petroleum Corporations: Civil Society Initiatives and “Soft Law” in the Oil and Gas Industry*, 36 N.Y.U. J. INT’L L. & POL. 457 (2004) (describing additional reporting mechanisms, including the Global Reporting Initiative, the Voluntary Principles on Security and Human Rights, and the Extractive Industry Transparency Initiative).

²⁹⁰ See Coppolecchia, *supra* note 288, at 1378.

²⁹¹ Rick Romell, *Lawsuit Targets S.C. Johnson’s ‘Green’ Labeling*, MILWAUKEE J. SENTINEL (Feb. 9, 2011), <http://www.jsonline.com/business/115613414.html>.

²⁹² *Id.*

²⁹³ Currently, consumers are challenging S.C. Johnson’s labeling. In particular, litigation contends that S.C. Johnson’s “Greenlist” system—which gives its own products, including Windex and Shout, its “Greenlist” seal of approval—is deceptive because it implies its products have been certified by an independent third party. Instead, “Greenlist” is actually a patent held by S.C. Johnson. *Lawsuit Says S.C. Johnson’s Green Labeling Deceptive*, WEAU NEWS (Eau Claire, WI) (Feb. 9, 2011, 7:11 AM), http://www.weau.com/home/headlines/Lawsuit_says_SC_Johnsons_green_labeling_deceptive_115631579.html.

²⁹⁴ See Joey Tsu-Yi Chen, Note, *Green SOX for Investors: Requiring Companies to Disclose Risks Related to Climate Change*, 5 J. BUS. & TECH. L. 325, 343-45 (2010).

²⁹⁵ *Id.* at 343.

²⁹⁶ *Id.* at 325-26.

Currently, investor organizations and researchers are asking for increased transparency from corporations.²⁹⁷ In essence, they expect the SEC to improve monitoring compliance with environmental disclosure requirements.²⁹⁸ The Sarbanes-Oxley Act empowers regulators to increase expectations of corporations with regard to transparency, including transparency about environmental information.²⁹⁹ In particular, companies should inform investors and the public about all environmental risks: for GE, transparency in the Hudson's PCB dredging; for BP, transparency in the cleanup and restoration of natural resources in the Gulf. For companies beyond GE and BP, this might include transparency in how a particular company plans to prevent environmental disasters and how the company would act should it face an environmental crisis.

CONCLUSION

Considerations regarding the role and place of nature in human life are more important today than ever before.³⁰⁰ RPs have a duty to safeguard the corporation's welfare—which obligates them to balance the multiple, and sometimes conflicting, claims of stakeholders, including shareholders, employees, and residents of local communities. Trustees have a duty to act on behalf of the public, restoring, rehabilitating, replacing, or acquiring the equivalent of injured resources and services after releases of pollutants. As a society, we have made considerable progress in environmental protection by asking government regulators to command and control. More recently, a wide range of stakeholders have asked for more collaborative, cooperative approaches that are flexible enough to respond to the particular facts of an environmental situation.

²⁹⁷ *Id.*

²⁹⁸ *Id.* at 343-45.

²⁹⁹ *Id.* at 325-26.

³⁰⁰ Lubchenco, *supra* note 272, writes:

We are beginning to understand that human health is an environmental issue, that social justice is an environmental issue, that the economy is in reality an environmental issue, and even national security is an environmental issue. As we begin to appreciate the fundamental ways that humans are dependent upon the functioning of intact ecological systems of the planet, we realize that those systems provide not only goods but the services that collectively are our life support systems. These life support systems determine our health, our economies and our future in ways we are only beginning to appreciate.

In NRDA specifically, the promise of cooperative NRDA—expedited processes with reduced overall costs and improved solutions—has yet to be realized. Flaws in the law and the limited usefulness of other avenues of social control have created hurdles. Hurdles include litigious railroading, lack of neutral scientific information, and weak disclosure requirements. These hurdles have impeded effective collaboration and, in turn, delayed New Governance principles from taking complete effect.

We expect little debate about whether cooperative NRDA and New Governance are worthwhile ideas. We do, however, expect arguments over the solutions we have suggested: (1) reforming CERCLA and OPA to incentivize cooperation, (2) reframing science as a mode of social control, and (3) increasing corporate disclosure requirements. These recommendations change the status quo, and change is difficult even when necessary. By putting a stop to feuding between RPs and Trustees, insisting on neutral science that inspires better behavior, and asking companies to demonstrate more transparency, RPs and Trustees will be poised to comply with their duties and meet their responsibilities to get to restoration in U.S. waterways. Moreover, the recommendations we suggest support corporate behavior that is environmentally and socially responsible.