# ENVIRONMENTAL LIABILITIES AND THE FEDERAL SECURITIES LAWS: A PROPOSAL FOR IMPROVED DISCLOSURE OF CLIMATE CHANGE-RELATED RISKS

BY

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*Climate change-related developments are occurring at an unprecedented pace, with new federal, state, and international proposals under contemplation by policymakers to dramatically reduce greenhouse gas emissions. In the United States, the apparent inevitable regulation of carbon dioxide and other heat trapping gases, and the predicted negative effects of climate change, presents a multitude of risks to businesses. Those risks—physical, regulatory and litigation—are encountered by many businesses today across numerous sectors of our national economy. Yet, while these risks are becoming more and more apparent, the current disclosure regime under the federal securities laws offers little, if anything, in terms of how those risks should be disclosed to the Securities and Exchange Commission and investors.*

*This Article summarizes the climate change-related risks that businesses face, then provides an overview of the intricacies of the current SEC environmental risk disclosure regime, including relevant accounting profession guidance, and questions whether adequate disclosure of climate change risk follows from the present regulatory system. This Article concludes that the current SEC disclosure regime is insufficient in terms of driving publicly traded companies to sufficiently disclose climate change risks.*

*To improve the disclosure of climate change-related liabilities by publicly traded companies, the SEC must provide specific guidance and should do so through a staff accounting bulletin. This follows an approach the SEC took in Staff Accounting Bulletin No. 92, where it advised publicly traded companies how to better account for and disclose liabilities incurred under the Comprehensive Environmental Response, Compensation, and Liability Act.*

*This Article argues that to improve disclosure of climate change risks there is a new role for the Emergency Planning and Community*

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*Right-to-Know Act. The list of "toxic chemicals" subject to the statute's section 313 reporting requirements should be revised by the Environmental Protection Agency to include the principal greenhouse gas, carbon dioxide. This Article concludes with how to subject carbon dioxide to the section 313 annual reporting requirements and the benefits for investors and businesses that would follow as a result. An advantage offered by the expanded use of section 313 is that the multi-chemical data provided in the Toxics Release Inventory database would present a comprehensive overview of the full array of toxic chemicals, including carbon dioxide, released in substantial quantities from the facilities operated by those businesses subject to expanded section 313 reporting. From the perspective of the investor who is interested in weighing not only the climate change risks a business may present, but also considering broader environmental risks, the availability in a single database of a broad spectrum of chemical release information is invaluable for an investor to perform an overall environmental risk evaluation and to factor that risk into the investment decision.*

## I. INTRODUCTION

> As society strives to maintain and to improve our environment, costs are imposed that may need to be disclosed to investors under our federal securities laws. These environmental costs have reached staggering proportions in recent years and are one of the critical issues facing businesses today. . . .
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> While the aggregate numbers concerning potential environmental costs are staggering, what is even more frightening is the massive amount of acknowledged environmental cost that has yet to be reflected in corporate financial statements.[1]

It is beyond doubt that businesses in the United States collectively incur billions of dollars in costs annually to comply with a myriad of local, state, federal, and international environmental ordinances, regulations, statutes, and treaties.[2] As the quotation above from a former commissioner of the Securities and Exchange Commission (SEC or Commission) recognizes, however, the extent to which publicly traded companies are providing investors with sufficient information about the costs and liabilities associated with the environmental regulatory regime remains the subject of debate. This debate is occurring at a time when the pressures upon

1 Richard Y. Roberts, Comm'r, U.S. Sec. & Exch. Comm'n, Remarks at American Bar Association Fourth Annual Joint Conference on Environmental Aspects of Corporate & Real Estate Transactions: Environmental Liability Accounting Developments (June 10, 1993).

2 *See, e.g.*, Christopher H. Schroeder, *Environmental Law, Congress, and the Court's New Federalism Doctrine*, 78 IND. L.J. 413, 414 (2003). It is probably more accurate to say when it comes to the cost of compliance that society expends billions of dollars annually to comply with environmental laws, since it is highly likely that much of these costs are factored into production costs and ultimately passed along to consumers. *E.g.*, James Salzman, *Sustainable Consumption and the Law*, 27 ENVTL. L. 1243, 1265 (1997).

businesses to disclose additional information, particularly information about the costs associated with the risks presented by climate change, are mounting.[3] This Article traces the evolution of the obligation of publicly traded companies to disclose environmental liabilities under the federal securities laws, discusses the climate change risks confronting businesses, and concludes with a proposal to better inform the public, investors, businesses, and regulators of the potential liabilities this evolving environmental threat presents.

The risks and costs associated with climate change are real today for numerous businesses, ranging from those in carbon intensive industries such as refining to those that directly emit little, if any, greenhouse gases such as property casualty insurers. Calls for political and public action are increasing, not just in the United States but globally, to take decisive action to reduce the emissions of carbon dioxide and other greenhouse gases through regulatory mechanisms such as trading programs modeled after the sulfur dioxide trading program in the Clean Air Act (CAA),[4] or a tax specifically targeting carbon emissions.[5] Consequently, businesses face a new wave of difficult to ascertain and ill-defined environmental costs resulting from the ever louder chorus calling for legislative and regulatory action responsive to the growing evidence that human activity is having a potentially catastrophic effect on our climate.[6] How should the multitude of

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3 *See generally* U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-04-808, ENVIRONMENTAL DISCLOSURE: SEC SHOULD EXPLORE WAYS TO IMPROVE TRACKING AND TRANSPARENCY OF INFORMATION (2004) [hereinafter GAO REPORT] (documenting current environmental disclosures and recommending increased and improved disclosure requirements).

4 42 U.S.C. §§ 7401–7671q (2000). *See generally* 42 U.S.C. §§ 7651–7651o (2000) for the statutory provisions related to the sulfur dioxide trading program. The sulfur dioxide trading program has been credited with using market-based regulation to reduce the amount of sulfur dioxide that coal-fired power plants emit and hence diminish the effects of so-called acid rain.

5 *See, e.g.*, Nicole Gelinas, *A Carbon Tax Would be Cleaner*, WALL ST. J., Aug. 23, 2007, at A11 (arguing that by making carbon emissions more expensive, a tax would result in decreased emissions of greenhouse gases).

6 In the 110th Congress more than 50 bills targeting climate change were introduced in the House and Senate. *See* JONATHAN L. RAMSEUR & BRENT D. YACOBUCCI, CONGRESSIONAL RESEARCH SERVICE REPORT FOR CONGRESS: CLIMATE CHANGE LEGISLATION IN THE 110TH CONGRESS at CRS-1 (2007). Nonetheless, as of June 2009, there remains no comprehensive federal legislation aimed at combating climate change. *See generally* FRANZ T. LITZ, PEW CTR. ON GLOBAL CLIMATE CHANGE, TOWARD A CONSTRUCTIVE DIALOGUE ON FEDERAL AND STATE ROLES IN U.S. CLIMATE CHANGE POLICY 3 (2008), *available at* http://www.pewclimate.org/docUploads/StateFedRoles.pdf ("Many states have proceeded in a meaningful, comprehensive fashion while the federal government struggles to take its first significant step toward legislative or regulatory action."). A number of states and regional governments, however, have taken climate change regulatory action in the absence of federal action. For example, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont established through a memorandum of understanding a carbon dioxide cap-and-trade program referred to as the Regional Greenhouse Gas Initiative, or "RGGI," targeting the electric utility generating industry. *See* REG'L GREENHOUSE GAS INITIATIVE, MEMORANDUM OF UNDERSTANDING 1–2 (2005), *available at* http://rggi.org/docs/mou_12_20_05.pdf [hereinafter MEMORANDUM OF UNDERSTANDING]. In another regional approach aimed at climate change, the states of Arizona, California, Montana, New Mexico, Oregon, Utah, and Washington, and the provinces of British Columbia, Ontario, Manitoba, and Quebec formed the Western Climate Initiative (WCI). *See*

businesses that many believe are already impacted financially by climate change, even in the absence of federal legislative action, inform investors of the exposure that they face?[7] That is, what should these businesses disclose to investors under the federal securities laws regarding climate change risks?

This Article ultimately focuses on that very question. Part II provides an overview of the climate change risks that confront businesses today. Part III reviews how disclosure of liabilities and risk generally became an integral part of federal securities regulation, and Part IV explores the evolution of the SEC's efforts, along with the accounting profession's guidance, to regulate the disclosure of environmental liabilities. The focus of Part V is a summary of the statutory liability that publicly traded companies may face as a result of inaccurate or misleading disclosures concerning environmental liabilities. In Part VI, the Article evaluates how, under the current disclosure regime, risks specific to climate change are lacking in the typical disclosure submitted to the SEC. In Part VII, the Article offers a proposal that, with minimal additional regulation, should serve to increase the information flow concerning the climate change liabilities that publicly traded companies may encounter.

The proposal offered here to improve disclosure consists of two components. The first component consists of new guidance or regulations by the SEC that would provide much needed clarity regarding the obligation of publicly traded companies to disclose climate change risk. This aspect of my proposal requires disclosure of the material costs associated with the need to comply with federal, regional, state, and local regulations mandating a decrease in carbon dioxide, the most abundant greenhouse gas. In addition, under the SEC regulatory aspect of my proposal, any climate change litigation pending against a publicly traded company also triggers a disclosure obligation. The second component of my proposal asserts a new role for section 313 of the Emergency Planning and Community Right-to-

Western Climate Initiative, http://www.westernclimateinitiative.org (last visited July 19, 2009). WCI "was created to identify, evaluate, and implement collective and cooperative ways to reduce greenhouse gases in the region, focusing on a market-based cap-and-trade system." *Id.* The State of California enacted legislation that will result in a far-reaching greenhouse gas regulatory program. Assembly Bill No. 32, the California Global Warming Solutions Act of 2006, CAL. HEALTH & SAFETY CODE §§ 38,500–38,599 (West Supp. 2009), was signed into law by Governor Schwarzenegger in September 2006. Press Release, Office of the Governor of the State of California, Gov. Schwarzenegger Signs Landmark Legislation to Reduce Greenhouse Gas Emissions (Sept. 27, 2006), http://gov.ca.gov/index.php?/press-release/4111/ (last visited July 19, 2009). The California Global Warming Solutions Act will use market forces, regulation, and a cap-and-trade program to reduce the emissions of carbon dioxide and other greenhouse gases. For a discussion of California's greenhouse gas reduction initiative implemented through A.B. 32, see Alice Kaswan, *The Domestic Response to Global Climate Change: What Role for Federal, State, and Litigation Initiatives?*, 42 U.S.F. L. REV. 39, 53–58 (2007). New Jersey has also adopted legislation targeting climate change and imposes the same aggressive reductions in greenhouse gas emissions as does the California Global Warming Solutions Act. Global Warming Response Act, N.J. STAT. ANN. §§ 26:2C-37 to :2C-44 (West Supp. 2009).

7 The costs triggered by new regulatory programs are but one type of potential liability that businesses face as a result of climate change. As discussed *infra* Part II.B.3, other potential liability exposure includes litigation against certain businesses that emit greenhouse gases or produce products that emit greenhouse gases.

Know Act (EPCRA).[8] Section 313 essentially requires that a variety of industrial facilities report annually the use, manufacture, or processing of specified "toxic chemicals" if certain threshold amounts are met.[9] This part of my proposal requires the United States Environmental Protection Agency (EPA) to add carbon dioxide to the list of reportable EPCRA section 313 toxic chemicals. Through this new role for EPCRA, on an annual basis facilities that are large emitters of carbon dioxide will have to include such emissions as part of the information submitted to the publicly available Toxics Release Inventory database.

The proposal suggested here not only would provide investors with information about potential climate change liabilities, but also will provide information about the emissions of the main greenhouse gas, carbon dioxide, by publicly traded companies so that investors can weigh and compare across industries the level of emissions as part of the information mix used in reaching an investment decision. This new requirement to account for and disclose carbon dioxide emissions would also provide businesses with information that could drive voluntary efforts towards carbon dioxide emission reductions, thereby reducing public pressure on the companies. Additionally, the proposal would provide a verification mechanism for emission reductions claimed by businesses or mandated by regulation. Lastly, in order to effectively address greenhouse gas emissions through any new sweeping federal regulatory regime, which appears inevitable, an accounting of the emissions of heat trapping gases is a necessary step. Consequently, the compiling and disclosure of carbon dioxide emissions through EPCRA section 313 from a wide array of industrial sources will assist regulators in developing an effective regulatory mechanism, which could result in an effort to address climate change and in meaningful reductions in carbon dioxide and other greenhouse gases.

## II. ENVIRONMENTAL LIABILITIES AND DISCLOSURE

### *A. An Overview*

To place climate change-related liabilities in the context of disclosure under the federal securities laws, it is helpful to have a general understanding of the types of environmental liabilities confronting businesses and the complexity that can arise in their disclosure. Speaking broadly, the liabilities imposed by environmental laws upon businesses generally fall within one of three categories. The first category, and for many businesses most likely the largest portion of environmental costs, arises out of the legal obligation to achieve and maintain compliance with

[8] Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. §§ 11,001–11,050 (2000). Section 313 is at 42 U.S.C. § 11,023 (2000).

[9] *See id.* § 11,023(f)(1)(A)–(B).

environmental laws and their implementing regulations.[10] Examples of such compliance costs include the expenditures needed to properly store, dispose, treat, or recycle hazardous wastes so that they do not pose a threat to human health or the environment.[11] Another example of compliance costs is the capital necessary to design, construct, and install pollution control equipment, such as a wastewater treatment system required by the Clean Water Act (CWA)[12] to reduce pollutants prior to discharge or the installation and operation of sophisticated state-of-the-art technology to meet emission limits pursuant to the CAA.[13] Within the category of compliance-related liabilities, too, fall the substantial operating and maintenance expenses necessary to keep pollution control equipment properly functioning to avoid noncompliance. The significant labor costs required to employ and train personnel who can assume responsibilities for environmental compliance are also within this cost category.

A second category of environmental liabilities concerns the penalties that government regulators may impose through enforcement resulting from noncompliance with environmental laws and regulations. The statutory penalties that the federal government can seek in civil enforcement actions for the failure to comply are substantial and can be as high as $32,500 per day per violation under most major environmental laws.[14] Indeed, multimillion-dollar penalties to resolve violations of environmental statutes are not an unheard of result stemming from government enforcement, particularly at the federal level.[15] Not only are the civil penalties that federal

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10 *See* J. CLARENCE DAVIES & JAN MAZUREK, POLLUTION CONTROL IN THE UNITED STATES: EVALUATING THE SYSTEM 143 (1998).

11 *See generally* Resource Conservation and Recovery Act (RCRA) of 1976, 42 U.S.C. §§ 6901–6992k (2000) (amending Solid Waste Disposal Act, Pub. L. No. 89-272, 79 Stat. 992 (1965)).

12 *See generally* Federal Water Pollution Control Act, 33 U.S.C. §§ 1251–1387 (2006). Section 402 of the Clean Water Act (CWA) established the "national pollutant discharge elimination system," commonly referred to as the "NPDES" permitting program. *Id.* § 1342. In general, absent a valid NPDES permit issued under section 402, "the discharge of any pollutant by any person shall be unlawful." *Id.* § 1311(a).

13 *See generally* 42 U.S.C. §§ 7661–7661f (2000) (establishing the CAA's permitting scheme for the emission of pollutants). Section 502(a) of the CAA makes it unlawful for affected sources to emit pollutants in the absence of a permit. *Id.* § 7661a(a).

14 *See, e.g.*, *id.* § 6928(i) (imposing a civil penalty up to $25,000 per day for RCRA violation); *id.* § 7413(d)(1)(B) (authorizing the EPA administrator to seek up to $25,000 per day for violating an order under the CAA); 33 U.S.C. § 1319(d) (2006) (subjecting violators of the CWA to a maximum civil penalty of $25,000 a day per violation). Under the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 (2006), the amounts of the civil and administrative penalties that the federal government may seek in enforcement actions are periodically adjusted upwards to keep pace with inflation. See Civil Monetary Penalty Inflation Adjustment Rule, 69 Fed. Reg. 7121, 7121, 7125 (Feb. 13, 2004) (to be codified at 40 C.F.R. pts. 19, 27), for the last increase by EPA of civil and administrative penalty amounts pursuant to the Debt Collection Improvement Act of 1996, 31 U.S.C. § 3701 (2006). As a result of this congressional command to increase penalties to reflect inflation, the statutory maximum civil penalty of $25,000 per day per violation under the above statues is now $32,500 per day per violation.

15 In January 2008, for example, Massey Energy Company agreed to pay a settlement of $20 million to end a federal civil enforcement action alleging numerous violations of the CWA. *See* Press Release, U.S. Envtl. Prot. Agency, Massey Energy Company Inc. Clean Water Act Settlement (Jan. 17, 2008), http://yosemite.epa.gov/opa/admpress.nsf/dc57b08b5acd42bc852573

enforcement actions can impose substantial, so are the costs in attorneys' fees and expert witness fees that businesses expend in defending themselves against allegations of noncompliance with environmental laws and regulations.[16]

A related cost that business may face in federal enforcement action for noncompliance with regulatory requirements is referred to as "economic benefit."[17] That is, EPA may disgorge any profit derived from delayed compliance and treat the savings associated with late compliance as a penalty component calculated in the enforcement action.[18]

In addition to sanctions imposed because of noncompliance, in this era of heightened "green awareness," businesses whose operations cause demonstrable environmental harm may incur unquantifiable but real costs when consumers or public interest groups brand such businesses as gross polluters, or worse.[19] Such harm to the reputation of a business can result in the loss of market share and revenue. For example, consider the enormous harm Exxon suffered to its reputation,[20] along with substantial cleanup costs

c90044a9c4/6944ea38b888dd03852573d3005074ba!OpenDocument (last visited July 19, 2009). As a substitute for government enforcement, virtually every major federal environmental law allows citizens to file suits for ongoing noncompliance that is not diligently prosecuted by state or federal regulators. For examples of citizen suit provisions under the federal environmental laws, see 33 U.S.C. § 1365 (2006); 42 U.S.C. § 6972 (2000); 42 U.S.C. § 7604 (2000); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, 42 U.S.C. § 9659 (2000). These statutory provisions empower citizens to file suit against regulated entities that are in noncompliance in the absence of diligent federal or state enforcement. Citizen plaintiffs who prevail may also receive attorney's fees. *See, e.g.*, *id.* § 1365(d) ("The court, in issuing any final order in any action brought pursuant to this section, may award costs of litigation (including reasonable attorney and expert witness fees). . . .").

16 *See, e.g.*, Bob Stuart, *Cleaning Bill*, WAYNESBORO NEWS VIRGINIAN, Apr. 14, 2009, http://www.newsvirginian.com/wnv/news/local/article/cleaning_bill/38725 (last visited July 19, 2009) (noting a $107 million civil penalty for CAA violations); Cinergy Corp. v. Associated Elec. & Gas Ins. Servs., Ltd., 865 N.E.2d 571, 573 (Ind. 2007) (litigating insurance payments for over $4 million in defense costs for a CAA lawsuit).

17 *See* United States v. Mun. Auth. of Union Twp., 150 F.3d 259, 263 (3d Cir. 1998) ("The [CWA] does not define the term 'economic benefit' . . . . It is apparent, however, that the goal of the economic benefit analysis is to prevent a violator from profiting from its wrongdoing.").

18 Calculation of the Economic Benefit of Noncompliance in EPA's Civil Penalty Enforcement Cases, 64 Fed. Reg. 32,948, 32,948 (June 18, 1999) ("A cornerstone of the EPA's civil penalty program is recapturing the economic benefit that a violator may have gained from illegal activity. Recapture helps level the economic playing field by preventing violators from obtaining an unfair financial advantage over their competitors who made the necessary expenditures for environmental compliance.").

19 The beneficial environmental claims by businesses in advertising are perhaps subject to exaggeration. *See* Eric Pfanner, *Cooling Off on Dubious Eco-Friendly Claims*, N.Y. TIMES, July 18, 2008, at C3 ("With everyone from oil companies to dishwasher makers to banks trotting out their environmental credentials, complaints about greenwashing, or misleading consumers about a product's environmental benefits, have risen.").

20 Clearly ExxonMobil has more than financially recovered from any reduced profits that it may have suffered as a result of the Exxon Valdez incident. Its business reputation, however, remains tainted by the largest oil spill in the United States. John Holusha, *Exxon's Public Relations Problem*, N.Y. TIMES, Apr. 21, 1989, at D1 ("[E]xperts in public relations say that Exxon seriously worsened the damage to its public standing by failing to seize control of developments after the spill and establish itself as a company concerned about the problems it had caused.").

and a multibillion-dollar punitive damages award, arising from the disastrous spill of 11,000,000 gallons of crude oil into Alaska's Prince William Sound in the spring of 1989, when the infamous Exxon Valdez struck Bligh Reef.[21] To avoid the taint of an uncaring corporate attitude towards the environment, businesses today actively attempt to position themselves in the marketplace as the producers of eco-friendly products, as demonstrated by Ford, BP, Wal-Mart and General Electric, to name a few companies that openly tout their commitment to the environment.[22]

There is a third category of environmental liabilities that businesses may face: the substantial costs associated with the cleanup or remediation of contaminated media—including soil, groundwater, or sediments—that can result from the improper disposal or release of statutorily defined "hazardous substances" under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).[23] Now that CERCLA has been with us for almost thirty years,[24] virtually all managers with responsibilities for the environmental affairs of businesses are aware of the federal Superfund program[25] and its dreaded joint, several, and strict liability statutory scheme.[26]

21 *See In re* The Exxon Valdez, 490 F.3d 1066, 1074 (9th Cir. 2007), *vacated*, 128 S. Ct. 2605 (2008). The Ninth Circuit Court of Appeals vacated the district court's $4.5 billion punitive damages award and remanded to the district court with instructions to reduce the award to $2.5 billion. *Id.* at 1095. The Supreme Court, however, granted certiorari on October 29, 2007. Exxon Shipping Co. v. Baker, 128 S. Ct. 492 (2007). On June 25, 2008, the Supreme Court issued its opinion and rejected the notion that the CWA preempted punitive damages but did, nonetheless, reduce the punitive damages award to $500 million from the $2.5 billion eventually imposed by the Ninth Circuit. Exxon Shipping Co. v. Baker, 128 S. Ct. 2605, 2634 (2008).

22 *See, e.g.*, FORD MOTOR CO., 2007/8 BLUEPRINT FOR SUSTAINABILITY 2, *available at* http://www.ford.com/doc/sr07-ford-sustainability.pdf ("I have long believed that environmental sustainability is the most important issue facing businesses in the 21st century. Fortunately, unlike 20 years ago, or even five years ago, growing number of people in our industry now agree, and we are doing something about it." (quoting William Clay Ford, Jr., Executive Chairman)); Press Release, Gen. Elec. Co., GE Unit Surpasses $4 Billion Renewable Energy Mark with NY Wind Farm Investment (July 9, 2008), *available at* http://www.geenergyfinancialservices.com/press_room/press_releases/NobleRelease%20July%209%202008_FINAL.pdf ("[R]enewable energy is our fastest growing business." (quoting Alex Urquhart, President and CEO of GE Energy Financial Services)); Wal-Mart Stores, Inc., Sustainability, http://walmartstores.com/Sustainability (last visited July 19, 2009) ("Wal-Mart's environmental goals are simple and straightforward: to be supplied 100 percent by renewable energy; to create zero waste; and to sell products that sustain our natural resources and the environment. . . . With the help of our Sustainable Values Networks, we are making progress toward our goals."); BP, BP SUSTAINABILITY REVIEW 2007, at 6 (2008), *available at* http://www.bp.com/liveassets/bp_internet/globalbp/STAGING/global_assets/e_s_assets/downloads/bp_sustainability_review_2007.pdf ("We aspire for our activities to cause no damage to the environment. We aim to minimize our impacts across the life cycle of our operations, from initial project planning through operations to decommissioning and remediation.").

23 42 U.S.C. §§ 9601–9675 (2000). The term "hazardous substance" is an extremely broad one under CERCLA and encompasses a wide range of contaminants. *See id.* (defining hazardous substance). The definition expressly excludes "petroleum, including crude oil or any fraction thereof." *Id.*

24 *See generally id.* §§ 9601–9675.

25 CERCLA is also known as "Superfund" because at one time the program was financed through a tax imposed on businesses of several billion dollars to create a "Hazardous Substance

These three general cost categories—compliance costs, penalties and other associated costs, and cleanup or remediation costs—are indicative of the fact that over the past thirty-five years, environmental law has evolved into a robust federal and state regulatory program. International treaties and foreign laws that regulate the environment may also affect companies with a global reach.[27] Collectively, this means that the breadth of environmental law has imposed substantial costs upon businesses. These substantial costs raise the concomitant need for those businesses regulated under both environmental laws and federal securities laws to disclose environmental-related liabilities to investors in various filings submitted to the SEC.[28] Similar to noncompliance with the federal environmental laws, failure to comply with the disclosure requirements of the federal securities laws can result in government enforcement or private claims of securities fraud.[29]

At first blush, the general obligation imposed on companies under the federal securities laws to disclose material information that the proverbial reasonable investor would want to consider in making an investment decision may seem uncomplicated for a business in terms of the three types

Superfund." *See id.* § 9611(a). Thus, in the event that money was required by EPA to fund an investigation or cleanup of a contaminated site, the Superfund was a funding source. *Id.*

26 The liability provisions of CERCLA are set out in 42 U.S.C. § 9607(a) (2000). Under CERCLA's liability regime, four classes of parties can face liability for the cleanup of a site contaminated with hazardous substances: 1) the current owners or operators of a contaminated site; 2) those who owned or operated the site during the period contamination occurred; 3) generators of hazardous substances disposed at a site; and 4) those who transported hazardous substances to a site. *Id.* Although silent on the specific type of liability a so-called potentially responsible party (PRP) can face, courts have interpreted CERCLA as imposing strict, joint, and several liability. *See, e.g.*, United States v. Monsanto Co., 858 F.2d 160, 167 (4th Cir. 1988) ("We agree with the overwhelming body of precedent that has interpreted section 107(a) [of CERCLA] as establishing a strict liability scheme."); United States v. Chem-Dyne Corp., 572 F. Supp. 802, 810 (S.D. Ohio 1983) (discussing "persons potentially liable" under CERCLA and placing the burden on the potentially liable party to show apportionment of the harm in order to avoid joint and several liability).

27 For example, in 2005 EPA amended nitrogen oxide (NOx) emission standards for new commercial aircraft engines in order to bring U.S. standards in line with emission standards of the United Nations International Civil Aviation Organization. EPA explained, "Because aircraft engines are international commodities, there is a commercial benefit to consistency between U.S. and international emission standards and control program requirements." ENVTL. PROT. AGENCY, NEW EMISSION STANDARDS FOR NEW COMMERCIAL AIRCRAFT ENGINES 3 (2005), *available at* http://www.epa.gov/OTAQ/regs/nonroad/aviation/420f05105.pdf.

28 Such filings include the registration statements required for the sale of a new offering of securities under section 5(c) of the Securities Act of 1933, 15 U.S.C. § 77e(c) (2006); the registration of securities under section 12(a) of the Securities Exchange Act of 1934, *Id.* § 78l(a) (2006), prior to listing a security for sale on an exchange; and periodic reports under section 13(a) of the Securities Exchange Act of 1934, 15 U.S.C. § 78m(a) (2006). Periodic reports required by publicly traded companies include annual reports, or "10-Ks," and quarterly reports, or "10-Qs." 17 C.F.R. §§ 240.13a-13(a), 249.308a, 249.310 (2008). If certain changes occur in a publicly traded company's operations before the need to file a 10-K or 10-Q, those changes may necessitate the filing of an "8-K" with the SEC to alert the agency and investors of the change. *Id.* §§ 240.13a-11(a), 249.308 (2008).

29 See Part V for a summary of the actions that the government and private parties may assert for the failure to adequately disclose liabilities under the federal securities laws.

of environmental costs or liabilities discussed above.[30] The management of a hypothetical publicly traded company, for example, Acme Inc., may know that new environmental regulations require it to upgrade existing pollution control equipment at several plants and that the capital costs for such equipment are several million dollars, with estimated annual operating and maintenance costs of another several hundred thousand dollars. If deemed material, these costs represent a straight forward environmental liability matter for Acme Inc. to disclose to existing and potential investors, since the capital costs are readily ascertainable as are the operating and maintenance costs.

But to illustrate the complexity that disclosure of environmental liabilities can present to publicly traded companies, suppose that according to EPA, Acme Inc. is also a potentially responsible party (PRP) at a Superfund site that requires comprehensive investigation and remediation to address soil and groundwater contaminated with an array of hazardous substances.[31] Assume further that it is early in the Superfund process at the site, and all that is known to Acme Inc. and its counsel, in terms of costs, is that to date the government has incurred substantial expenses conducting a preliminary investigation and removal action.[32] It is quite clear from representatives of EPA that the government will seek the past costs it has incurred from the PRPs, some of whom are no longer in business and are thus unable to contribute to either the reimbursement of the government's past expenditures or towards the future site costs necessary to complete the investigation and remediation. It is also known that the final remedy to address the contamination at the site will run into the tens of millions of dollars, but precisely what the final remedy and its associated costs will be are far from known with any precision at the time Acme Inc. is notified of its PRP status by the government. In light of such uncertainties as to Acme Inc.'s ultimate liability exposure at this Superfund site, the disclosure obligation attendant to this type of environmental liability can present one of the more challenging disclosure issues for publicly traded companies under the federal securities laws.[33]

An even more challenging disclosure issue for our hypothetical Acme Inc. arises from potential climate change-related liabilities associated with the emission of greenhouse gases. A discussion of the precise nature of the

30 *See, e.g.*, TSC Industries, Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976) (describing the general standard for determining the materiality of an omitted fact); *see also* Basic Inc. v. Levinson, 485 U.S. 224, 232 (1988) (stating that application of the *TSC Industries* materiality standard to preliminary merger discussion "is not self-evident").

31 See note 26 for a summary of the CERCLA liability provisions.

32 The word "removal" is a term of art under CERCLA and is defined as actions taken to temporarily abate the threat that a release of hazardous substances presents to the environment. 42 U.S.C. § 9601(23) (2000). The steps taken as a permanent solution to the release or threat of release of hazardous substances, on the other hand, are referred to as "remedial actions" under CERCLA. *Id.* § 9601(24).

33 *See* Emily S. Plishner, *Environmental Financial Disclosure: What to Say and Where to Say It*, CHEMICAL WK., Dec. 8, 1993, at 49, 49 ("Even when it is obvious that an environmental loss is likely, as when a company has been named a potentially responsible party (PRP) at a Superfund site, it is often difficult to quantify the loss.").

climate change risks and liabilities that a company such as Acme Inc. might encounter follows below. While these risks are not real for our hypothetical Acme Inc., the risks and costs associated with climate change are far from hypothetical today for many businesses.

### *B. Climate Change Risks and Liabilities*

To appreciate the risks climate change presents to businesses and to understand why those risks merit disclosure to the investing public requires a discussion of those specific risks, which one report summarizes as follows:

> Climate change will have far-reaching impacts on U.S. companies. More extreme-weather events, regulations to curb greenhouse gas emissions, and growing demand for climate-friendly technologies are just a few of the ways that climate change will ripple through nearly every business in the United States. No sector is immune to these impacts.[34]

Another report anticipates that, in terms of the financial impact associated with climate change, it "will influence economic output in the developed world via several different paths, including the availability of commodities essential for economic growth, such as water, food and energy."[35] Similar to the previous disclosure uncertainties that arose following the enactment of federal environmental laws, particularly CERCLA, businesses face uncertainties in determining how to provide the SEC and investors with information concerning the risks and material liabilities associated with the evolving environmental challenges presented by the shifting landscape of climate change and its impacts on the planet.

#### *1. The Regulatory Risks of Climate Change*

With increasing confidence in the science of climate change, and the dire anticipated effects arising from an increasingly warmer planet, repeated calls have come for urgent legislative and regulatory actions responsive to the threat that scientists have predicted and that are becoming more apparent.[36] There have been, for instance, a number of bills proposed in Congress targeting climate change.[37] Moreover, in light of the Supreme Court's decision in *Massachusetts v. United States Environmental Protection*

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34 Mindy Lubber & Julie Fox Gorte, *Preface* to CALVERT & CERES, CLIMATE RISK DISCLOSURE BY THE S&P 500, at i (2007), *available at* http://www.cdproject.net/download.asp?file=CDP4_S_and_P500_Report.pdf.

35 NICHOLAS STERN, THE ECONOMICS OF CLIMATE CHANGE 140 (2007).

36 *See, e.g.*, U.S. CLIMATE ACTION P'SHIP, A CALL FOR ACTION 2–3 (2007), *available at* http://us-cap.org/USCAPCallForAction.pdf (recommending "prompt enactment of national legislation in the United States to slow, stop and reverse the growth of greenhouse gas (GHG) emissions over the shortest period of time reasonably achievable").

37 *See* RAMSEUR & YACOBUCCI, *supra* note 6, at 1–2.

*Agency* (*Massachusetts v. EPA*),[38] Congress, federal regulators, and others have indicated that some type of carbon dioxide-focused regulatory regime is likely in the not too distant future.[39] More importantly, following his historic election, President Obama indicated that, even in the midst of a financial crisis the likes of which have not been seen since the Great Depression, addressing climate change remains a priority in his administration.[40] The President's political appointees have echoed his commitment towards promulgating new regulations targeting reduced emissions of greenhouse gases.[41]

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38 549 U.S. 497 (2007). By a vote of five to four, the Court held that, despite EPA's assertions to the contrary, greenhouse gases, including carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons, were pollutants as that term is defined in the CAA. *Id.* at 501, 528–29. *See also* 42 U.S.C. § 7602(g) (2000) (defining "air pollutant" as "any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive . . . substance or matter which is emitted into or otherwise enters the ambient air"). A remarkable aspect of the majority opinion is the extent to which Justice Stevens catalogued the predicted harms that are associated with climate change. *See Massachusetts v. EPA*, 549 U.S. at 521–23. In dissent, Chief Justice Roberts found that action to address climate change was under consideration by the Executive and Legislative Branches and consequently concluded that the petitioners' challenge to EPA's refusal to take action was nonjusticiable. *Id.* at 535 (Roberts, C.J., dissenting). Justice Scalia also wrote a dissent, finding under the plain language of section 202(a)(1) of the CAA that EPA was granted broad discretion as to how it could respond to rulemaking petitions such as that submitted by the petitioners, and concluded his dissent by writing, "No matter how important the underlying policy issue at stake, this Court has no business substituting its own desired outcome for the reasoned judgment of the responsible agency." *Id.* at 560.

39 *See Industry Eyes Options to Soften impact of Upcoming NSR Rules for CO2*, INSIDE E.P.A. WKLY. REP., Sept. 28, 2007, at 1, 13–14.

40 John M. Broder, *Obama Affirms Climate Change Goals*, N.Y. TIMES.COM, Nov. 19, 2008, http://www.nytimes.com/2008/11/19/us/politics/19climate.html?scp=49&st=nyt (last visited July 19, 2009) ("President-elect Barack Obama, in strongly-worded remarks to a gathering of governors and foreign officials . . . said he had no intention of softening or delaying his aggressive targets for reducing emissions that cause the warming of the planet.").

41 *See, e.g.*, Memorandum from Lisa P. Jackson, Adm'r, Envtl. Prot. Agency, to EPA Employees (Jan. 23, 2009), http://www.epa.gov/administrator/memotoemployees.html (last visited July 19, 2009). In the memorandum, Administrator Jackson stated that climate change was among the "five priorities that will receive my personal attention," and said the following regarding climate change in particular:

> Reducing greenhouse gas emissions. The President has pledged to make responding to the threat of climate change a high priority of his administration. He is confident that we can transition to a low-carbon economy while creating jobs and making the investment we need to emerge from the current recession and create a strong foundation for future growth. I share this vision. EPA will stand ready to help Congress craft strong, science-based climate legislation that fulfills the vision of the President. As Congress does its work, we will move ahead to comply with the Supreme Court's decision recognizing EPA's obligation to address climate change under the Clean Air Act.

*Id. See also* John M. Broder, *E.P.A. Expected to Regulate Carbon Dioxide and Other Heat-Trapping Gases*, N.Y. TIMES, Feb. 19, 2009, at A13 ("The Environmental Protection Agency is expected to act for the first time to regulate carbon dioxide and other greenhouse gases that scientists blame for the warming of the planet, according to top Obama administration officials. The decision, which most likely would play out in stages over a period of months, would have a profound impact on transportation, manufacturing costs and how utilities generate power.").

Even EPA, which was painfully slow under President George W. Bush to publicly recognize the existence of climate change, the role greenhouse gases play, and the predicted devastating impacts that will result, eventually lost its reluctance during his administration and finally readily admitted that "global climate change is a substantial and critical challenge for the environment."[42] In light of the agency's recent history of essentially ignoring climate change as a matter worthy of recognition or regulatory consideration, it was startling that former EPA Administrator Stephen L. Johnson cited with approval the work performed to date by the Intergovernmental Panel on Climate Change (IPCC). He commented in the waning months of the Bush administration that "[a]ll of the U.S. is very likely to warm during this century, and most areas of the U.S. are expected to warm by more than the global average."[43] Administrator Johnson also cataloged the negative aspects of climate change for the U.S., including "more intense, more frequent, and longer lasting" heat waves,[44] increased precipitation events "increasing the risk of flooding, greater runoff and erosion, and thus the potential for adverse water quality effects,"[45] and rising sea levels.[46] In a series of particularly sobering admissions based on IPCC data, former EPA Administrator Johnson described climate change's "key impacts for North America":

> Coastal communities and habitats will be increasingly stressed by climate change impacts interacting with development and pollution; climate change will constrain North America's over-allocated water resources, increasing competition among agricultural, municipal, industrial and ecological uses; climate change impacts on infrastructure and human health and safety in urban centers will be compounded by aging infrastructure, maladapted urban form and building stock, urban heat islands, air pollution, population growth and an aging population; and, disturbances such as wildfire and insect outbreaks are increasing and are likely to intensify in a warmer future with drier soils and longer growing seasons.
>
> Severe heat waves are projected to intensify in magnitude and duration over the portions of the U.S. where these events already occur, with likely increases in mortality and morbidity, especially among the elderly, young and frail. Ranges of vector-borne and tick-borne diseases in North America may expand but with modulation by public health measures and other factors.
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> . . . .

42 California State Motor Vehicle Pollution Control Standards: Notice of Decision Denying a Waiver of Clean Air Act Preemption for California's 2009 and Subsequent Model Year Greenhouse Gas Emission Standards for New Motor Vehicles, 73 Fed. Reg. 12,156, 12,168 (Mar. 6, 2008).

43 *Id.* at 12,166.

44 *Id.*

45 *Id.*

46 *Id.*

> The IPCC projects with virtual certainty declining air quality in the U.S. and other world cities due to warmer and fewer cold days and nights and/or warmer/more frequent hot days and nights over most land areas. Climate change is expected to lead to increases in ozone pollution, with associated risks in respiratory infection and aggravation of asthma. Ozone exposure also may contribute to premature death in people with heart and lung disease.[47]

One reason it is important to consider EPA's views on climate change impacts is that they raise the specter of the regulatory risks that businesses face. The parade of climate change horribles cited by former EPA Administrator Johnson could readily serve as the basis of an endangerment finding under section 108 of the CAA[48] that would, in turn, require EPA to list the main heat-trapping gas, carbon dioxide, as a criteria pollutant and consequently obligate EPA to set primary and secondary national ambient air quality standards for carbon dioxide pursuant to section 109 of the CAA.[49] If that were to occur under section 110[50] of the statute, the states would have to amend their existing air pollution control regulations, or "state implementation plans," specifically to regulate carbon dioxide emissions as they do the other criteria pollutants.[51] This would mean, of course, that

47 *Id.* at 12,167 (citation omitted).

48 Section 108 provides in part that the administrator of EPA shall list pollutants that in his or her judgment "cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare," are emitted from "numerous or diverse mobile or stationary sources," and for which there are no existing air quality criteria. Clean Air Act, 42 U.S.C. § 7408(a)(1)(A)–(C) (2000). After *Massachusetts v. EPA*, there is no legal basis to assert that carbon dioxide is not a pollutant that causes or contributes to air pollution. Further, based on a growing body of scientific evidence, as well as the remarks of former EPA Administrator Johnson concerning the effects of climate change on the United States, there also is no legal or factual basis to assert that the effects of increasing carbon dioxide levels are not anticipated to endanger public health or welfare. Lastly, there is no basis to claim that carbon dioxide is not from numerous and diverse sources. Thus, it would appear that all the statutory factors are met for the EPA administrator to exercise her judgment and decide to list carbon dioxide as a criteria pollutant under section 108 of the CAA.

49 Section 109 of the CAA provides in relevant part that "[t]he Administrator . . . shall publish proposed regulations prescribing a national primary ambient air quality standard and a national secondary ambient air quality standard for each pollutant [listed under section 108]." *Id.* § 7409(a)(1)(A) (2000). Similarly, section 202 provides in part that for mobile sources of pollutants, "[t]he Administrator shall by regulation prescribe . . . standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in his [or her] judgment cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare." *Id.* § 7521(a)(1). Indeed, on April 24, 2009, EPA Administrator Jackson proposed "to find that atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202(a) of the Clean Air Act." Proposed Endangerment and Cause or Contribution Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 18,885, 18,886 (Apr. 24, 2009). Exactly what mobile source emission regulations will arise from this proposed endangerment finding remain to be seen; the public comment period closed June 23, 2009, and presumably the EPA is considering what course of action to take in light of the voluminous amounts of public comments received. *See id.*

50 42 U.S.C. § 7410 (2000).

51 Section 110 of the CAA states in part that "[e]ach State shall . . . adopt and submit to the Administrator . . . after the promulgation of a national primary ambient air quality standard . . .

businesses would face a new set of highly complex state regulations that beyond a doubt would impose enormous compliance costs necessary to reduce carbon dioxide emissions.[52]

Notwithstanding former Administrator Johnson's candid acknowledgment in the spring of 2008 of the threat climate change presents, no specific federal legislative or regulatory action has yet been taken to require businesses to dramatically curb carbon dioxide and other greenhouse gas emissions.[53] The odds are quite high, though, with President Obama in the White House and Lisa Jackson as the new EPA Administrator, coupled with Democratic control of the House and Senate, that we are on the cusp of federal greenhouse gas legislation and regulation.

In addition to likely federal regulatory action, the regulatory risks that businesses face also include a multitude of rapidly increasing state and regional efforts that are aimed at reducing greenhouse gases.[54] Thus, more and more businesses are confronting the obligation and the associated costs to comply with state and regional climate change laws and regulations that focus on reducing greenhouse gas emissions.[55]

The regulatory risks that businesses face are not limited to potential federal or current local and state efforts targeting climate change. The 1997 international agreement, the Kyoto Protocol, requiring a reduction in the emissions of greenhouse gases, was adopted by more than one hundred countries and required participating industrialized nations to reduce greenhouse gas emissions by an average of 5.2% below 1990 emission levels between a commitment period lasting from 2008 to 2012, with the precise emissions reduction targets varying from country to country.[56] The Kyoto Protocol expires in 2012, but discussions to negotiate a new treaty are underway and officially started in December of 2007.[57] Precisely what new treaty framework this call for renewed international action will result in remains to be seen, but it is a further example of another regulatory risk that

under section 7409 of this title for any air pollutant, a plan which provides for implementation, maintenance, and enforcement of such primary standard . . . within such State." *Id.* § 7410(a)(1).

52 Even in the absence of proposed climate change regulations from EPA headquarters, a number of EPA regions are taking action to implement greenhouse gas regulations. The plans under consideration by several EPA regions are voluntary, but anticipate that with a change in administrations following the 2008 election a new regulatory program requiring mandatory reductions in greenhouse gas emissions will be put into place. *See EPA Regions Draft Internal GHG Plans to Prepare for Climate Rules*, INSIDE E.P.A. WKLY. REP., Aug. 15, 2008, at 1, 4.

53 *See supra* notes 6, 41, and accompanying text.

54 See, for example, Kaswan, *supra* note 6, at 42–78, for a summary of state and local climate change-focused regulatory efforts.

55 *See, e.g.*, Mary Ellen Hogan, *California Climate Change Initiatives Leading the West and the Nation*, NAT. RESOURCES & ENV'T, Winter 2008, at 14, 14 ("California's leadership [on addressing climate change] has influenced other states to follow California's lead and how its political leaders in Washington are influencing Congress to move ahead on the national level.").

56 David Freestone, *The UN Framework Convention on Climate Change, the Kyoto Protocol, and the Kyoto Mechanisms*, *in* LEGAL ASPECTS OF IMPLEMENTING THE KYOTO PROTOCOL MECHANISMS 3, 9–10 (David Freestone & Charlotte Streck eds., 2005).

57 *See Contemporary Practice of the United States Relating to International Law*, 102 AM. J. INT'L L. 155, 165 (2008) (describing the climate change negotiations that began in 2007).

businesses may confront, particularly those global businesses headquartered in the United States with international operations that are subject to the reductions called for by the existing Kyoto Protocol and any new international effort to reduce greenhouse gases.

With increased focus at the local, state, federal, and international levels on taking meaningful regulatory steps towards reducing greenhouse gas emissions, the regulatory risks to businesses increase. Installation of expensive control equipment may be required to reduce emissions, costly process modifications might be necessary in the absence of technically feasible control equipment, a carbon trading program modeled after the CAA's sulfur dioxide emission trading program may result, a carbon tax might be imposed as an incentive to reduce emissions, or some combination of the above approaches may follow from new legislation and regulation. The end result will without a doubt cause a material increase in costs to businesses. Those with carbon dioxide-intensive facilities will likely see increased costs of operations arising from domestic efforts to reduce greenhouse gases, as will those that manufacture greenhouse gas emitting products, such as automobiles, when faced with a need for substantial product redesign in order to comply with new greenhouse gas regulations. Of course, those businesses that fail to comply with a new federal greenhouse gas regulatory regime will face enforcement-related liabilities. Perhaps some noncompliant facilities will even be ordered to shutdown.

Another regulatory-related risk that businesses will face when Congress or EPA adopts legislation or regulations focused on reducing greenhouse gas emissions is even higher energy costs. New legislation or regulations will impact energy producing facilities such as coal-fired electric utilities and refineries especially hard, since their operations emit very large amounts of carbon dioxide.[58] The additional regulatory costs will then be passed along to consumers of energy, with large customers—businesses—shouldering substantially higher energy costs.

### *2. The Direct Physical Risks to Businesses*

It may be that few businesses face a greater likelihood of catastrophic financial losses resulting from the negative predicted effects of climate change than do insurers.[59] Hurricane Katrina vividly illustrates the type of

58 *See, e.g.*, U.S. DEP'T OF ENERGY & U.S. ENVTL. PROT. AGENCY, CARBON DIOXIDE EMISSIONS FROM THE GENERATION OF ELECTRIC POWER IN THE UNITED STATES 3 (2000), *available at* http://www.eia.doe.gov/cneaf/electricity/page/co2_report/co2emiss.pdf (discussing the emissions from coal-fired power plants).

59 *See* SWISS RE, OPPORTUNITIES AND RISKS OF CLIMATE CHANGE 23 (2002), *available at* http://www.swissre.com/resources/c981a000462ff1898450d4300190b89f-Klimaaenderung_en.pdf (commenting in general on the climate change risks faced by the insurance industry). The risks posed by climate change to insurers results in large part from the attendant unpredictability of weather phenomena:

> In a constant climate, the sum of all weather-related losses and damage would be calculable over long periods. The more variable the climate, the more variable the extent of damage per time unit, and the more difficult to estimate weather risks reliably. For the

unprecedented property damage claims that may become routine for the insurance industry if destructive weather-related events do occur more often and with more severity as one of the predicted effects of climate change.[60] Even insurers that do not provide casualty or property damage insurance may not escape the negative financial effects of climate change since it is likely, for instance, that health and life insurers will also confront increased claims related to the adverse health impacts of extreme weather on insured individuals.[61]

Hurricane Katrina is also illustrative of the physical risks that businesses beyond casualty insurers can face as a result of the increased severity of weather events that are anticipated by scientists as a consequence of climate change. Even if they are rarely subjected to an event as powerful and dramatic as a category five hurricane, businesses will likely see capital costs and operating expenses substantially increase as hard assets are subjected to the harsh effects of extreme weather events arising from climate change. These assets will require more frequent maintenance, costly replacement, and maybe even relocation to areas less impacted by the ravages of climate change.[62]

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> insurer, this translates into an increased risk of being ruined by a sudden, unexpectedly high loss burden.

*Id.* At least one property casualty insurer, State Farm, has decided to leave the Florida market, apparently because it presents too great a risk of loss. *See Morning Edition: State Farm Abandons Florida's Homeowners Market* (NPR radio broadcast Jan. 28, 2009), http://www.npr.org/templates/story/story.php?storyId=99942808 (last visited July 19, 2009) ("State Farm has notified officials in Florida that it plans to stop selling property insurance in the state. The move may leave 1.2 million State Farm customers in the hurricane-prone state looking for an insurance company.").

60 *See* RAWLE O. KING, CONGRESSIONAL RESEARCH SERVICE REPORT FOR CONGRESS: HURRICANE KATRINA: INSURANCE LOSSES AND NATIONAL CAPACITIES FOR FINANCING DISASTER RISK, at CRS-4 (2005) ("[P]rivate insurer losses from Hurricane Katrina are estimated to be $40–$60 billion. This would make [Hurricane Katrina] the costliest natural disaster in U.S. history, exceeding Hurricane Andrew in 1992 and the September 11, 2001 terrorist attacks. . . . Total damages are expected to exceed $200 billion."); *see also* STERN, *supra* note 35, at 150 (describing Hurricane Katrina as the "costliest weather catastrophe on record"). Hurricane Katrina resulted in economic losses totaling approximately 1.2% of gross domestic product, and imposed incalculable human costs—over 1300 people died and over a million became refugees from their homes. *Id.*

61 *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE WORKING GROUP II, CLIMATE CHANGE 2001: IMPACTS, ADAPTATION, AND VULNERABILITY 429 (James J. McCarthy et al. eds., 2001) [hereinafter CLIMATE CHANGE 2001] ("Climate- and weather-related risks faced by life/health insurers include injuries or death resulting from extreme weather episodes, water- or vector-borne diseases, degraded urban air quality, pressure on the quality and adequacy of food and water supplies, and increased vulnerability to power failures.").

62 *See* STERN, *supra* note 35, at 155. Stern notes:

> Rising sea levels will demand heavy investment in flood protection around ports and the export and import related activities concentrated in and around them. Stronger storm surges, winds and heavier rainfall already point to the requirement for stronger ships and sturdier offshore oil, gas and other installations. Multi-billion dollar processing installations such as oil refineries, liquefied natural gas plants and re-gasification facilities may have to be re-located to more protected areas inland.

Agriculture is another multibillion-dollar business in the United States and requires predictable weather patterns to thrive.[63] One of the hallmarks of climate change is disruption of established and expected weather patterns.[64] Prolonged droughts, unprecedented flooding, and severe temperatures will exert significant adverse consequences on the agricultural sector, which is perhaps the most weather-dependent business segment of both our national economy and the global economy.[65] It may be that few other sectors, so vital to day-to-day life, will more directly feel the brunt of the physical risks attendant to climate change than will agriculture.[66] The impact on agriculture will lead to at best higher food prices and at worst severe shortages of agricultural commodities.[67]

Apart from regulatory-related costs driving energy prices higher, mentioned earlier,[68] the negative direct physical effects of climate change will also contribute to higher energy costs.[69] That is, climate change will adversely affect energy production facilities, which will exacerbate the anticipated rise in energy prices.[70]

### *3. Litigation Risks*

Litigation is yet another risk that businesses face with respect to climate change. One type of litigation risk involves cases where plaintiffs seek redress against large emitters of greenhouse gases or manufacturers of greenhouse gas emitting products for the adverse effects arising from a warming planet.[71] Another area of potential litigation exposure involves challenges in the administrative forum or in the courts to the construction of new or modified stationary sources of greenhouse gas emissions.

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> This would reverse decades of building steel mills, petrochemical plants and other energy-related facilities close to the deepwater ports accommodating bulk cargo vessels, super-tankers and ever larger container ships which have become the key vectors of rising global trade and just-on-time production schedules.

*Id.*

63 *See id.* at 80 (explaining why food production is particularly sensitive to climate change).

64 *See id.* at 16–17 (discussing the expected changes in weather patterns as a result of climate change).

65 *See id.* at 115–16.

66 *See id.* at 141 (noting that in areas such as the Western United States, climate change will cause "increasing water shortages in regions where water is already scarce" and will result in "substantial declines in crop yields").

67 *Id.*

68 *See supra* Part II.B.1.

69 *See* STERN, *supra* note 35, at 142.

70 *See id.* at 142–43 (noting that during a 2003 heat wave in Europe, French nuclear power plants had to decrease electricity production because cooling water from rivers became so warm as to impede cooling). "In California, hydropower generation is predicted to fall by 30%" due to reduced water levels in reservoirs. *Id.* at 143.

71 As mentioned earlier, businesses also face potential liability for the failure to adequately disclose climate change risk. *See supra* Part II.A.

*a. Damages for the Harms Caused by Climate Change*

Two similar cases serve as examples of the litigation risk that businesses face resulting from the harms associated with climate change. In *Connecticut v. American Electrical Power Co., Inc.* (*American Electrical*)[72] and *California v. General Motors Corp.*,[73] damages were sought by plaintiffs for the direct consequences of climate change-related adverse impacts. Ultimately both cases were disposed of through motions to dismiss on the grounds that the issues of climate change and the actions needed to address it raised nonjusticiable political questions.[74] As found by the district court in the *General Motors* case:

> [T]he adjudication of Plaintiff's claim would require the Court to balance the competing interests of reducing global warming emissions and the interests of advancing and preserving economic and industrial development. The balancing of those competing interests is the type of initial policy determination to be made by the political branches, and not this Court.[75]

Although neither case seeking damages or injunctive relief has proceeded past the motion to dismiss stage, both decisions have been appealed.[76] If either appellate court were to reverse the district court and allow the suit to proceed, multitudes of businesses would likely face similar suits seeking recovery of climate change-related damages. Given the breadth of harms predicted to flow from climate change, the potential damages that the business defendants are exposed to in these two cases could be into multimillion dollar amounts.[77] The floodgates of climate change litigation would certainly open if the plaintiffs prevailed on the merits following appeal, and defendants could face billions of dollars in liability.

72 406 F. Supp. 2d 265 (S.D.N.Y. 2005).

73 No. C06-05755 MJJ, 2007 WL 2726871 (N.D. Cal. Sept. 20, 2006) (order granting defendants' motion to dismiss). The defendants included General Motors, Toyota Motor North America, Inc., Ford Motor Company, Honda Motor Co., Inc., Daimler Chrysler Corp., and Nissan North America, Inc. *Id.* at *1.

74 *American Electrical*, 406 F. Supp. 2d at 274 ("Because resolution of the issues presented requires identification and balancing of economic, environmental, foreign policy, and national security interests, 'an initial policy determination of a kind clearly for non-judicial discretion' is required." (quoting Vieth v. Jubelirer, 541 U.S. 267, 278 (2004))); *Gen. Motors Corp.*, 2007 WL 2726871, at *16. In *General Motors*, the district court relied heavily on the Supreme Court's decision in *Baker v. Carr*, 369 U.S. 186 (1962), for its holdings that a case seeking damages and abatement of the harms resulting from climate change presented nonjusticiable political questions. *Gen. Motors Corp.*, 2007 WL 2726871, at *6.

75 *Gen. Motors Corp.*, 2007 WL 2726871, at *8.

76 Notice of Appeal, Connecticut v. Am. Elec. Power Co., Inc., 406 F. Supp. 2d 265 (S.D.N.Y. Sept. 22, 2005) (No. 05-5104-cv); Notice of Appeal, California v. Gen. Motors Corp., 2007 WL 2726871 (N.D.Cal. Oct. 17, 2007) (No. C06-05755 MJJ).

77 See generally Complaint for Damages and Demand for Jury Trial at 1, Native Village of Kivalina v. ExxonMobil Corp., No. C 08-01138 SBA (N.D. Cal. Feb. 26, 2008), *available at* http://www.climatelaw.org/cases/country/us/kivalina/Kivalina%20Complaint.pdf (claiming damages where the scope of harm was smaller).

The lack of litigation success so far in cases seeking damages for climate change harms has not discouraged others from seeking redress in the courts for the adverse impacts associated with rising global temperatures attributable to carbon dioxide emissions. In a case filed subsequent to both *American Electrical* and *General Motors*, the Native Village of Kivalina and City of Kivalina filed suit in federal district court against a host of major energy businesses, including ExxonMobil, BP America, Royal Dutch Shell, Duke Energy, and Edison International, seeking to hold them liable under several legal theories for the impact of rising sea levels resulting from climate change in Alaska.[78] Asserting that the "defendants knew or should have known of the impacts of their emissions on global warming and on particularly vulnerable communities such as Alaskan coastal villages,"[79] the suit seeks the estimated $95 to $400 million it will cost to relocate the town and village.[80]

*b. Inability to Construct New or Modified Emission Sources*

Another type of litigation risk is the growing opposition that businesses face in administrative proceedings or in the courts when permits are sought for projects that emit substantial amounts of carbon dioxide and other greenhouse gases. Permits, such as those required for new or modified stationary sources of regulated air pollutants under the CAA,[81] provide an administrative forum that is ripe with opportunities for regulators and public interest groups to challenge on climate change grounds either the need for the project or the issuance of the permit necessary to construct or modify such sources.

This is an evolving area of risk to businesses and came to the fore after Kansas regulators denied a permit for a proposed coal-fired power plant based on concerns about the increased emissions of carbon dioxide and other greenhouse gases that the plant would emit and their contribution to climate change.[82] In a noteworthy finding, the Kansas regulators pointedly concluded that no permit should issue because the proposed coal-fired power plant presented a risk to human health and the environment as a

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78 *Id.*

79 *Id.* at 2.

80 *Id.* at 1. Several defendants have moved to dismiss the complaint filed by the Village of Kivalina and the City of Kivalina. *See* Amended Re-Notice of Motion and Motion of Certain Oil Company Defendants to Dismiss Plaintiffs' Complaint Pursuant to Fed. R. Civ. P. 12(b)(6), Native Village of Kivalina v. Exxon Mobil Corp., No. C 08-01138 SBA (N.D. Cal. Mar. 3, 2009), *available at* http://turtletalk.files.wordpress.com/2009/03/oil-companies-re-notice-of-motion-to-dismiss.pdf.

81 *See* 42 U.S.C. §§ 7661–7661f (2000). Absent the issuance of a permit under these provisions of the CAA for new or modified major stationary sources of emissions, construction and operation of such sources is a violation of the statute, subjecting violators to administrative, civil, or criminal liability. *See Id.* at §§ 7413, 7661b(a).

82 *See* Steven Mufson, *Power Plant Rejected Over Carbon Dioxide for First Time*, WASH. POST, Oct. 19, 2007, http://www.washingtonpost.com/wp-dyn/content/article/2007/10/18/AR2007101802452.html?nav=emailpage (last visited July 19, 2009).

result of the pollutants that it would emit.[83] Absent the permit, the project cannot proceed.[84]

In another permit challenge involving a coal-fired power plant, a Georgia state court reversed the decision of an administrative law judge granting a permit under the CAA that would have authorized construction and operation of a new coal-fired electricity generating facility.[85] In reversing the administrative law judge, the court concluded that the failure to include carbon dioxide as one of the pollutants considered in the best available control technology analysis was inconsistent with the express language of the CAA.[86]

What the permit denials in Kansas and Georgia mean for businesses is that, at a minimum, they must be cognizant that major projects which emit carbon dioxide and other greenhouse gases will come under closer scrutiny by regulators and public interest groups in the permitting stage. This could result in lengthy delays and the imposition of permit conditions that would require expensive control technologies to reduce carbon emissions, adding to project costs. In terms of additional risk to new or modified stationary sources, public interest environmental groups no doubt are emboldened as a result of what has occurred in Kansas and Georgia and are more likely to mount vigorous campaigns during the permitting stage to challenge proposed projects that emit large amounts greenhouse gases.[87] If the permit

83 Letter from Roderick Bremby, Sec'y, Kan. Dep't of Health and Env't, to Wayne Penrod, Senior Manager, Sunflower Elec. Power Corp. (Oct. 18, 2007) (on file with author). In the letter, Secretary Bremby denies a construction permit for a proposed coal-fired power plant, stating that the "emission of air pollution from the proposed coal fired plant, *specifically carbon dioxide emissions*, presents a substantial endangerment to the health of persons or to the environment." *Id.* at 1–2 (emphasis added); *see also* Mufson, *supra* note 82 ("'[I]t would be irresponsible to ignore emerging information about the contribution of carbon dioxide and other greenhouse gases to climate change and the potential harm to our environment and health if we do nothing.'" (quoting Secretary Bremby)). Sunflower Electric pursued an administrative appeal of the permit denial and also filed suit in federal district court, alleging denial of equal protection and violation of the Commerce Clause. *See* Complaint for Declaratory and Injunctive Relief at 1, Sunflower Elec. Power Corp. v. Sebelius, No. 08-2575-EFM (D. Kan. Nov. 17, 2008).

84 *See* 42 U.S.C. § 7661b(a) (2000).

85 Friends of the Chattahoochee, Inc. v. Couch, No. 2008CV146398, at 19 (Super. Ct. Ga. June 30, 2008) (final order).

86 *Id.* at 6–9. The court relied on *Massachusetts v. EPA* to conclude that carbon dioxide was a pollutant and, as such, any new construction required an emission limitation under the best available control technology provision in section 165(a)(4) of the CAA, 42 U.S.C. § 7475(a)(4) (2000). *See also* 42 U.S.C. § 7479(3) (2000) (defining "best available control technology" as an "emission limitation based on the maximum degree of reduction of each pollutant . . . emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility").

87 *See, e.g.*, *In re* Deseret Power Elec. Coop., PSD Appeal No. 07-03 (Envtl. Appeals Bd. Nov. 13, 2008) (denying review in part and remanding in part for PSD Permit No. PSD-OU-0002-04.00). The Sierra Club successfully challenged the issuance of a permit by EPA Region 8 to construct a new coal-fired electric generating facility in Utah. *Id.* at 1. The Environmental Appeals Board accepted the Sierra Club's argument that the failure of the Region to consider carbon dioxide emissions was fatal to the permit issuance. *Id.* at 63. The permit was remanded to the agency "for the Region to reconsider whether or not to impose a $CO_2$ [best available

denials are not reversed, absent the issuance of the requested permits, these projects simply cannot proceed to construction; all the costs that went into their design will probably be lost, and the financing and future profits associated with the projects will not materialize.

As discussed above, businesses face a number of risks—regulatory, physical, and litigation—arising from climate change. These risks present the likelihood of imposing substantial material costs and, as such, businesses need to consider disclosing climate change-related risk to investors.

How and why did the obligation publicly traded companies have to provide disclosure of liabilities arise? In addition, what does the current SEC regulatory regime require in terms of disclosure? These are the subjects of Part III.

## III. THE IMPETUS FOR THE FEDERAL REGULATION OF SECURITIES: THE CRASH OF 1929

Prior to the enactment of the federal securities laws, oversight of the sale and trading of securities was a matter left to the states to regulate.[88] Federal regulation in the area of securities and the exchanges over which they were sold was virtually nonexistent and efforts by Congress to legislate in the securities arena were typically met with vigorous opposition.[89] The antagonism towards federal securities regulation substantially melted away following the stock market crash of 1929,[90] which loudly announced its

control technology] limit in light of the Agency's discretion to interpret . . . what constitutes a 'pollutant subject to regulation under [the CAA].'" *Id.*

88 See 1 LOUIS LOSS ET AL., SECURITIES REGULATION 48–61 (4th ed. 2006), for a general overview of state securities regulation. Kansas was the first state to pass securities legislation, and its securities law, as well as other state securities statutes, is referred to as a "blue sky law" because it was enacted to "to protect the Kansas farmers against the industrialists selling a piece of the blue sky." THOMAS LEE HAZEN, THE LAW OF SECURITIES REGULATION 20 (5th ed. 2005).

89 *See* MICHAEL E. PARRISH, SECURITIES REGULATION AND THE NEW DEAL 20 (1970) (quoting then-president of the Investment Bankers Association, Pliny Jewell, as saying two years before the 1929 crash that "'[t]here is no need for Federal legislation . . . . With most of the states already with adequate specific laws, with the assistance of the postal authorities, and our basic common law . . . nothing further is needed'"); *see also* JOHN KENNETH GALBRAITH, THE GREAT CRASH: 1929, at 166 (1979) (stating that in reaction to the development of the Securities and Exchange Commission, "Wall Street—always with exceptions—was disposed to fight back. It insisted on the right of a financial community in general, and of a securities market in particular, to conduct its affairs in its own way, by its own lights and to govern itself").

90 Even after the crash of 1929, when it should have been quite apparent that comprehensive federal securities legislation was inevitable, there was still some resistance to such regulation. *See* Letter from President Franklin D. Roosevelt to Sen. Duncan U. Fletcher, Chairman, Banking & Currency Comm. (Mar. 26, 1934), *reprinted in* S. REP. NO. 73-792, at 2 (1934). President Roosevelt lamented that he had recently learned "that a more definite and more highly organized drive is being made against [the proposed Securities Exchange Act of 1934] than against any similar recommendation made by me during the past year. Letters and telegrams bearing all the earmarks of origin at some common source are pouring into the White House and the Congress." *Id.* The report also noted that in response to the then proposed Securities Exchange Act of 1934, "[s]tock exchanges have hitherto resisted proposals for their regulation by any governmental agency, on the ground that they are sufficiently able to regulate themselves to afford protection to investors." *Id.* at 4. The resistance to government regulation was unpersuasive for several reasons, in part because "however zealously exchange authorities

arrival on October 24, 1929, when "[p]rice levels wilted quickly after the opening trades . . . . There was a tidal wave of panic, not a gradual loss of confidence."[91] It became clear from the resulting congressional investigation[92] that the dramatic rise of stock prices in the late 1920s was reflective of a highly speculative stock market bubble.[93] As the details came

may supervise the business conduct of their members, the interests with which they are connected frequently conflict with the public interest." *Id.*

91 BARRIE A. WIGMORE, THE CRASH AND ITS AFTERMATH: A HISTORY OF SECURITIES MARKETS IN THE UNITED STATES, 1929–1933, at 6 (1985). Because of the sudden and precipitous drop in stock market value, October 24, 1929 became known as "Black Thursday." *Id.* One prominent author wrote concerning Black Thursday:

> Thursday, October 24, is the first of the days which history—such as it is on the subject—identifies with the panic of 1929. Measured by disorder, fright, and confusion, it deserves to be so regarded. That day 12,894,650 shares changed hands, many of them at prices which shattered the dreams and the hopes of those who had owned them.

GALBRAITH, *supra* note 89, at 98–99. Black Thursday marked only the beginning of a lengthy and costly period of market decline: "Tuesday, October 29, was the most devastating day in the history of the New York stock market, and it may have been the most devastating day in the history of markets. It combined all the bad features of all the bad days before. . . . Repeatedly and in many issues there was a plethora of selling orders and no buyers at all." *Id.* at 111.

92 *See* Comm. on Banking & Currency, Stock Exchange Practices, S. REP. NO. 73-1455, at 55 (1934) [hereinafter Stock Exchange Practices Report] ("Among the most vicious practices unearthed at the hearings before the subcommittee was the flagrant betrayal of their fiduciary duties by directors and officers of corporations who used their positions of trust and the confidential information which came to them in such positions, to aid them in their market activities. Closely allied to this type of abuse was the unscrupulous employment of inside information by large stockholders who, while not directors and officers, exercised sufficient control over the destinies of their companies to enable them to acquire and profit by information not available to others."); *see also* ELIZABETH SZOCKYJ, THE LAW AND INSIDER TRADING: IN SEARCH OF A LEVEL PLAYING FIELD 6 (1993) ("Details of the greed-induced manipulations of banking and securities practiced by the affluent during the 1920s and early 1930s awed and outraged the public. Among the evidence produced by committee counsel to spur legislative action was . . . the buying and selling of stocks by officers of corporations who had inside information of the affairs of the corporations and whose transactions on the exchange were conducted in such a manner as to prevent the public from knowing of their dealings." (internal quotation marks omitted) (quoting Letter from the Counsel for the Senate Comm. on Banking & Currency to the U.S. Senate (1933))).

93 *See* GORDON THOMAS & MAX MORGAN-WITTS, THE DAY THE BUBBLE BURST: A SOCIAL HISTORY OF THE WALL STREET CRASH OF 1929, at 4 (1979) ("Throughout 1928 the double sensations of the stock market—unprecedented volume and soaring prices—had been front-page news. There had been two major breaks, in June and December, but they were quickly forgotten. Day after day, month after month, the market had surged upward, carrying favorite stocks into the empyrean. Radio Corporation of America had gone from 85 to an incredible 420 during the year . . . . An obscure company called Western Warehouses had leaped in similar fashion. They, and the shares of a hundred companies like them, rose mainly because . . . 'the titans of the market wished them to rise.'" (quoting William R. Crawford, superintendent of the mechanical department of the New York Stock Exchange)). The rapid upward march of stock prices served to further fuel what was a classic speculative bubble:

> Almost everybody had a story to tell of a spectacular killing. An actor had made $40,000 . . . . A waiter at the Exchange's Luncheon Club had resigned, $90,000 better off, as a result of tips passed on by his customers . . . . A stenographer was $15,000 richer through selling General Motors stock she had only had for two days.

to light regarding the realities of the practices involved in the sale and purchase of securities during this prefederal regulatory period, it eventually became accepted that state-by-state regulation of the securities markets had failed to curb highly questionable initial offering and secondary trading practices.[94] Robust federal legislation was required to restore both market order and investor confidence in Wall Street;[95] consequently, no longer would securities and the financial markets through which they were traded escape broad federal regulation.[96]

### *A. Disclosure: The Essence of the Federal Securities Regulatory Regime*

In light of the conclusion that state securities regulation was ineffectual in regulating markets and combating securities fraud, as was evident from congressional testimony concerning rampant dishonesty in the markets of the 1920s,[97] Congress enacted two principal statutes to restore investor trust and confidence in the financial markets: the Securities Act of 1933[98] and the Securities Exchange Act of 1934.[99] The 1933 Act governs the offering of securities for sale,[100] and the 1934 Act regulates trading of securities in

*Id.* at 6.

94 *See, e.g.*, PARRISH, *supra* note 89, at 41 (observing that state regulations were comprised of "confused, fragmentary efforts by public governments and by private associations").

95 *See* Helen S. Scott, *Federal Regulation of Securities*, *in* FUNDAMENTALS OF AMERICAN LAW 583, 587 (Alan B. Morrison ed., 1996) ("The [primary federal statutes regulating the securities markets] were passed as part of the federal government's response to the economic situation in the 1930s and the stock market crash of 1929. While stock market practices were not cast as the sole causes of the Depression of the 1930s, Congress clearly felt that the markets encouraged unduly speculative activity, were rife with conflicts of interest, and had proved unable to police themselves.").

96 *See* Stock Exchange Practices Report, *supra* note 92, at 5 (recognizing the importance of the transactions that take place over the securities markets). The Senate Committee on Banking and Currency recognized the importance of securities transactions in the United States:

> Directly or indirectly the influence of . . . transactions [in securities] permeates our national economy in all its phases. The business conducted on securities exchanges has attained such magnitude and has become so closely interwoven with the economic welfare of the country, that it has been deemed an appropriate subject of governmental regulation.

*Id.*

97 *Id.* at 55.

98 Securities Act of 1933, 15 U.S.C. §§ 77a–77aa (2006).

99 Securities Exchange Act of 1934, 15 U.S.C. §§ 78a–78oo (2006). While there are other federal statutes regulating the securities and financial markets, "[t]he Securities Act [of 1933] and the Securities Exchange Act [of 1934] constitute virtually the entire body of general federal securities regulation." GARY M. BROWN, SODERQUIST ON THE SECURITIES LAWS § 1:2.2 (5th ed. 2006). Accordingly, these two statutes and their disclosure requirements specifically relevant to environmental liabilities are the focus of this Article.

100 *See* LOUIS LOSS & JOEL SELIGMAN, FUNDAMENTALS OF SECURITIES REGULATION 45 (5th ed. 2004). One may typically think of the term "securities" as encompassing only stocks or bonds. Under the federal securities laws, the term is defined much more broadly than those two frequently encountered investment forms. *See* 15 U.S.C. § 77b(a)(1) (2006) (defining "security"). The term has even been interpreted by the Supreme Court to include the sale of interests in a Florida orange grove. Under the test set out by the Supreme Court, an investment involves a security if 1) there is an investment of money, 2) in a common enterprise, 3) with the

securities markets.[101] The obligation to disclose all material facts that a reasonable investor would want to know in reaching a decision whether to buy or sell a security[102] is at the heart of both the 1933 Act[103] and the 1934 Act:[104]

> No investor, no speculator can safely buy and sell securities * * * without having an intelligent basis for forming his judgment as to the value of the securities he buys or sells. The idea of a free and open public market is built upon the theory that competing judgments of buyers and sellers as to the fair price of the security brings about a situation where the market price reflects as nearly as possible a just price. Just as the artificial manipulation tends to upset the true function of an open market, so the hiding and secreting of important information obstructs the operations of the markets as indices of real value. There cannot be honest markets without honest publicity.[105]

To provide investors with material information and to prevent fraudulent practices in the sale of securities, both statutes and their subsequent implementing regulations as adopted by the SEC mandated that issuers disclose to the investing public a wide range of financial and nonfinancial information relevant to the decision to purchase or sell a security.[106] By this statutorily mandated disclosure obligation, Congress

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expectation of profits, and 4) through the efforts of others. *See* SEC v. W.J. Howey Co., 328 U.S. 293, 297–99 (1946).

101 *See* RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 332 (2d ed. 1977) ("The regulation of the securities markets has two main aspects, both intended to reduce the likelihood of a recurrence of a 1929-type crash. First, new issues of stock may be sold only by means of a prospectus, approved by the SEC in advance, that contains certain required information (including adverse information) deemed material to a purchaser. Second, trading in securities is subject to a variety of restrictions to dampen 'speculative fever' and increase public confidence in the securities markets.").

102 The term "material facts" has been interpreted to mean those facts that a reasonable investor would like to have at in hand when making a decision to buy or sell a security. *See* TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976).

103 *See* Stock Exchange Practices Report, *supra* note 92, at 150 ("The evidence presented to the Senate subcommittee [following investigations of the stock market crash] regarding the practices prevalent in the investment banking business laid the foundation for the Securities Act of 1933. Broadly speaking, the Act imposes upon the seller of a new security the duty to make fair, complete, and adequate disclosure to the investor, with appropriate penalties for violations of that duty."); *see also* 15 U.S.C. § 77g(a) (2006) (requiring that registration statements "contain such other information, and be accompanied by such other documents, as the Commission may by rules or regulations require as being necessary or appropriate in the public interest or for the protection of investors").

104 *See* 15 U.S.C. § 78*l* (2006) (concerning the information required to register a stock on a national exchange); *see also Id.* § 78m(a) (imposing an obligation upon publicly traded companies to file periodic reports and other information "necessary or appropriate for the proper protection of investors and to insure fair dealing in the security").

105 Feit v. Leasco Data Processing Equip. Corp., 332 F. Supp. 544, 564 (E.D.N.Y. 1971) (alteration in original) (quoting F. WHEAT, DISCLOSURE TO INVESTORS 50 (1969)).

106 *See* Robert L. Knauss, *A Reappraisal of the Role of Disclosure*, 62 MICH. L. REV. 607, 607 (1964) ("'The keystone to the entire structure of federal securities legislation is disclosure.'" (quoting U.S. SEC. & EXCH. COMM'N, REPORT OF SPECIAL STUDY OF SECURITIES MARKETS, H.R. DOC. NO. 88-95, pt. 3, at 1 (1963))); *see also* Stock Exchange Practices Report, *supra* note 92, at 153 ("The purposes of the Securities Act of 1933 are to make available to him complete and truthful

sought to restore investor confidence through the provision of all material facts so that investors could make informed decisions about the purchase and sale of securities.[107]

### *B. Regulation S-K and Disclosure Under the 1933 and 1934 Acts*

The totality of the information that an issuer subject to the federal securities laws must disclose to the SEC and investors is beyond the scope of this Article; however, the basic disclosure document that a new issuer of securities offered to the public must submit to the SEC under the 1933 Act is included in various registration forms such as Form S-1.[108] Following the submission of the applicable registration form and the initial sale of securities, a publicly traded company is then required to submit periodic disclosure statements to the SEC,[109] including Forms 10-Q, 10-K, and 8-K.[110] In sum, Form 10-Q is filed by issuers on a quarterly basis, 10-K is filed on an annual basis, and 8-K is filed when there are certain material changes in a public company.[111] The nonfinancial information that is required as part of the registration form, Forms 10-Q, 10-K, and 8-K is set out in Regulation S-K, the so-called integrated disclosure regulation.[112] Finding substantial overlap and duplication with prior efforts regulating disclosure obligations, the integrated disclosure adopted by the SEC in Regulation S-K ensures "that investors and the market place are provided meaningful, nonduplicative

information from which he may intelligently appraise the value of a security, and to safeguard against the negligent and fraudulent practices perpetrated upon him in the past by incompetent and unscrupulous bankers, underwriters, dealers and issuers.").

107 *See* Knauss, *supra* note 106, at 608 (stating that the objective of the Securities Act of 1933 was to place "the burden of telling the whole truth on the seller" (quoting President Franklin D. Roosevelt)).

108 For an overview of the federal securities registration process, see William W. Barker, *SEC Registration of Public Offerings Under the Securities Act of 1933*, 52 BUS. LAW. 65 (1996).

109 *See* 15 U.S.C. § 78m (2006).

110 The SEC has adopted voluminous regulations to implement the disclosure requirements of the 1933 Act and 1934 Act. The regulations applicable to the disclosure of nonfinancial information under both statutes can be found at 17 C.F.R. parts 229 (Regulation S-K), 230–31, 234, 240–41, and 249 (2008). The regulations concerning the disclosure of detailed financial information, Regulation S-X, are codified at 17 C.F.R. pt. 210 (2008). The regulations applicable to the disclosure of nonfinancial information and financial information must be read in conjunction with those in 17 C.F.R. pt. 232 (2008) addressing the submittal of information to the SEC through its Electronic Data Gathering, Analysis and Retrieval system, or "EDGAR" system in SEC parlance. Forms 10-Q, 10-K, and 8-K are also available from the Commission's website. *See* U.S. Sec. & Exch. Comm'n, Securities and Exchange Commission Forms List, http://www.sec.gov/about/forms/secforms.htm (last visited July 19, 2009).

111 The regulations of general applicability for completing Forms 8-K, 10-Q, and 10-K are found at, respectively, 17 C.F.R. § 249.308 (2008), 17 C.F.R. §§ 249.308, .308a, .310 (2008).

112 Very broadly speaking, the basic nonfinancial information that is subject to investor and SEC disclosure in these various forms includes a description of the securities offered for sale, the planned use of the proceeds from the sale of the securities, the risks arising from the purchase of the securities, a description of the issuer's business, a summary of pending or threatened legal proceedings, management's discussion and analysis of the business, and the compensation of certain key executives. *See id.* pt. 229 (listing regulations providing standard instructions for filing forms under the Securities Act and Securities Exchange Act).

information both periodically and when securities distributions are made to the public, while the costs of compliance for public companies are decreased."[113]

### *C. Regulation S-X and the Disclosure of Financial Information*

Critical to any decision to invest in a particular company is detailed information concerning the financial strength, risks, and liabilities presented by the issuer or business. Hence, the disclosure of voluminous amounts of financial information is an important component, if not the single most important component, of disclosure under both the 1933 Act[114] and the 1934 Act.[115] Given the undisputed importance of financial information to the securities regulatory scheme, the SEC has the express statutory authority to regulate the contents of financial statements[116] and has adopted extensive regulations concerning the information required in the financial statements that are routinely filed with the SEC by publicly traded companies.[117]

Through its auditing function, the accounting profession plays a crucial role in securities regulation by periodically examining or auditing the financial statements prepared by publicly traded companies:

> By certifying the public reports that collectively depict a corporation's financial status, the independent auditor assumes a *public* responsibility transcending any employment relationship with the client. The independent public accountant performing this special function owes ultimate allegiance to the corporation's creditors and stockholders, as well as to the investing public.[118]

Another court summarized the importance and purposes of the accounting profession's auditing function as follows:

> [A]udits of financial statements and the resulting audit reports are very frequently (if not almost universally) used by businesses to establish the

113 Reproposal of Comprehensive Revision to System for Registration of Securities Offerings, 46 Fed. Reg. 41,902, 41,902 (Aug. 18, 1981) (to be codified at 17 C.F.R. pt 239).

114 *See, e.g.*, Securities Act of 1933, 15 U.S.C. § 77aa (2006) (requiring new issuers of securities to file audited financial statements as part of registration process).

115 *See, e.g.*, Securities Exchange Act of 1934, 15 U.S.C. § 78l(b)(1)(J)–(L), (g)(1) (2006) (requiring the filing of audited financial statements as part of registering securities on an exchange); *id.* § 78m(a)(2) (requiring filing of annual reports with the SEC); *id.* § 78n (requiring filing of audited financial statements in connection with proxy materials). The Senate committee tasked with investigating the root causes of the crash of 1929 summed up the state of financial disclosure in the late 1920s as follows: "The committee has repeatedly heard testimony illustrating the evasions, suppressions, distortions, exaggerations, and outright misrepresentations practiced by corporations with intent to cloak their operations and to present the investing public a false or misleading appearance as to financial condition." *See* S. REP. 73-792, at 11 (1934).

116 *See* Francis M. Wheat, *The SEC, the Financial Accounting Standards Board and the Accounting Profession*, 29 BUS. LAW. 141, 142 (1974) (noting that "the SEC[] possesse[s] . . . undoubted statutory power to prescribe both the form and the content of financial statements to be filed with it, as well as the methods to be followed in their preparation").

117 *See generally* 17 C.F.R. pt. 210 (2008) (Regulation S-X).

118 United States v. Arthur Young & Co., 465 U.S. 805, 817–18 (1984).

> financial credibility of their enterprises in the perceptions of outside persons, e.g., existing and prospective investors, financial institutions, and others who extend credit to an enterprise or make risk-oriented decisions based on its economic viability. The unqualified audit report of a CPA firm . . . is often an admission ticket to venture capital markets—a necessary condition precedent to attracting the kind and level of outside funds essential to the client's financial growth and survival.[119]

As alluded to above, the singular importance of financial information provided to regulators and investors has clear implications for the accounting profession, in particular its function as auditors of publicly traded companies. Although the regulations, specifically Regulation S-X, governing the role of accountants as auditors under the federal securities laws are quite detailed,[120] they essentially impose three obligations upon accountants vis-à-vis the financial information provided by publicly traded companies. First, accountants must, when auditing a corporation's finances,[121] conduct the audit in accordance with generally accepted auditing standards, or "GAAS," which are the applicable standards recognized and established by the Auditing Standards Board of the American Institute of Certified Public Accountants.[122] Second, accountants must assure that the

119 Bily v. Arthur Young & Co., 834 P.2d 745, 751 (Cal. 1992).

120 Although it is beyond dispute that the disclosure of accurate and timely financial information is important, at least one study has analyzed accounting practices in effect at the time of the 1929 crash and concluded that "[t]here is no substantial evidence to support the contention that accounting was culpable in the stock market crash of 1929." GADIS J. DILLON, THE ROLE OF ACCOUNTING IN THE STOCK MARKET CRASH OF 1929, at 6 (1984).

121 An audit "is the process whereby the independent Certified Public Accountant conducts an examination of management's financial statements to determine whether the statements present fairly the financial information which they purport to convey." U.S. Sec. & Exch. Comm'n v. Arthur Young & Co., 590 F.2d 785, 788 n.2 (9th Cir. 1979) (citing CODIFICATION OF AUDITING STANDARDS AND PROCEDURES, Statement on Auditing Standards No. 1, § 150.01 (Am. Inst. of Certified Pub. Accountants 1972)); *see also* Sarbanes-Oxley Act of 2002, 15 U.S.C. § 7201(2) (2006) (defining "audit" as "an examination of the financial statements of any issuer by an independent public accounting firm in accordance with the rules of the Board or the Commission").

122 17 C.F.R. § 210.2-02(b)(1) (2008) requires auditors to "state whether the audit was made in accordance with generally accepted auditing standards," or GAAS. GAAS "are general standards of conduct relating to the auditor's professional qualities as well as to the judgments exercised by him in the performance of his examination and issuance of his report." *Arthur Young & Co.*, 590 F.2d at 788 n.2 (citing CODIFICATION OF AUDITING STANDARDS AND PROCEDURES, Statement on Auditing Standards No. 1, § 150.01 (Am. Inst. of Certified Pub. Accountants 1972)). The GAAS consist of general standards, field work standards, and reporting standards. *See* Gregory M. Dearlove, CPA, Initial Decision Release No. 315, Administrative Proceeding File No. 3-12064, at 13 (U.S. Sec. & Exch. Comm'n July 27, 2006); *see also* James F. Strother, *The Establishment of Generally Accepted Accounting Principles and Generally Accepted Auditing Standards*, 28 VAND. L. REV. 201, 208 (1975) ("Generally accepted auditing standards define, among other things, the obligations of due and professional care which attend an independent auditor's examination and his report upon audited financial statements."). In light of the numerous corporate scandals that came to light in the early 2000s, Congress enacted the Sarbanes-Oxley Act of 2002 (SOX), 15 U.S.C. §§ 7201–7266 (2006). *See generally* Larry Bumgardner, *Reforming Corporate America: How Does the Sarbanes-Oxley Act Impact American Business?*, GRAZIADIO BUS. REP., http://gbr.pepperdine.edu/031/sarbanesoxley.html (last visited July 19, 2009). One aspect of SOX relevant to the auditing of publicly traded

financial statements filed with the SEC are prepared consistent with generally accepted accounting principles, or "GAAP."[123] A financial statement filed with the SEC that does not comply with GAAP is presumed to be misleading and inaccurate.[124] The third fundamental obligation imposed upon the accounting profession by the federal securities laws is that an accountant is required to issue an opinion certifying that the audited financial statements fairly portray the company's financial status for the reporting period.[125] If a financial statement does not conform to GAAP, then the auditor must issue a qualified opinion, no opinion, or expressly note that the financial statement does not meet the requirements of GAAP.[126]

As the recent plethora of major corporate accounting scandals, most notably Enron,[127] well demonstrates, the financial information examined by accountants in their role as auditors is provided by the management of the audited company, and that information is only as reliable and sound as the management is honest and forthcoming. Nonetheless, the disclosure of detailed audited financial information by publicly traded companies remains a cornerstone of federal securities regulation.

While it is critical to understand the essential role that the accounting profession plays in the regulation of securities and especially financial disclosure, it is also important to understand the role of the SEC regarding the financial information provided. The acceptance by the SEC of a registrant's audited financial statements and other information in required filings does not serve as the imprimatur of the agency as to the truth or accuracy of the information. In fact, registrants are required to expressly

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companies is the establishment of the Public Company Accounting Oversight Board (PCAOB). 15 U.S.C. § 7211 (2006). The PCAOB is a nonprofit corporation charged with the oversight of "the audit of public companies that are subject to the securities laws . . . in order to protect the interests of investors and further the public interest in the preparation of informative, accurate, and independent audit reports for companies the securities of which are sold to, and held by and for, public investors." *Id.* To date, the PCAOB has established six standards governing different aspects of auditing. *See* PCAOB, Standards and Related Rules, http://pcaobus.org/Standards/Standards_and_Related_Rules/index.aspx (last visited July 19, 2009).

123 Regulation S-X, 17 C.F.R. § 210.2-02(c)(2) (2008), requires auditors to opine whether financial statements have been prepared in accordance with GAAP. GAAP "establish[es] guidelines relating to the process by which the transactions and events of a business entity are measured, recorded, and classified in accordance with a conventional format." *Arthur Young & Co.*, 590 F.2d at 789 n.4; *see also* Strother, *supra* note 122, at 203 ("Generally accepted accounting principles consist of the accounting conventions by which financial information is recorded, attributed to particular periods and summarily presented in the form of financial statements."). "GAAS thus differs from GAAP; the former involves how an auditor goes about obtaining information, while the latter involves the format in which to present the information." *Arthur Young & Co.*, 590 F.2d at 789 n.4.

124 17 C.F.R. § 210.4-01(a)(1) (2008) ("Financial statements filed with the Commission which are not prepared in accordance with generally accepted accounting principles will be presumed to be misleading or inaccurate, despite footnote or other disclosures, unless the Commission has otherwise provided.").

125 *Id.* § 210.2-02(c).

126 *See id.* § 210.2(c)-(d) (2008); *see also* Bily v. Arthur Young & Co., 834 P.2d 745, 751 (1992).

127 *See* KURT EICHENWALD, CONSPIRACY OF FOOLS: A TRUE STORY (2005) (detailing the fall of Enron and the many accounting issues presented).

note on all registration forms under the 1933 Act that "[n]either the Securities and Exchange Commission nor any state securities commission has approved or disapproved these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense."[128] Although the reforms to the federal securities laws made by Congress in the Sarbanes-Oxley Act (SOX) impose a requirement upon the SEC to review filings of publicly traded companies on a "regular and systematic basis for the protection of investors,"[129] one must question whether, as a practical matter, the SEC has the resources to truly conduct a detailed, thorough examination of each and every one of the vast numbers of filings that are routinely submitted to the Commission. Thus, even with the voluminous amount of financial and other information that publicly traded companies are required to disclose to the investing public and the SEC under both the 1933 Act and 1934 Act, there still remains an element of caveat emptor concerning the sale or purchase of securities.

## IV. THE OBLIGATION TO DISCLOSE ENVIRONMENTAL LIABILITIES UNDER THE 1933 AND 1934 ACTS

Until the 1970s, the disclosure obligation imposed by the federal securities laws required little, if any, disclosure regarding the environmental affairs of publicly traded corporations.[130] This was largely because until the 1970s there were no meaningful federal environmental regulatory programs or far-reaching state environmental regulatory programs, so businesses that issued publicly traded securities usually were not subject to environmental liabilities arising from their operations.[131] Another contributing factor to the lack of specific environmental-related disclosures for decades after the establishment of the federal securities regulatory regime was that public interest had not yet evolved to the point where demands were being placed upon businesses to literally clean up their operations to reduce adverse effects on the environment.

Today, decades after the development of a broad environmental regulatory scheme consisting of federal, state, and local components,[132] there are several reasons why publicly traded companies provide information

128 17 C.F.R. § 229.501(b)(7) (2008). Alternatively, the regulations allow registrants to use any equivalent language clearly expressing the disclaimer.

129 Sarbanes-Oxley Act of 2002, 15 U.S.C. § 7266(a) (2006).

130 Richard Y. Roberts, Comm'r, U.S. Sec. & Exch. Comm'n, Remarks at American Bar Association 1993 Annual Meeting, Toxic & Hazardous Substances & Environmental Law Committee Program: Overview of Environmental Liability Disclosure Requirements, Recent Developments and Materiality (Aug. 9, 1993), *available at* http://www.sec.gov/news/speech/1993/080993roberts.pdf.

131 *See* Elizabeth Ann Glass Geltman, *Disclosure of Contingent Environmental Liabilities by Public Companies Under the Federal Securities Laws*, 16 HARV. ENVTL. L. REV. 129, 133 (1992) (noting that the Securities Exchange Act required corporations to reveal environmental data pivotal to the corporation's well being).

132 *See* Richard B. Stewart, *Environmental Law*, *in* FUNDAMENTALS OF AMERICAN LAW 481, 482–85 (Alan B. Morrison ed., 1996) (describing the evolution of the environmental regulatory scheme).

about their environmental records, including environmental liabilities. One fundamental reason for such disclosure is that it may be financially material to the company and its investors.[133] Environmental liabilities can have a material adverse effect on a company's balance sheet, and thus under federal securities laws disclosure is required on that basis alone.[134]

Another reason to disclose environmental information beyond the legal obligation that the 1933 and 1934 Acts impose is to provide investors not only with information concerning environmental liabilities that a company may face but, more positively, to provide information announcing the environmental accomplishments of a company, such as substantial reductions in emissions or development of sustainable production processes. Reporting progress in this area may entice investment in the business because of its reduced or minimized impact on the environment. A third reason that publicly traded companies disclose information related to environmental matters is that shareholders, as the owners of the company, demand that management provide information about the impact of a company on the environment.[135] A fourth reason why management may provide expansive environmental information is in an effort to capture market share in our consumer-driven economy through touting a business as "green" or otherwise attuned to the environmental concerns of consumers.[136] A fifth reason why a company may disclose information about its environmental record is to use the absence of environmental liabilities to show that superior management is at the helm of the business and has taken concrete steps to minimize adverse environmental impacts.

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133 Disclosures Pertaining to Matters Involving the Environment and Civil Rights, Securities Act Release No. 5170, Exchange Act Release No. 9252, [1971 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 78,150, at 80,487 (July 19, 1971).

134 *Id.*

135 *See, e.g.*, Elise N. Rindfleisch, Comment, *Shareholder Proposals: A Catalyst for Climate Change-Related Disclosure, Analysis, and Action?*, 5 BERKELEY BUS. L.J. 45, 48 (2008) ("Shareholders increasingly recognize the importance of climate change-related action taken by the companies in which they invest, as demonstrated by the rising numbers of climate change-related proposals filed in the U.S. . . . In 2007, the largest number of climate change-related shareholder proposals was filed, numbering forty-three.").

136 One example of a business that has adopted this approach to disclosure of environmental information is BP. Discussing climate change, BP points out:

> Our current energy efficiency programme follows a successful initiative in which we reduced our GHG emissions to 10% below their 1990 levels between 1998 and 2001. We now have an ongoing programme designed to prepare our businesses for the emergence of further carbon markets beyond the EU and to improve our competitiveness.

BP, What BP is Doing, http://www.cdproject.net/responses/public/BP_3800_Corporate_GHG_Emissions_Response_CDP6_2008.asp (last visited July 19, 2009).

### *A. Development of the SEC's Environmental Disclosure Requirements*

The explosive development of environmental law began in 1970[137] and culminated in the passage of numerous statutes targeting serious environmental concerns such as air pollution,[138] untreated wastewater discharges,[139] and the unregulated disposal of hazardous wastes,[140] all of which were associated with the heavy industry that dominated the nation's business landscape at the time.[141] The dramatic growth in federal environmental statutes also resulted in the development of state environmental regulatory programs because several of the new environmental statutes provided the federal government with the opportunity to delegate to the states the day-to-day operations of many environmental programs established by Congress.[142] Further, public awareness and involvement in environmental issues found a new and powerful voice with the advent of the environmental movement and the growth in local and national environmental public interest groups.[143] The combination of new federal environmental legislation, greater state responsibility for environmental protection, and heightened public awareness resulted in the need for businesses subject to the federal securities laws now to consider potential liabilities arising from the new body of federal and state environmental protection programs in the information included in required disclosures to the SEC and investors.[144]

The SEC's initial effort to clarify the scope of environmental liability disclosure by publicly traded companies was set out in a release entitled *Disclosures Pertaining to Matters Involving the Environment and Civil*

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137 *See* Robert V. Percival, *"Greening" the Constitution—Harmonizing Environmental and Constitutional Values*, 32 ENVTL. L. 809, 829 (2002) (describing the various environmental statutes passed in the early 1970s). Congress also passed the National Environmental Policy Act in late December of 1969. *See* National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83. Stat. 852 (codified as amended at 42 U.S.C. §§ 4321–4370e (2000)).

138 *See* Clean Air Act, 42 U.S.C. §§ 7401–7671q (2000).

139 Federal Water Pollution Control Act, 33 U.S.C. §§ 1251–1387 (2006).

140 Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601–9675 (2000); Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901–6992k (2000) (amending Solid Waste Disposal Act, Pub. L. No. 89-272, 79 Stat. 992 (1965)).

141 *See* Stewart, *supra* note 132, at 486 (describing the function of the CAA, CWA, and RCRA and the basic mechanisms for regulating industry in the United States).

142 *See, e.g.*, 33 U.S.C. § 1342(b) (2006) (authorizing EPA to delegate the CWA's national pollutant discharge elimination permitting program to the states); *id.* § 1344(g) (2006) (authorizing states to seek delegation of the CWA's dredge and fill permitting program); 42 U.S.C. § 6926(b) (2000) (allowing states to seek authorization for RCRA's hazardous waste treatment, storage and disposal facility permitting program).

143 *See* Stewart, *supra* note 132, at 496–98 (describing the role of environmental advocacy and the use of litigation as a means of reforming government environmental policy).

144 Of course, businesses with a global reach may also incur costs to comply with foreign environmental laws as well. *See, e.g.*, Jane Perlez & Evelyn Rusli, *Spurred by Illness, Indonesians Lash Out at U.S. Mining Giant*, N.Y. TIMES, Sept. 8, 2004, at A1 (chronicling the difficulties faced by Newmont Mining of Colorado in obtaining mining permits because of local environmental groups and government officials in foreign countries).

*Rights*.[145] The guidance provided in this release as to what environmental disclosure was necessary stated that:

> The Commission's requirements . . . call for disclosure, if material, when compliance with statutory requirements with respect to environmental quality e.g., various air, water and other anti-pollution laws, may necessitate significant capital outlays, may materially affect the earning power of the business, or cause material changes in [a] registrant's business done or intended to be done.[146]

In addition to disclosing the material capital costs necessary to achieve compliance with environmental laws, under this 1971 SEC guidance, registrants were also required to disclose material litigation arising under "federal, state or local [statutes], regulating the discharge of materials into the environment, or otherwise specifically relating to the protection of the environment."[147] With respect to the disclosure of environmental litigation proceedings, the SEC noted that if disclosure of pending or threatened environmental litigation was not provided on the grounds that it was not material, "it will be the practice of the [SEC's] Division of Corporate Finance to request [from] registrants . . . (1) a description of the omitted information and (2) a statement of the reasons for its omission."[148]

The SEC's initial guidance treated environmental liabilities associated with the cost of compliance similar to the array of other liabilities that publicly traded companies might face.[149] That is, if the cost of compliance was not deemed material, it was not subject to disclosure.[150] Environmental liabilities arising from litigation, however, for reasons not made clear in the release, were essentially treated as if they were always material because if such liabilities were not disclosed on a nonmaterial basis, then the SEC would request information about such pending or threatened environmental litigation.[151] Perhaps the reason for this deviation from the ubiquitous materiality requirement was a belief that an abundance of disclosures about environmental litigation, even if not financially material, might demonstrate to investors that a particular company was not a worthy investment choice because it was terribly out of tune with the need to maintain compliance and avoid environmental litigation.[152]

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145 Disclosures Pertaining to Matters Involving the Environment and Civil Rights, *supra* note 133.

146 *Id.* at 80, 487–88 (citation omitted); *see also* Geltman, *supra* note 131, at 145 ("[I]n 1971, the SEC issued an interpretive release informing public companies that existing securities laws required disclosure of all economically material environmental information.").

147 Disclosures Pertaining to Matters Involving the Environment and Civil Rights, *supra* note 133, at 80,488.

148 *Id.*

149 *See id.*

150 *Id.*

151 *Id.*

152 *See* Geltman, *supra* note 131, at 146 ("One commentator has noted that this imposed disclosure of environmental information [was] considered to be socially or ethically important to certain social constituents." (citing Stephen W. Hamilton, *Environmental Disclosure Requirements of the Securities Exchange Commission*, *in* ENVIRONMENTAL AUDITING HANDBOOK, 2-109 (L. Harrison ed., 1984))).

### *1. Further Impetus for Disclosure of Environmental Liabilities: The National Environmental Policy Act*

The first meaningful piece of federal environmental legislation in the 1970s was the National Environmental Policy Act (NEPA).[153] In NEPA, Congress expressly recognized "the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances."[154] Through its enactment of NEPA, Congress imposed an obligation on all federal agencies to assess the environmental impact of "major Federal actions significantly affecting the quality of the human environment"[155] and to consider alternatives that would have less of an environmental impact.[156] If the agency failed to conduct the required assessment of alternatives, along with the other requirements imposed by NEPA, then the resulting federal action was susceptible to challenge in federal court.[157]

In response to the command of NEPA, the SEC amended its original environmental disclosure requirements with its Notice of Adoption of Amendments to Registration and Report Forms to Require Disclosure with Respect to Compliance with Environmental Requirements and Other Matters.[158] To fulfill its NEPA obligation as a federal agency, the SEC required businesses subject to the securities laws' registration and periodic reporting requirements to provide "as a part of the description of an issuer's business, appropriate disclosure with respect to the material effects which compliance with environmental laws and regulations may have upon the capital expenditures, earnings and competitive position of the issuer and its

153 National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321–4370e (2000).

154 *Id.* § 4331(a).

155 *Id.* § 4332(2)(C).

156 *See id.* § 4332(2)(C)(iii).

157 Indeed, since its enactment there have been numerous challenges under NEPA to actions taken or proposed by federal agencies, and several NEPA challenges have been decided by the Supreme Court. *See, e.g.*, Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 359 (1989) (holding that 1) NEPA did not require the Forest Service to include a fully developed mitigation plan in its environmental impact statement; 2) the Act did not require the Service to make a "worst case analysis" in its environmental impact statement; and 3) the Service's failure to develop a complete mitigation plan did not violate its own regulations); *see also* Winter v. Natural Res. Def. Council, 129 S. Ct. 365 (2008); Dep't of Transp. v. Pub. Citizen, 541 U.S. 752 (2004); Marsh v. Or. Natural Res. Council, 490 U.S. 360 (1989); Metro. Edison Co. v. People Against Nuclear Energy, 460 U.S. 766 (1983); Strycker's Bay Neighborhood Council v. Karlen, 444 U.S. 223 (1980); Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council, 435 U.S. 519 (1978); Kleppe v. Sierra Club, 427 U.S. 390 (1976).

158 Notice of Adoption of Amendments to Registration and Report Forms to Require Disclosure with Respect to Compliance with Environmental Requirements and Other Matters, Securities Act Release No. 5386, Exchange Act Release No. 10,116, 1 SEC Docket 1 (Apr. 20, 1973). This release expressly superseded the SEC's initial guidance concerning the disclosure of environmental liabilities set out in Disclosures Pertaining to Matters Involving the Environment and Civil Rights, Securities Release No. 5170, Exchange Act Release No. 9252, [1970–1971 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 78,150 (July 19, 1971).

subsidiaries."[159] At this time of rapidly developing federal and state environmental statutes and regulations, the obligation to disclose compliance costs was broadened to include an assessment of future compliance costs because "[i]f management has a reasonable basis to believe that future environmental compliance may have a material effect on the issuer's expenditures, earnings or competitive position in the industry, then such matters should be disclosed."[160]

The SEC at this time made it clear that it would no longer only request information about such litigation if deemed nonmaterial by the registrant, but instead took the position that

> [a]ny such [administrative or judicial] proceedings by governmental authorities shall be deemed material and shall be described whether or not the amount of any claim for damages involved exceeds 10 percent of current assets. . . and whether or not such proceedings are considered "ordinary routine litigation incidental to the business."[161]

Under this newly announced approach, environmental litigation involving the government was always subject to disclosure,[162] whereas environmental litigation brought by a private party, such as a common law nuisance claim seeking to abate air pollution, might not require disclosure if it was not material or did not exceed a claim in excess of ten percent of the current assets of the registrant.[163]

*2. Natural Resources Defense Council v. SEC*

As the body of federal environmental law emerged and grew, public interest groups were also pressuring businesses and the SEC for increased mandatory disclosure concerning environmental matters.[164] The Natural Resources Defense Council (NRDC), along with several other like-minded groups, filed a rulemaking petition requesting that the SEC promulgate new, more extensive environmental disclosure requirements.[165] Under the NRDC's

159 Notice of Adoption of Amendments to Registration and Report Forms to Require Disclosure with Respect to Compliance with Environmental Requirements and Other Matters, *supra* note 158, at 2.

160 *Id.*

161 *Id.* at 3. Other types of litigation required disclosure only if a claim exceeded 10% of a registrant's current assets on a consolidated basis or was not "ordinary routine litigation incidental to the business." *Id.*

162 *See* Geltman, *supra* note 131, at 145–46 ("The 1973 rules . . . required disclosure of *all* environmental proceedings involving a government entity, regardless of whether the proceedings were economically significant or material.").

163 *Id.* at 152.

164 *See* Perry E. Wallace, *Disclosure of Environmental Liabilities Under the Securities Laws: The Potential of Securities-Market-Based Incentives for Pollution Control*, 50 WASH. & LEE L. REV. 1093, 1104 (1993) ("Notwithstanding the SEC's advances in [the area of environmental disclosure], environmental protectionists were not satisfied. Environmentalism was gaining momentum in the United States and the voices crying out for more extensive action to reduce pollution and preserve the environment became louder and louder.").

165 *See Natural Res. Def. Council v. SEC*, 389 F. Supp. at 694.

rulemaking proposal, publicly traded companies would have to disclose information concerning the environmental impact of their products and whether steps were or could be taken to mitigate those impacts.[166] The SEC refused to adopt the proposal offered by the NRDC, and in the resulting litigation the district court found that the Commission had failed to comply with the Administrative Procedure Act by not providing adequate public notice of the new environmental disclosure rules and remanded to correct this procedural deficiency.[167]

The subsequent proceeding culminated in the Notice of Commission Conclusions and Rulemaking Proposals in the Public Proceeding Announced in Securities Act Release No. 5569,[168] where the Commission reconsidered the NRDC's proposal by holding public hearings that spanned nineteen days, resulted in hundreds of public comments, and produced a record of more than 10,000 pages.[169] A portion of the NRDC proposal was nonetheless ultimately rejected because the SEC concluded that investors were more interested in whether publicly traded companies were in compliance "rather than in whether, and to what extent, corporations have gone beyond what is expected of them in this area."[170] The SEC also found that the NRDC's environmental disclosure proposal was cost prohibitive and would have resulted in the disclosure of information that investors were not interested in receiving.[171]

The NRDC's proposal to require disclosure related to capital costs associated with environmental compliance was, however, adopted by the SEC.[172] Arguably, though, the requirement to disclose information about environmental compliance capital costs provided investors with little new information and did not impose upon publicly traded companies any new regulatory obligation. As the SEC pointed out in adopting this requirement, its existing rules require disclosure for "material effects that compliance with Federal, State and local provisions . . . may have upon the capital expenditures, earnings and competitive position of the registrant."[173]

166 *Id.*

167 Administrative Procedure Act, 5 U.S.C. §§ 551–559, 701–706, 1305, 3105, 3344, 4301, 5335, 5362, 7521 (2000); *Natural Res. Def. Council*, 389 F. Supp. at 699.

168 Notice of Commission Conclusions and Rulemaking Proposals in the Public Proceeding Announced in Securities Act Release No. 5569, Securities Act Release No. 5627, Exchange Act Release No. 11,733, 8 SEC Docket 41 (Oct. 14, 1975).

169 *Id.* at 42.

170 *Id.* at 47.

171 *Id.*

172 *Id.* at 47–48.

173 *Id.* at 60; *see also* Notice of Commission Conclusions and Final Action on the Rulemaking Proposals in Securities Act Release No. 5627 (Oct. 14, 1975) Relating to Environmental Disclosure, Securities Act Release No. 5704, Exchange Act Release No. 12,414, [1975–1976 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 80,495, at 86,291 (May 6, 1976) (listing a SEC requirement that businesses disclose material estimated capital expenditures for environment compliance with applicable law and regulations).

*3. Regulation S-K and the Disclosure of Environmental Liabilities*

Before the promulgation of Regulation S-K,[174] the detailed requirements of disclosure were buried in the instructions to the various disclosure forms and left to a variety of guidance documents, such as the releases issued by the SEC in an effort to advise publicly traded companies about disclosure obligations.[175] The disclosure guidance provided prior to Regulation S-K was just that—guidance—and was not promulgated as regulations of the Commission.[176] The lack of a codified set of SEC disclosure regulations changed with the adoption of Regulation S-K.[177] Of particular relevance to this Article are the specific environmental disclosure obligations eventually adopted by the SEC through rulemakings and set out in Item 101[178] and Item 103[179] of Regulation S-K. Item 101 addresses the disclosure of environmental compliance costs and Item 103 sets out the requirements to disclose environmental litigation.[180]

In terms of environmental regulatory compliance costs, similar to the obligation described in the SEC's Notice of Adoption of Amendments to Registration and Report Forms to Require Disclosure with Respect to Compliance with Environmental Requirements and Other Matters, Item 101 requires in a narrative form the disclosure of the following:

> [T]he material effects that compliance with Federal, State and local provisions which have been enacted or adopted regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, may have upon the capital expenditures, earnings and competitive position of the registrant and its subsidiaries. The registrant shall disclose any material estimated capital expenditures for environmental control facilities for the remainder of its current fiscal year and its succeeding fiscal year and for such periods as the registrant may deem materials [sic].[181]

With respect to environmental litigation, Item 103 currently requires the disclosure of environmental litigation 1) if it is material, 2) if it involves a claim for damages in an amount greater than "10 percent of current assets of the registrant and its subsidiaries on a consolidated basis," or 3) if a governmental authority in such an action seeks a penalty, exclusive of interests and costs, of greater than $100,000.[182]

Another area under Regulation S-K where disclosure concerning environmental liabilities may arise is in the Management's Discussion and

174 *See* 17 C.F.R. pt. 229 (2008).

175 Barker, *supra* note 108, at 82 (noting that the SEC provided disclosure guidance in "numerous Guides on the Preparation and Filing of Registration Statements and Reports" prior to the development of Regulation S-K).

176 *Id.* at 82–83 n.63.

177 *Id.* at 83.

178 *See* 17 C.F.R. § 229.101 (2008).

179 *See id.* § 229.103.

180 *See id.* §§ 229.101(c)(xii), .101(h)(4)(xi), .103.

181 *Id.* § 229.101(c)(xii).

182 *Id.* § 229.103 (Instructions to Item 103).

Analysis of Financial Condition and Operations, typically referred to as Item 303.[183] Item 303 is silent in terms of expressly requiring management to discuss environmental liabilities beyond the requirements imposed by Item 101 and Item 103. The SEC guidance,[184] however, has interpreted Item 303 as requiring management specifically to discuss environmental liabilities.[185] The one example given in the SEC interpretive guidance of when Item 303 requires a discussion by management of environmental liabilities is when a publicly traded company has been named as a potentially responsible party (PRP) under CERCLA.[186] The guidance goes on to note, though, that materiality is still a factor even when CERCLA liability is involved, so PRP status alone may not require disclosure.[187] The guidance is, in fact, of little practical assistance since it leaves the company subject to the disclosure requirements with less than clarity regarding precisely when to report not only CERCLA liability but other environmental liabilities as well. In terms of climate change risk disclosure, Item 101, Item 103, and the Management's Discussion and Analysis required by Item 303 have not been updated in response to the threat that climate change poses to countless public companies.[188]

### *B. Accounting and the Disclosure of Environmental Liabilities*

In addition to disclosure of environmental liabilities under Items 101, 103, and 303 of SEC's Regulation S-K, a publicly traded company must also disclose material environmental liabilities in its financial statements under a

183 *Id.* § 229.303.

184 Management's Discussion and Analysis of Financial Condition and Results of Operations, 54 Fed. Reg. 22,427, 22,427 (May 24, 1989) (to be codified at 17 C.F.R. pts. 211, 231, 241, 271).

185 Geltman, *supra* note 131, at 158 ("Although the language of Item 303 does not expressly require registrants to include environmental disclosure, an interpretive letter from SEC's Division of Corporate Finance confirmed speculation by the securities bar that the MD&A requirement included disclosure of contingent environmental liabilities."); Wallace, *supra* note 165, at 1109–10 ("While Item 303 of Regulation S-K does not explicitly address environmental liabilities and obligations, its provisions have been interpreted to require disclosure of environmental matters under relevant circumstances.").

186 54 Fed. Reg. at 22,430.

187 *Id.* at 22,430 n.30.

188 The SEC is considering replacing GAAP as the accounting standards that publicly traded companies are required to follow in financial reporting with the International Financial Reporting Standards (IFRS). *See* Roadmap for the Potential Use of Financial Statements Prepared in Accordance with International Financial Reporting Standards by U.S. Issuers, 73 Fed. Reg. 70,816, 70,820 (Nov. 21, 2008). Some believe that the move to IFRS will result in the need to more stringently report environmental liabilities, and critics of the potential change in accounting standards argue that such a change is unwise given the volatility of the financial markets. *See Market Crisis May Hamper SEC Switch to Strict Environmental Accounting*, INSIDE E.P.A. WKLY. REP., Sept. 19, 2008, at 1, 1. If and when the SEC will act on this proposal, and the precise effect it will have on environmental liability disclosure, remains to be seen. The SEC extended the public comment period on the proposed change in accounting methods to April 20, 2009, and will need to evaluate public comments before taking any action towards the possible change to IFRS. Roadmap for the Potential Use of Financial Statements Prepared in Accordance with International Financial Reporting Standards by U.S. Issuers, 74 Fed. Reg. 6359, 6359 (Feb. 9, 2009) (announcing the extension of the public comment period for 60 more days until April 20, 2009).

host of accounting standards.[189] These standards, therefore, are relevant to the scope of a publicly traded company's environmental disclosure obligations. These accounting standards, however, as the following summary will show, are also problematic in terms of climate change risk disclosure. Their primary shortcoming is that they do not explicitly mention climate change as a risk to publicly traded companies that requires possible financial statement consideration.

### *1. FASB Statement No. 5*

The Financial Accounting Standards Board (FASB)[190] is recognized by the SEC as the authoritative source of the standards applicable to the accounting profession in the preparation of financial statements for public companies.[191] "[A]ccordingly, FASB's financial accounting and reporting standards are recognized as 'generally accepted' for purposes of the federal securities laws. As a result, registrants are required to continue to comply with those standards in preparing financial statements filed with the Commission, unless the Commission directs otherwise."[192]

An important FASB standard regarding the disclosure of environmental liabilities is the *Statement of Financial Accounting Standards Number 5: Accounting for Contingencies* (*SFAS No. 5*),[193] which defines "loss contingency" as "an existing condition, situation, or set of circumstances involving uncertainty as to possible gain . . . or loss . . . to an enterprise that will ultimately be resolved when one or more future events occur or fail to occur."[194] *SFAS No. 5* became effective in 1975,[195] which was early in the

189 *See* Wallace, *supra* note 165, at 1119.

190 Established in 1973, "[t]he mission of the FASB is to establish and improve standards of financial accounting and reporting for the guidance and education of the public, including issuers, auditors, and users of financial information." Fin. Accounting Standards Bd., Facts About FASB, http://www.fasb.org/facts/ (last visited July 19, 2009). To fulfill its mission, FASB develops standards that govern the preparation of financial reports, including those filed with the SEC by publicly traded companies. *See id.*; *see also* Tracy N. Tucker, *It Really Is Just Trying to Help: The History of FASB and Its Role in Modern Accounting Practices*, 28 N.C.J. INT'L L. & COM. REG. 1023, 1027 (2003) ("The FASB's primary responsibility is setting accounting standards, which is accomplished with Statements of Financial Accounting Standards, Interpretations, Statements of Financial Accounting Concepts, and Technical Bulletins." (citations omitted)). The SEC, in turn, relies upon FASB pronouncements in regulating issuers of securities and their financial statements. *See* John C. Burton, *Elephants, Flexibility, and the Financial Accounting Standards Board*, 29 BUS. LAW. 151, 151 (1974) ("[T]he SEC has the statutory authority and responsibility for setting accounting measurement and disclosure requirements. Historically the Commission has felt that this responsibility can be most effectively met by allowing the private sector to lead the way in setting principles of financial measurement.").

191 Commission Statement of Policy Reaffirming the Status of the FASB as a Designated Private-Sector Standard Setter, 68 Fed. Reg. 23,333, 23,333 (May 1, 2003).

192 *Id.*

193 ACCOUNTING FOR CONTINGENCIES, Statement of Financial Accounting Standards No. 5 (Fin. Accounting Standards Bd. 1975) [hereinafter SFAS No. 5]. *See also* John W. Bagby et al, *How Green Was My Balance Sheet?: Corporate Liability and Environmental Disclosure*, 14 VA. ENVTL. L.J. 225, 306 (1995) ("GAAP has established the loss contingency as the primary accounting concept affecting the treatment of environmental liabilities in the financial statements.").

194 SFAS No. 5, *supra* note 194, § 1.

development of federal environmental law, several years before the enactment of the onerous joint and several liability scheme established by Congress in CERCLA, and decades before climate change became a focus of serious concern.[196] *SFAS No. 5*, as an accounting standard, does not expressly reference environmental liabilities as a possible category of a loss contingency or as a type of contingent liability meriting disclosure in financial statements.[197] Consequently, in terms of providing helpful disclosure guidance for publicly traded companies concerning environmental liabilities, the absence of concrete examples involving contingent environmental liabilities, such as climate change liability, is an understandable, but major, weakness of *SFAS No. 5*.

That criticism aside, several of the loss contingency examples provided in *SFAS No. 5* are broad enough to encompass environmental liabilities as one of the contingencies requiring financial statement treatment and disclosure.[198] Specifically, *SFAS No. 5* requires disclosure of 1) the risk of loss or damage of property due to fire, explosion, or other hazard,[199] 2) pending or threatened litigation,[200] and 3) actual or possible claims and assessments.[201] The "other hazard" language in *SFAS No. 5* is potentially broad enough to include the scenario where property damage resulting from the direct effects of climate change or associated severe weather events occurs. Further, environmental litigation, including climate change-related litigation, asserted against a publicly traded company certainly falls within the *SFAS No. 5* requirement to include as a loss contingency either pending or threatened litigation or claims.

Under *SFAS No. 5*, if it is determined that an estimated loss contingency[202] exists, it must be accrued[203] as a charge against income if "it is probable that an asset [has] been impaired or a liability . . . incurred"[204] and "[t]he amount of loss can be reasonably estimated."[205] *SFAS No. 5* also notes

195 *Id.* § 20. *See also* Fin. Accounting Standards Bd., Status of Statement No. 5, http://www.fasb.org/st/status/statpg5.shtml (last visited July 19, 2009).

196 *See* Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9607(a) (2000).

197 *See* SFAS No. 5, *supra* note 194.

198 *See* Bagby et al., *supra* note 194, at 307 n.483. *See also* Wallace, *supra* note 165, at 1122 ("One can easily envision the applicability of SFAS No. 5 to environmental matters. Such an assumption is only further strengthened by the examples of loss contingencies provided in paragraph 4 of the rule. They include '[p]ending or threatened litigation' and 'actual or possible claims and assessments.' Indeed, these categories, along with obligations to make capital and operating expenditures, constitute the main sources of the economic burden of environmental regulation.").

199 SFAS No. 5, *supra* note 194, § 4.

200 *Id.*

201 *Id.*

202 A loss contingency is "reasonably possible" if "[t]he chance of the future event or events is more than remote but less than likely." *Id.* § 3.

203 *Id.* § 8.

204 *Id.*

205 *Id.* "The requirement that the loss be reasonably estimable is intended to prevent accrual in the financial statements of amounts so uncertain as to impair the integrity of those statements." *Id.* § 59.

that, consistent with the disclosure philosophy underlying federal securities laws, information about both the nature of the accrual and the amount "may be necessary for the financial statements not to be misleading."[206] Disclosure is also required when "there is at least a reasonable possibility that a loss or an additional loss may have been incurred."[207] Under the "reasonable possibility" disclosure requirement, the nature of the contingent liability and an estimate of the possible loss or its range must be disclosed.[208] If the estimate or range of a reasonably probable loss contingency is unknown, then the fact that "an estimate cannot be made" should be disclosed in notes to the financial statements under *SFAS No. 5*.[209]

### *2. Staff Accounting Bulletin No. 92*

While *SFAS No. 5* addressed the financial accounting treatment of contingent liabilities in general, as alluded to previously, one of the more challenging contingent environmental liability disclosure issues revolves around CERCLA[210] and its joint and several liability scheme. There are several reasons why this particular example of environmental liability can present a financial disclosure challenge. When a publicly traded company is identified as one of several PRPs at a contaminated site, in theory, under joint and several liability the company could face responsibility for all site response costs.[211] The costs arising from a site included on the national priorities list,[212] or designated as a Superfund site—the list of the most heavily contaminated sites in the country that present the greatest threat to human health and the environment—typically range in the tens of millions of dollars, if not more.[213] Sole responsibility for site costs could occur if other PRPs become insolvent and leave no successor.[214] The disclosure dilemma that the theoretical possibility of sole liability raises is the extent to which it requires a publicly traded company to disclose as a contingent liability under *SFAS No. 5* all potential site costs whenever designated a PRP under CERCLA.

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206 *Id.* § 9. Also in keeping with the materiality requirement that is generally applicable to disclosure under the securities laws, *SFAS No. 5* provides that it "need not be applied to immaterial items." *Id.* § 20.

207 *Id.* § 10.

208 *Id.*

209 *Id.*

210 See *supra* note 26 for a summary of CERCLA liability provisions. *See also* Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9607(a) (2000).

211 *See* Bagby et al., *supra* note 194, at 242 n.80.

212 *See* 42 U.S.C. § 9605(a)(8) (2000) (requiring EPA to prioritize cleanup sites where the release or threat of release of hazardous substances has occurred). Once evaluated, the site is included on the national priorities list (NPL) as a site urgently requiring removal or remedial action to abate the threat if a site presents a sufficient risk to human health and the environment. *Id.*

213 William D. Araiza, *Text, Purpose and Facts: The Relationship Between CERCLA Sections 107 and 113*, 72 NOTRE DAME L. REV. 193, 195 (1996).

214 *See* Bagby et al., *supra* note 194, at 242.

In practice, however, rarely, if ever, is only one PRP held responsible for all site costs at a multi-PRP CERCLA site.[215] Usually what occurs through the process of allocation, aided by contribution actions among PRPs,[216] is that each PRP is assigned a portion of the total site costs.[217] The allocation process, though, along with the technical process related to site investigation and cleanup, often can take years of data collection and negotiations to resolve.[218] This presents uncertainties in CERCLA litigation, which abound along the long road traveled before resolution of the precise amount of response costs that the government, and ultimately the courts, will assess against each PRP.[219] In turn, this fosters uncertainty as to what should be disclosed as a CERCLA liability. Such uncertainties surrounding CERCLA liability are then magnified by the fact that the statutory scheme entitles some PRPs to obtain contribution from other PRPs,[220] and the uncertainties concerning a given PRP's total liability are further heightened because some PRPs may seek recovery of their costs from liability insurers, with the outcome of the insurance recovery litigation indeterminate for several years.[221]

Given such lack of clarity presented by the vagaries of CERCLA liability, how are companies regulated by the securities laws to account for and disclose

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215 Jason V. Stitt, Note, *The Dischargeability of Environmental Claims in Bankruptcy: Resolution to Diametrically Opposed Goals*, 17 J. NAT. RESOURCES & ENVTL. L. 27, 28 (2003).

216 PRPs may seek contribution for site costs from other PRPs. Contribution actions, in turn, usually require courts to then decide what portion of costs should be attributable to each PRP through a process called allocation. 42 U.S.C. § 9613(f)(1) (2000) ("In resolving contribution claims, the court may allocate response costs among liable parties using such equitable factors as the court determines are appropriate."). Among the equitable factors considered by courts are 1) the volume of wastes disposed of by each PRP; 2) its toxicity; 3) the involvement in the generation, transportation, treatment, storage, or disposal of the hazardous waste; and 4) cooperation with governmental officials in addressing the site contamination. *See* United States v. Vertac Chem. Corp., 79 F. Supp. 2d 1034, 1036–37 (E.D. Ark. 1999), *aff'd*, 453 F.3d 1031 (8th Cir. 2006).

217 *See* Gerald W. Boston, *Toxic Apportionment: A Causation and Risk Contribution Model*, 25 ENVTL. L. 549, 566 (1995).

218 *See generally* Geltman, *supra* note 131, at 164 (discussing the difficulties posed by the timing of disclosure).

219 *See id.* at 165 ("Even if the registrant knows that it has been properly designated a PRP under [CERCLA], quantifying potential liability may be impossible without conducting a detailed investigation and soliciting assurances from appropriate parties concerning the availability of contribution or insurance.").

220 *See* Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9613(f)(1) (2000); *see also* Cooper Indus., Inc. v. Aviall Servs., Inc., 543 U.S. 157 (2004). In *Cooper Industries*, the Supreme Court limited contribution actions under CERCLA to instances where costs are sought following a civil action. *Id.* at 165–66. In other words, the Court precluded contribution actions under section 113(f) of CERCLA when a PRP has voluntarily taken action to address a release or threat of release caused in whole or part by a third party.

221 *See, e.g.*, Brette S. Simon, *Environmental Insurance Coverage Under the Comprehensive General Liability Policy: Does the Personal Injury Endorsement Cover CERCLA Liability?*, 12 UCLA J. ENVTL. L. & POL'Y 435, 436–37 (providing an example of a company that sought indemnification from its liability insurer when EPA brought a claim against it to recover money EPA expended in cleaning up a Superfund site).

to the SEC and investors these potentially multimillion dollar contingent liabilities? Although *SFAS No. 5* addresses contingent liabilities, it provides no direct guidance in the context of the phenomenon of CERCLA liability that arose roughly five years following the effective date of *SFAS No. 5*.[222]

To address this shortcoming of *SFAS No. 5* regarding how publicly traded companies are to account for and disclose such contingent environmental liabilities in financial reports filed with the Commission, the SEC's Division of Corporate Finance[223] issued Staff Accounting Bulletin Number 92 (SAB No. 92) in 1993.[224] SAB No. 92 was necessary because of a concern at the SEC that, understandably, "a diversity in application of generally accepted accounting principles (GAAP) to environmental liabilities existed that may have obscured the magnitude of contingent environmental liabilities and skewed the related disclosures."[225]

In a question and answer format, SAB No. 92 clarified several aspects of how to account for and subsequently disclose contingent environmental liabilities.[226] SAB No. 92, for example, made it clear with respect to contingent environmental liabilities such as CERCLA liability that, even if there were uncertainties as to the amount, these liabilities should be disclosed.[227] So long as there was at least an estimable range of the probable liability, the company should report the lower range of the contingent liability.[228] In light of CERCLA's joint and several liability scheme and the reality of the CERCLA allocation process, SAB No. 92 opined that PRPs could avoid disclosing that they might bear the burden of all response costs

222 To a lesser degree an enforcement action under one of the major federal environmental statutes presents financial uncertainties, too, given that under many federal environmental statutes the government can seek up to $32,500 per day per violation. *See supra* note 14 and accompanying text. Thus in an enforcement action involving a number of violations over a lengthy period, the maximum statutory penalty can easily reach into the millions of dollars, as well as substantial sums in attorneys' fees and expert fees to resolve. Similar to a PRP's CERCLA liability, the defendant in an environmental enforcement action may not know the precise amount of the penalty until after several years of negotiation or until following trial. See *supra* notes 14, 26, and accompanying text for a discussion of the challenging problem of calculating potential damages under CERCLA.

223 The SEC's Division of Corporate Finance, having a variety of regulatory responsibilities, including the review of periodic filings by public companies, also issues periodic accounting bulletins that provide guidance on a variety of financial reporting issues that may confront publicly traded companies. *See* U.S. Sec. & Exch. Comm'n, Selected Staff Accounting Bulletins, http://www.sec.gov/interps/account.shtml (last visited July 19, 2009) (discussing Staff Accounting Bulletins).

224 Staff Accounting Bulletin No. 92, 58 Fed. Reg. 32,843 (June 14, 1993) (codified at 17 C.F.R. pt. 211) [hereinafter SAB No. 92].

225 Richard Y. Roberts & Kurt R. Hohl, *Environmental Liability Disclosure and Staff Accounting Bulletin No. 92*, 50 BUS. LAW. 1, 3 (1994); *see also* SAB No. 92, *supra* note 225, at 32,844 ("Because uncertainty regarding the alternative methods of presenting in the balance sheet the amounts recognized as contingent liabilities . . . and current disclosure practices remain diverse, the staff is publishing its interpretation of the current accounting literature and disclosure requirements to serve as guidance for public companies.").

226 *See* SAB No. 92, *supra* note 225, at 32,844–46.

227 *Id.* at 32,844.

228 *Id.* ("Notwithstanding significant uncertainties, management may not delay recognition of a contingent liability until only a single amount can be reasonably estimated.").

at a contaminated site so long as there was a reasonable basis to apportion or allocate costs among the PRPs.[229] SAB No. 92 also advised reporting companies that, to the extent there were uncertainties about the precise scope of one's joint and several liability, such uncertainties merited discussion in the notes to the financial statements.[230] So that financial statements would not mislead investors, SAB No. 92 also required the disclosure of the "judgments and assumptions" involved in arriving at and disclosing the amounts of contingent environmental liabilities.[231]

Other issues analyzed in SAB No. 92 include offsetting contingent environmental liabilities with contingent gains such as potential insurance recoveries,[232] discounting future environmental expenditures,[233]disclosure of contingent environmental liabilities beyond those in the financial statements,[234] and contingent environmental liabilities associated with the sale or closure of a facility.[235] SAB No. 92 thus in particular clarified the applicability of *SFAS No. 5* to the thorny question of CERCLA liability that any number of publicly traded companies faced following the passage of the statute in 1980. SAB No. 92 does little though, if anything, to shed light on the even thornier question of climate change risk disclosure.

229 *Id.*

230 *See id.*

231 *Id.* at 32,845.

232 *Id.* at 32,844. The SEC concluded that given the uncertainties associated with such recoveries, offsetting was not typically recommended. *Id.*

233 *Id.* at 32,844–45.

234 *Id.* at 32,845. In addition to disclosure in the financial statements, the SEC reminded companies that disclosure pursuant to Item 101, Item 103, and Item 303 under Regulation S-K required consideration. *Id.*

235 The SEC concluded that such costs required disclosure if they were material. *Id.* at 32,845–46. "A primary objective of SAB [No.] 92 was to elicit more meaningful information concerning environmental matters in filings with the Commission." Roberts & Hohl, *supra* note 226, at 11. A subsequent review by the SEC of the annual reports filed by Fortune 500 companies in 2002 found that, in terms of environmental disclosure, "many companies did not provide adequate disclosure," and "that companies could improve their disclosures required by SAB [No.] 92." U.S. Sec. & Exch. Comm'n, Summary by the Division of Corporate Finance of Significant Issues Addressed in the Review of the Periodic Reports of the Fortune 500 Companies, http://www.sec.gov/divisions/corpfin/fortune500rep.htm (last visited July 19, 2009). The Government Accounting Office (GAO) also undertook an evaluation of the environmental disclosures provided by publicly traded companies and concluded that "[l]ittle is known about the extent to which companies are disclosing environmental information in their filings with [the] SEC, despite many efforts to study environmental disclosure over the past 10 years." GAO REPORT, *supra* note 3, at 4. The fundamental problem found by the GAO in its evaluation of environmental disclosures was that "[w]hile disclosures studies can summarize the information included in companies' SEC filings, determining what should have been reported may be impossible without direct access to company records." *Id.* The GAO report concluded that "[w]ithout more compelling evidence that the disclosure of environmental information is inadequate, the need for changes to existing disclosure requirements and guidance or increased monitoring and enforcement by [the] SEC is unclear." *Id.* at 36.

*3. SOP 96-1*

The *Statement of Position 96-1* (*SOP 96-1*)[236] of the American Institute of Certified Public Accountants (AICPA) also addresses the accounting and disclosure of CERCLA remediation liabilities. It provides a detailed, comprehensive guide as to how accountants are to treat the substantial expenses that a company can confront when faced with a government demand to fund the cleanup of a contaminated site.[237] *SOP 96-1* became effective after December 15, 1996,[238] and applies to "all entities that prepare financial statements in conformity with [GAAP]."[239] In determining when companies should recognize remediation liabilities, *SOP 96-1* relies heavily on the analysis of contingent liabilities set forth in *SFAS No. 5*.[240] However, in terms of recognizing environmental remediation liabilities, *SOP 96-1* improves upon *SFAS No. 5*[241] by providing examples of specific environmental "benchmarks" that can trigger the recognition of a remediation liability that will in turn require disclosure in a company's financial statements.[242] The specific examples include identification as a PRP at a site, the issuance of a unilateral order by the EPA, and participation as a PRP in CERCLA-specific activities, such as the remedial investigation/feasibility study phase or remedial design phase at a site. [243]

The drafters of *SOP 96-1* attempt to manage the challenges of estimating CERCLA liabilities. The drafters of *SOP 96-1* clearly understood the difficulties associated with estimating the costs of CERCLA liabilities and recognized in the statement that, for a variety of reasons, the costs associated with environmental remediation liabilities may be difficult to

236 ACCOUNTING STANDARDS EXECUTIVE COMM., AM. INST. OF CERTIFIED PUB. ACCOUNTANTS, STATEMENT OF POSITION 96-1: ENVIRONMENTAL REMEDIATION LIABILITIES (1996) [hereinafter SOP 96-1].

237 *SOP 96-1* does not apply to the voluntary cleanup of contaminated property, nor does it apply to remedial activities that may arise as a result of the cessation of facility operations. *See id.* at 33.

238 *Id.* at 34.

239 *Id.* at 33.

240 As pointed out in *SOP No. 96-1*, "recognition" of a liability "has to do with *when* amounts should be reported in financial statements." *Id.* at 35 (emphasis added). The measurement of the liability once recognized, however, "has to do with the *amounts* to be reported in financial statements." *Id.* (emphasis added).

241 *SFAS No. 5* is not specific to environmental liabilities, but rather addresses the recognition and accounting treatment for any contingent liability, be it environmental or otherwise. *See* SFAS No. 5, *supra* note 194, § 10–12.

242 *See* SOP 96-1, *supra* note 237, at 39.

243 Under section 106(a) of CERCLA, EPA is authorized to issue orders requiring PRPs to take appropriate action at a site that presents an imminent and substantial endangerment to human health or the environment. *See* Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9606(a) (2000). The potent section 106(a) order is not subject to judicial review, and, absent few exceptions, the failure to comply with the demands of an order issued under section 106(a) is not only a violation of CERCLA that can subject a recipient to civil penalties, but can also result in liability for treble the costs incurred by the government if EPA instead performs the work originally demanded of the PRP in the order. *See id.* §§ 9606(a), 9607(c)(3).

determine.[244] Nonetheless, *SOP 96-1* cautions that the inability to provide a reasonable estimate does not mean that the liability should go unrecognized.[245] Rather, under such circumstances, "the components of the liability that can be reasonably estimated should be viewed as a surrogate for the minimum in the range of the overall liability."[246] For instance, if the total amount of the site cleanup costs is not known because it is early in the CERCLA process, a company identified as a PRP could recognize a portion of site expenses, such as the estimated costs of funding the remedial investigation and feasibility study component of the overall site investigation and cleanup, and then disclose those costs in its financial statement.

In terms of measuring a recognized CERCLA liability, *SOP 96-1* explains that the evaluation of costs is a site-specific determination (as it should be) and includes the wide variety of costs commonly associated with the actions taken at a typical CERCLA site that lands on the NPL.[247] These actions and costs include the remedial investigation; performance of a risk assessment; development and implementation of the remedial action plan; the EPA's past costs and future oversight costs; the operation, maintenance, and monitoring of the remedy ultimately selected for the site; and professional expenses such as attorneys' and consultants' fees.[248] Each of these commonly encountered CERCLA site cost components is measured "based on the reporting entity's estimate of what it will cost to perform each of the elements of the remediation effort . . . when those elements are expected to be performed."[249] Similar to the treatment of strict, joint, and several CERCLA liability in SAB No. 92,[250] the amount of the remedial liability reported under *SOP 96-1* is based on an estimated amount of the site costs allocated to the company and not the total sites costs that might be imposed under CERCLA's section 107(a) joint and several liability scheme.[251]

Overall, *SOP 96-1* provides perhaps the most comprehensive coverage of the disclosure of environmental remediation liabilities arising under CERCLA. It does, however, have its limitations. One limitation is that it does not apply to accounting for the costs associated with the voluntary cleanup of contaminated sites.[252] *SOP 96-1* by its express terms also does not apply to situations where the government is seeking not only remedial costs but also natural resource damages,[253] nor does it apply to the frequently encountered

244 Among the factors recognized in *SOP 96-1* that can cloud the determination of the amount of the liability are 1) the extent and type of site contamination, 2) potential remedial technologies, and 3) the number of PRPs identified at a site and their financial viability to fund the cleanup process. SOP 96-1, *supra* note 237, at 37.

245 *Id.* at 38.

246 *Id.*

247 *Id.*

248 *Id.* at 44–45.

249 *Id.* at 47.

250 *See* SAB No. 92, *supra* note 225, at 32,844–45.

251 SOP 96-1, *supra* note 237, at 48–49.

252 *See id.* at 33.

253 *Id.* Under CERCLA, natural resource damages are allowed under section 107(a)(C) of the statute and are defined to include damages to "land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in

litigation situation where hazardous substance contamination has resulted in a toxic tort action.[254] Another shortcoming is that *SOP 96-1* also does not provide guidance on the accounting treatment associated with the costs incurred to comply with applicable environmental laws or the substantial attorneys' fees that arise in an effort to recoup costs through a contribution action that were above and beyond one's fair share of contaminated site costs.[255] A final shortcoming is that, while *SOP 96-1* addresses the challenges attendant to the disclosure of CERCLA liabilities,[256] the standard fails to address climate change risk in any fashion.

Despite these limitations, *SOP 96-1* is a very useful tool. It provides guidance in determining from an accounting and disclosure perspective how to treat environmental remedial costs that can arise as a result of CERCLA liability. One of the most helpful aspects of *SOP 96-1* is a case study that is provided in Appendix B, where the concepts of the statement are applied to various events a PRP routinely encounters in the life cycle of a hypothetical Superfund site.[257]

*4. SFAS No. 143*

In addition to the costs arising from compliance with environmental statutes and regulations and those costs resulting from the remediation of a release of hazardous substances, a business may also incur substantial costs based on a legal obligation to take remedial action upon the permanent shutdown of operations, or, in accounting terminology, the "retirement" of an asset.[258] To address the accounting required in this situation and its

trust by, appertaining to, or otherwise controlled by the United States . . . , any State or local government, any foreign government, [or] any Indian tribe." Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601(16), 9607(a)(C) (2000); *see also* Idaho v. S. Refrigerated Transp. Inc., No. 88-1279, 1991 WL 22479, at *11 (D. Idaho Jan. 24, 1991) (recognizing natural resource damages under CERCLA and awarding the State of Idaho natural resource damages under section 107(a)(C) arising from a chemical spill that resulted in the death of steelhead trout).

254 SOP 96-1, *supra* note 237, at 33.

255 *Id.* at 44–46. As noted previously, under section 113(f) of CERCLA a party can seek contribution from other PRPs. 42 U.S.C. § 9613(f)(1) (2000). *See also* Cooper Indus., Inc. v. Aviall Servs., Inc., 543 U.S. 157, 167 (2004) (construing section 113(f) of CERCLA to only allow contribution following a civil action). Thus, those who voluntarily remediate contaminated property or do so as the result of a threat of litigation may not seek contribution under section 113(f); however, such parties could pursue a cost recovery action under section 107(a). *See* 42 U.S.C. § 9607(a) (2000); United States v. Atl. Research Corp., 127 S. Ct. 2331, 2338 (2007) (construing section 107(a) to allow under certain circumstances PRPs who voluntarily incurred response costs to seek those costs under CERCLA in a cost recovery action rather than under a claim for contribution).

256 SOP 96-1, *supra* note 237, at vii–viii.

257 *Id.* at 90–95.

258 *See* ACCOUNTING FOR ASSET RETIREMENT OBLIGATIONS, Statement of Fin. Accounting Standards No. 143 (Fin. Accounting Standards Bd. 2001) [hereinafter SFAS No. 143]. "Retirement" is defined in SFAS No. 143 "as the other-than-temporary removal of a long-lived asset from service." *Id.* § 2 n.2. Retirement includes the "sale, abandonment, recycling, or disposal in some other manner" of a long-lived asset. *Id.*

attendant disclosure in the financial statements of a business, the FASB adopted the *Statement of Financial Accounting Standards Number 143* (*SFAS No. 143*),[259] which became effective June 16, 2002.[260] This accounting standard specifically addresses the "legal obligations associated with the retirement of a tangible long-lived asset that result from the acquisition, construction, or development and (or) the normal operation of a long-lived asset."[261] The legal obligations that can trigger the need to consider, account for, and disclose asset retirement-related costs include those based upon statute, regulation, or contract.[262] Importantly, the routine costs associated with the maintenance of an asset or the replacement costs of components are not covered by *SFAS No. 143*; only the costs associated with the permanent retirement of an asset are within the scope of the standard.[263]

With respect to accounting treatment and disclosure, *SFAS No. 143* requires recognition of the liability "in the period in which it is incurred if a reasonable estimate of fair value[264] can be made."[265] Once recognized, the asset retirement costs are then reflected in the financial statements as an increase in the carrying costs of the asset in the amount that corresponds with the associated liability and are subsequently allocated over the useful life of the asset in the financial statement.[266] Once the liability is recognized and fair value is established, *SFAS No. 143* requires the disclosure of four key pieces of information concerning the costs associated with the retirement of the asset: 1) a general description of the obligation and associated long-lived asset; 2) the fair value of the asset; 3) the beginning and ending aggregate carrying amounts of asset retirement obligations; and 4) if no fair value is provided, the reasons why no reasonable estimate is possible.[267]

Since asset retirement costs are not always entirely clear, one difficulty with *SFAS No. 143* is whether a particular environmental liability merits treatment as an asset retirement cost. The substantial costs that can arise from the need to remediate a spill or a release of hazardous substance, for instance, may be beyond the scope of the standard if the spill or release is sudden, unexpected, and not a result of normal operations.[268] *SFAS No. 143*, however, does apply in such a situation if the spill or release is expected as

259 SFAS No. 143, *supra* note 259.

260 *Id.* § 24.

261 *Id.* § 2 (emphasis omitted) (footnote omitted).

262 *Id.* § A2.

263 *Id.* § A9.

264 According to the *SFAS No. 157*, "fair value" is defined as "the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date." FAIR VALUE MEASUREMENTS, Statement of Fin. Accounting Standards No. 157, § 5 (Fin. Accounting Standards Bd. 2006) (replacing the definition of fair value in *SFAS No. 143*).

265 SFAS No. 143, *supra* note 259, § 3.

266 *Id.* § 11. As an example of how the cost allocation process works, *SFAS No. 143* provides that if an asset has a useful life of 10 years, the business would incur 10% of the retirement costs each year. *Id.* § 11 n.10.

267 *See id.* § 22.

268 *See id.* § A13. *See also id.* § 2 ("An obligation that results from the improper operation of an asset also is not within the scope of this Statement . . . .").

the result of normal operations.[269] In the situation involving a sudden and unexpected catastrophic spill or release, *SFAS No. 143* cautions instead that AICPA's *SOP 96-1* may apply as guidance in terms of proper accounting treatment and disclosure, rather than the standard for obligations associated with the retirement of long-lived assets.[270] Since the focus of *SFAS No. 143* is the environmental liabilities arising from the shutdown of assets, it does not address the disclosure of climate change risk.[271]

*5. FIN 47*

The latest pronouncement from the accounting profession through FASB that has implications for the financial treatment of environmental liabilities is *FASB Interpretation Number 47* (*FIN 47*), which became effective December 31, 2005, for companies that report financial statements on a calendar year basis.[272] *FIN 47* arose out of a need for more consistent financial accounting treatment of liabilities associated with the sale or shut down of tangible assets such as buildings and plants,[273] and it consequently clarifies the applicability of *SFAS No. 143* to such situations.[274]

Examples of the need to account for such liabilities provided in *FIN 47* include one hypothetical situation where there are several kilns located at a facility, and through normal use, the bricks lining the kilns become contaminated and require disposal as a hazardous waste pursuant to applicable state environmental law. Under *FIN 47*, once the bricks become contaminated through the operation of the kilns, the company should report an estimate of the costs associated with the disposal of the bricks.[275] In the other example provided in *FIN 47*, the owner of a facility that contains asbestos must account for the liabilities associated with the future need to remove and properly dispose of the asbestos in the event demolition or renovation activities could disturb the asbestos, assuming a reasonable estimate can be made of those future costs.[276] Thus, *FIN 47* has broad environmental liability disclosure implications for potential future events, such as the shutdown and need to remediate historical site contamination at industrial property or the need to remove underground storage tanks when

269 *See id.* § A13.

270 *Id.* § 2.

271 *See id.* § 2 (describing the scope of *SFAS No. 143*).

272 FAIR VALUE MEASUREMENTS, Statement of Fin. Accounting Standards No. 157, § 5 (Fin. Accounting Standards Bd. 2006); ACCOUNTING FOR CONDITIONAL ASSET RETIREMENT OBLIGATIONS, FASB Interpretation No. 47, at FIN47-2 (Fin. Accounting Standards Bd. 2005) [hereinafter FIN 47].

273 FIN 47, *supra* note 273, at FIN47-1 ("Diverse accounting practices have developed with respect to the timing of liability recognition for legal obligations associated with the retirement of a tangible long-lived asset when the timing and (or) method of settlement of the obligation are conditional on a future event.").

274 *See* Steve Burkholder, *Asset Retirement: FASB to Clarify Rules on Asbestos Removal, Similar Liabilities From Plant, Shutdowns*, 36 SEC. REG. & L. REP. 1627, 1627 (2004) (noting that a new applicability interpretation was under consideration by FASB). "The central point of the planned interpretation . . . is in keeping with Statement No. 143 . . . ." *Id.*

275 FIN 47, *supra* note 273, § A6–A7.

276 *Id.* § A9–A10.

taken out of service. In these examples, future potential environmental costs can require disclosure under *FIN 47* if a reasonable estimate of those costs is feasible.[277] Since *FIN 47* is a clarification of *SFAS No. 143*, *FIN 47* is also silent regarding the accounting treatment of climate change.[278]

### *C. EPA's Foray into Environmental Disclosure Obligations*

EPA delved into the environmental disclosure arena in 2001 when it issued a memorandum, the Schaeffer Memorandum, directing the agency's enforcement personnel to advise publicly traded companies, subject to federal enforcement as a result of violating environmental laws, of their obligations under the securities laws to disclose "material legal proceedings" pursuant to Item 103 of Regulation S-K.[279] EPA was prompted to provide companies subject to enforcement with this reminder of their disclosure obligations because, based on several studies summarized in the Schaeffer Memorandum, the agency was alarmed at the low rate of environmental liability disclosure.[280] According to one study referred to in the Schaeffer Memorandum, "62 percent of respondents had not accrued known environment-related exposures on their financial statements."[281] Another cited study conducted by EPA's Office of Enforcement and Compliance Assurance evaluating environmental litigation disclosure under Item 103 "found a non-reporting rate of 74 percent."[282]

In response to the perceived rampant inadequacies in environmental liability disclosures, enforcement personnel were instructed to provide a copy of the Schaeffer Memorandum to companies facing environmental enforcement as a reminder of their SEC environmental liability disclosure obligations.[283] Later, in 2001, EPA also prepared an *Enforcement Alert*, emphasizing the agency's decision to remind publicly traded companies of their environmental liability disclosure obligations.[284] In the *Enforcement*

277 *See* Burkholder, *supra* note 275 (recognizing that *FIN 47* originated from an effort to clarify the accounting treatment of asbestos liabilities and, in so doing, FASB recognized applicability to environmental liabilities in general that arose out of future legal obligations to cleanup and dispose of other toxic and hazardous substances as retired assets).

278 *See* FIN 47, *supra* note 273, at FIN47-1.

279 Memorandum from Mary Kay Lynch, Dir., Office of Planning & Policy Analysis, U.S. Envtl. Prot. Agency, and Eric V. Schaeffer, Dir., Office of Regulatory Enforcement, U.S. Envtl. Prot. Agency, to Office of Enforcement & Compliance Assistance Office Dirs., Office of Reg'l Counsel for Regions I–X, Enforcement Div. Dirs. for Regions I–X, and Enforcement Coordinators for Regions I–X 1 (Jan. 19, 2001) (on file with author) [hereinafter Schaeffer Memorandum].

280 *Id.* at 1–2

281 *Id.*

282 *Id.* at 2.

283 *Id.*

284 U.S. Envtl. Prot. Agency, *U.S. EPA Notifying Defendants of Securities and Exchange Commission's Environmental Disclosure Requirements*, ENFORCEMENT ALERT, Oct. 2001, at 1, 1, *available at* http://www.epa.gov/compliance/resources/newsletters/civil/enfalert/sec.pdf [hereinafter ENFORCEMENT ALERT].

*Alert*, the agency also summarized the disclosure obligations enforced by the SEC.[285]

In light of this entry by EPA into the realm of environmental liability disclosure, one would think that the agency and the SEC would coordinate efforts to evaluate and improve the disclosure of environmental liability information. EPA could have, for example, periodically provided a list of the publicly traded companies subject to major environmental enforcement to the SEC, which could then evaluate whether the enforcement matters were disclosed. As practical as that may seem, however, there is a lack of coordination between the agencies:

> SEC and EPA do not have a formal agreement to share relevant information. At one time, EPA was providing enforcement-related data to SEC's Division of Corporation Finance on a quarterly basis, but SEC questioned the usefulness of the data because they were facility-specific and SEC could not readily identify the parent company responsible for filing reports with SEC.[286]

Thus, these two regulatory agencies have not coordinated efforts to monitor, enforce, and improve the disclosure of environmental liabilities by companies subject to the federal securities laws.[287] EPA took a step in that direction with the Schaeffer Memorandum, but by all appearances that effort and interest has waned as an EPA priority since more than seven years has passed after the memorandum appeared, and it has not been updated or revised to reflect the emergence of climate change as a material risk requiring disclosure.[288] Neither has EPA issued any further guidance through an *Enforcement Alert*; nor is it certain how long EPA provided its environmental disclosure guidance or whether it still does so as a matter of course.[289] Moreover, an SEC telephone number "dedicated to answering questions related to environmental disclosure issues" listed by EPA in its October 2001 environmental disclosure *Enforcement Alert* is no longer in service.[290]

Progress has been made to clarify the financial treatment of environmental liabilities and their subsequent disclosure. A current major failing of these efforts is that none of the SEC or accounting profession guidance has been updated in response to the rapidly evolving area of climate change-related liabilities businesses face and the concomitant

285 *Id.* at 1–2.

286 GAO REPORT, *supra* note 3, at 5.

287 *See id.* at 23, 28 (discussing the inability to determine the adequacy of the SEC's monitoring efforts absent better information on the extent of environmental disclosure and results of the SEC's company filing reviews and the limited efforts by the SEC and EPA to coordinate and improve environmental disclosure).

288 EPA does have a page devoted to the disclosure of environmental liabilities on its website. All it does, however, is summarize the Schaeffer Memorandum and the 2001 *Enforcement Alert* devoted to the disclosure of liabilities. *See generally* U.S. Envtl. Prot. Agency, Compliance Incentives and Auditing, http://www.epa.gov/compliance/incentives/programs/marketbased.html (last visited July 19, 2009).

289 *See generally id.* (listing no additional documents past the issuance of the Schaeffer Memorandum).

290 *See* ENFORCEMENT ALERT, *supra* note 285, at 3.

obligation to disclose those risks.[291] Given the overarching importance of climate change as an environmental issue and the varied risks it poses to a host of businesses,[292] this is a major flaw in the decades-long efforts by regulators and the accounting profession to clarify the obligations of publicly traded companies to disclose environmental liabilities in financial statements and other regulatory filings intended to apprise investors of risk.[293] As the current accounting profession guidance has recognized in its treatment of CERCLA liability, it may be difficult to ascertain with precision the costs of an environmental liability. Nonetheless, at a minimum an express recognition that climate change presents a threat and, more importantly, why it presents a risk is worthy of disclosure by publicly traded companies.

## V. LIABILITY FOR INADEQUATE OR MISLEADING ENVIRONMENTAL DISCLOSURES

One reason why the disclosure of environmental liabilities is important within the federal securities law regime is that knowledge concerning liabilities is among the risk factors investors weigh and can use in reaching a decision whether to buy or sell a particular security. Another reason, of course, is to avoid running afoul of one's legal obligations and to avert incurring administrative, civil, or criminal liability.

Under the federal securities laws there are a number of statutory provisions that the SEC, as well as investors, can use to hold public companies and their employees liable for civil penalties, criminal sanctions, or damages for failing to disclose relevant material environmental liabilities. Specifically, these actions may include claims for relief under the primary antifraud provision of section 10(b)[294] and Rule 10b-5,[295] section 13,[296] and section 14[297] of the 1934 Exchange Act.

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291 See *supra* Part II.B for a discussion of the specific types of risk that climate change presents to businesses. These risks may trigger a disclosure obligation under the federal securities laws.

292 *See supra* Part II.B.

293 See *infra* Part VII for suggestions regarding how to improve the disclosure of climate change-related liabilities.

294 Section 10(b) of the Securities Exchange Act of 1934, 15 U.S.C. § 78j(b) (2006), is the workhorse in the fight against securities fraud of all stripes, and allows the SEC to pursue enforcement resulting from

> the use of any means or instrumentality of interstate commerce . . . [t]o use or employ, in connection with the purchase or sale of any security . . . any manipulative or deceptive device or contrivance in contravention of such rules and regulations as the Commission may prescribe as necessary or appropriate in the public interest or for the protection of investors.

*Id.* § 78.

295 Rule 10b-5 was adopted by the SEC to implement the antifraud mandate provided by Congress in section 10(b) of the 1934 Act. *See* 17 C.F.R. § 240.10b-5 (2008). Relevant in terms of the disclosure of environmental liabilities, Rule 10b-5 provides in part:

> It shall be unlawful . . . [t]o make any untrue statement of a material fact or to omit to state a material fact . . . or . . . [t]o engage in any act, practice, or course of business

Admittedly, the SEC has not moved to pursue enforcement against any publicly traded company alleging inadequate disclosure of climate change risk,[298] but the enforcement risk related to inadequate environmental liability disclosure is mounting on another front, as illustrated by action taken in the

> which operates or would operate as a fraud or deceit upon any person in connection with the purchase or sale of any security.

*Id.* Together, section 10(b) and Rule 10b-5 form a potent enforcement tool for the SEC to combat fraudulent practices in the sale or purchase of securities. *See* Sergeant v. Genesco, Inc., 492 F.2d 750, 760 (5th Cir. 1974) ("The basic intent of section 10(b) and rule 10b-5 . . . is to protect investors and instill confidence in the securities markets by penalizing unfair dealings."). They have indeed been used to seek sanctions for the failure to disclose environmental liabilities. See, for example, *In re* Lee Pharm., Exchange Act Release No. 34-39843, Administrative Proceeding File No. 3-9573 (U.S. Sec. & Exch. Comm'n Apr. 9, 1998), http://www.sec.gov/litigation/admin/3439843.txt (last visited July 19, 2009) (order instituting proceedings), an SEC administrative enforcement for violations of section 10 and Rule 10b-5 arising from material misstatements in filings submitted to the SEC concerning the presence of extensive soil and groundwater contamination. Private investors, too, have an implied cause of action under section 10(b) and Rule 10b-5. *See, e.g.*, Grossman v. Waste Mgmt., Inc., 589 F. Supp. 395, 399 (N.D. Ill. 1984) (explaining that plaintiffs sought damages under section 10(b) and Rule 10b-5 for failure to accurately disclose environmental noncompliance and associated regulatory disputes); Endo v. Albertine, 812 F. Supp. 1479, 1479–80 (N.D. Ill. 1993) (explaining that investors sought damages under section 10(b) and Rule 10b-5 for failure to disclose, among other liabilities, the environmental liabilities associated with the issuer's former chemical company subsidiary).

296 Section 13, 15 U.S.C. § 78m (2006), governs the accuracy of reports filed with the agency, such as Form 10-Q and Form 10-K. It, too, along with its implementing regulations, has been used by the SEC to enforce inaccurate environmental disclosures made in filings submitted to the agency. See, for example, *In re* Ashland Inc., Exchange Act Release No. 34-54830, Administrative Proceeding File No. 3-12487 (U.S. Sec. & Exch. Comm'n Nov. 29, 2006), *available at* http://www.sec.gov/litigation/admin/2006/34-54830.pdf, which involved an SEC cease-and-desist order issued pursuant to section 13 of the 1934 Act for violations that arose when Olasin, the director of Ashland's environmental remediation group, reduced the costs associated with various Ashland remedial obligations by millions of dollars over the course of several years. The reductions resulted in a decrease of Ashland's environmental reserves by more than $12 million in 1999 and 2000, and by 10% in 2001, which in turn served to increase Ashland's net income. *Id.* at 5. Consequently, the company's financial statements and SEC filings contained the misstated reserve amounts and their resulting positive effects on net income. *See id.*

297 Proxy solicitations seeking shareholder authority to have someone vote on their behalf are governed by section 14 of the 1934 Act. *See* 15 U.S.C. § 78n (2006). Rule 14a-9 imposes an accuracy requirement on the information submitted to shareholders in the effort to obtain their proxies. 17 C.F.R. § 240.14a–9(a) (2008). A shareholder in *United Paperworkers Int'l Union v. Int'l Paper Co.*, 801 F. Supp. 1134, 1134 (S.D.N.Y. 1992), *aff'd*, 985 F.2d 1190 (2d Cir. 1993), alleged misstatements of certain environmental liabilities in proxy solicitation materials. The court concluded in response to the defendant's motion for summary judgment that the company had failed to disclose in the proxy materials provided to shareholders any information about a series of pending environmental enforcement proceedings. *Id.* at 1142. The court further found, in a stinging rebuke of management, that "the Board's discussion of environmental issues in the Annual Report simply does not disclose information sufficient to enable a shareholder to make a reasoned judgment" about the shareholder proposal. *Id.*

298 *See, e.g.*, SIMPSON THACHER & BARTLETT LLP, DISCLOSURE OF CLIMATE CHANGE RISK IN SEC FILINGS 1, 2 (2008), *available at* http://www.simpsonthacher.com/content/publications/pub780.pdf (discussing petitions urging the SEC to begin examining the adequacy of climate change disclosures).

fall of 2007 by the office of New York Attorney General Andrew Cuomo.[299] His office issued subpoenas to five major energy companies: AES Corporation, Dominion Resources, Xcel Energy, Peabody Energy, and Dynegy Inc.[300] These subpoenas sought information about the climate change risks that each of these businesses faced and whether those risks were adequately disclosed to investors in SEC filings.[301] The cover letter accompanying each of the five subpoenas states, "As you are aware, a public company must disclose information material to a shareholder's investment decision."[302] It proceeds to allege that the Attorney General's office was concerned that, based on a review of 2006 Form 10-Ks filed with the SEC, the recipients of the subpoenas "failed to disclose material information about the increased climate risks" these businesses faced. [303]

The outcome of the investigation by the New York Attorney General's office remains unclear because it is ongoing with respect to three of the recipients of the subpoenas.[304] Xcel Energy resolved its alleged failure to provide adequate disclosure,[305] as did Dynegy,[306] but the implications are

299 Felicity Barringer & Danny Hakim, *New York Subpoenas 5 Energy Companies*, N.Y. TIMES, Sept. 16, 2007, at Metro 31.

300 *Id.*

301 *See* Letter from Katherine Kennedy, Special Deputy Attorney Gen., Office of the N.Y. Attorney Gen., and Matthew Gaul, Chief, Investor Prot. Bureau, N.Y. Attorney Gen. Office, to Gregory H. Boyce, President & Chief Executive Officer of Peabody Energy (Sept. 14, 2007) (on file with author); Letter from Katherine Kennedy, Special Deputy Attorney Gen., Office of the N.Y. Attorney Gen., and Matthew Gaul, Chief, Investor Prot. Bureau, N.Y. Attorney Gen. Office, to Thomas F. Farrell, II, Chairman, President, & Chief Executive Officer of Dominion Res. (Sept. 14, 2007) (on file with author); Letter from Katherine Kennedy, Special Deputy Attorney Gen., Office of the N.Y. Attorney Gen., and Matthew Gaul, Chief, Investor Prot. Bureau, N.Y. Attorney Gen. Office, to Paul Hanrahan, President & Chief Executive Officer of AES Corp. (Sept. 14, 2007) (on file with author) [hereinafter Letter to Hanrahan]; Letter from Katherine Kennedy, Special Deputy Attorney Gen., Office of the N.Y. Attorney Gen., and Matthew Gaul, Chief, Investor Prot. Bureau, N.Y. Attorney Gen. Office, to Richard C. Kelly, Chairman, President, & Chief Executive Officer of Xcel Energy (Sept. 14, 2007) (on file with author); Letter from Katherine Kennedy, Special Deputy Attorney Gen., Office of the N.Y. Attorney Gen., and Matthew Gaul, Chief, Investor Prot. Bureau, N.Y. Attorney Gen. Office, to Bruce Williamson, Chairman & Chief Executive Officer of Dynegy Inc. (Sept. 14, 2007) (on file with author).

302 *See, e.g.*, Letter to Hanrahan, *supra* note 302, at 1.

303 *Id.*

304 *See Dynegy to Warn Investors on Risk of Coal Burning*, N.Y. TIMES, Oct. 23, 2008, http://www.nytimes.com/2008/10/24/business/24dynegy.html?emc=rss&partner=rssnyt (last visited July 19, 2009).

305 Nicholas Confessore, *Energy Firm to Specify Investor Risk*, N.Y. TIMES, Aug. 28, 2008, at C1 (noting that Xcel Energy and the New York attorney general's office had resolved the climate change disclosure issues raised in the Xcel subpoena through an agreement by the company to provide "detailed warnings about the risks that global warming poses to its business"). The article quoted Attorney General Cuomo as saying, "This landmark agreement sets a new industrywide precedent that will force companies to disclose the true financial risks that climate change poses to their investors." *Id.* He was further quoted in the article as noting, "Coal-fired power plants can significantly contribute to global warming, and investors have the right to know all the associated risks." *Id.*

306 *Dynegy to Warn Investors on Risk of Coal Burning*, *supra* note 305 ("Dynegy has agreed to put detailed information in its financial filings on any material risks posed by climate change.

clear for the other three companies and for other businesses as well. Attorney General Cuomo is threatening legal action arising out of the alleged failure to disclose climate change-related liabilities.[307] If legal action by the State of New York proceeds as a result of its ongoing investigation, it is highly likely that shareholder suits claiming securities fraud based on inadequate disclosure of material facts concerning climate change liabilities will follow against the companies that have yet to reach an agreement with Attorney General Cuomo.

## VI. THE INTERPLAY BETWEEN THE CURRENT DISCLOSURE REGIME AND CLIMATE CHANGE RISK

To recap, the current environmental liability disclosure regime imposes an obligation upon publicly traded companies to provide a narrative description of the material costs to comply with environmental statutes and regulations, including any associated capital costs that will be incurred to achieve compliance.[308] In addition, the material impact that compliance costs may have upon the business should be provided.[309] To the extent that a publicly traded company is involved in environmental litigation, that too should be disclosed under certain circumstances.[310] The costs attendant to CERCLA liability are also relevant information about a publicly traded company's environmental exposure that may require disclosure, even if the liability is only capable of an estimate within a range of likely losses[311] or is based on the estimated costs corresponding to a particular phase of the CERCLA process, such as the remedial investigation, feasibility study, risk assessment, or post-remedial monitoring phases.[312] The liabilities associated with the need to comply with environmental regulatory obligations, triggered by the sale or shutdown of a facility, are also costs that fall within the obligation to disclose environmental liabilities.[313]

How does this current environmental liability disclosure regime consisting of SEC regulations, agency guidance, and accounting profession pronouncements match up with the climate change risks highlighted previously? That is, does the existing framework for disclosing environmental liabilities, coupled with the threat of enforcement for inadequate disclosure, sufficiently compel the disclosure to investors and the SEC of the climate change risks businesses face? A review of how

That could include warning investors about looming government regulations that might make it more expensive to emit carbons, or the possibility that the company could be sued over pollution.").

307 *See* Confessore, *supra* note 306.

308 *See* 17 C.F.R. § 229.10(c)(xii) (2008).

309 *See id.*

310 *See id.* § 229.103 (Instructions to Item 103). Specifically, under Item 103, environmental litigation requires disclosure if it involves 1) a material claim, 2) a claim for damages greater that 10% of current assets, or 3) a monetary sanction sought by a governmental entity of more than $100,000. *Id.*

311 *See supra* Part IV.B.1–2 (discussing *FASB No. 5* and SAB No. 92).

312 *See supra* Part IV.B.3 (discussing *SOP 96-1*).

313 *See supra* Part IV.B.4–5 (discussing of *SFAS No. 143* and *FIN 47*).

climate change risks are typically managed in an actual SEC filing suggests that the regulatory framework in place does not result in adequate disclosure of climate change risk. This conclusion is supported by extensive studies of climate change risk disclosure by publicly traded companies.[314]

### *A. Disclosure of Regulatory Risks*

Regarding the regulatory risks to businesses that climate change presents, the current disclosure scheme may not impose a disclosure obligation. Federal legislative inaction to combat climate change by reducing greenhouse gas emissions is one basic reason disclosure of regulatory risk may not be triggered by the current regime. Although numerous bills have been introduced in Congress,[315] to date, there is no federal regulatory effort in place specifically targeting mandatory reductions in greenhouse gas emissions.[316] As a consequence, businesses with intense carbon dioxide and other greenhouse gas emissions, as well as industry sectors that produce products resulting in emissions of climate-changing gases, presently escape the need to acknowledge that significant costs might be incurred to substantially reduce emissions under federal law.[317]

314 *See, e.g.*, MICHELLE CHAN-FISHEL, FRIENDS OF THE EARTH, FIFTH SURVEY OF CLIMATE CHANGE DISCLOSURE IN SEC FILINGS OF AUTOMOBILE, INSURANCE, OIL & GAS, PETROCHEMICAL, AND UTILITIES COMPANIES 9–10 (2006). After reviewing the climate change risk-related disclosures made in SEC filings by 112 publicly traded companies in the automobile, insurance, oil and gas, petrochemical, and utility sectors, the author concluded that while "dramatic improvement has occurred among the oil and gas sector" in terms of climate change risk disclosure in SEC filings, "disclosure rates in other sectors are holding steady and remain much lower." *Id.* at 8–9. According to the survey results, in 2004 only 26% of those in the automobile manufacturing sector disclosed climate change risk in SEC filings. *Id.* at 9. "Climate reporting among insurers and petrochemicals companies is of particular concern, with only 15 percent of insurers and 28 percent of petrochemicals companies providing disclosure." *Id.* The author further stated, "Friends of the Earth believes that the low disclosure rates among the automobile, petrochemical and insurance sectors are unacceptable." *Id.* The findings by Chan-Fishel are consistent with other surveys examining the disclosure of environmental liabilities and climate change risk by publicly traded companies. *See, e.g.*, RISKMETRICS GROUP, CARBON DISCLOSURE PROJECT, CARBON DISCLOSURE PROJECT REPORT 2007: USA S&P500, at 33–47 (2007). The Carbon Disclosure Project has as its mission "to create a rigorous global database of corporate carbon emissions." Gregory J. Fleming, *Introduction* to *id.* Its report reviewed 10-K filings as part of an evaluation of climate change-related disclosures and determined that "disclosure on climate change was rare across all sectors, and predominately limited to regulatory risk." *Id.* at 33. In another survey, the SEC Division of Corporate Finance reviewed the 2002 filings by all Fortune 500 companies to determine how well companies disclosed, among other items, environmental risks. *See* U.S. Sec. & Exch. Comm'n, Summary by the Division of Corporate Finance of Significant Issues Addressed in the Review of the Periodic Reports of the Fortune 500 Companies, http://www.sec.gov/divisions/corpfin/fortune500rep.htm (last visited July 19, 2009). According to the SEC's analysis, many of the Fortune 500 companies failed to provide adequate environmental disclosures. *Id.*

315 *See supra* note 39 and accompanying text.

316 As noted previously, this lack of federal legislation and regulation is likely to change with President Obama in the White House. *See supra* note 40 and accompanying text.

317 Shortly after *Massachusetts v. EPA*, 549 U.S. 497 (2007), the EPA's efforts directed towards climate change and reduction of greenhouse gas emissions were to call for further

In one of its 2008 10-Ks filed with the SEC, ExxonMobil provides an illustration of how this lack of disclosure obscures the specific risk presented to it by possible climate change regulation.[318] There, in terms of climate change regulatory risk, it is only mentioned that ExxonMobil faces "laws and regulations related to environmental or energy security matters, including those addressing alternative energy sources and the risks of global climate change."[319] Absent a federal regulatory scheme that would impose dramatic reductions in greenhouse gas emissions throughout a broad reach of industry, this boilerplate of highly generalized regulatory risk, mentioning climate change as almost an aside, provides investors with little useful information about the magnitude of the climate change regulatory risk that ExxonMobil faces.[320] Yet, in light of the fact that ExxonMobil's refinery facilities emit large amounts of carbon dioxide and other greenhouse gases, and that the use of one of its principal products—gasoline—results in the emission of carbon dioxide,[321] it would appear that in order to fully inform investors of the regulatory risk it faces, more is required in terms of disclosure than that provided in its 2007 10-K. With the lack of federal legislation, admittedly the regulatory risk may be incalculable with any precision, but it is present nevertheless and merits more than the bare mention it receives in ExxonMobil's 2007 10-K.

There are a number of state and regional regulatory efforts aimed at curbing greenhouse gas emissions,[322] and those might require affected companies to disclose compliance costs or the effects that state and regional greenhouse gas regulatory programs might have on a business. The state and

study of if and how to regulate greenhouse gas emissions under the CAA. Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. 44,354, 44,354 (July 30, 2008) (to be codified at 40 C.F.R. ch. 1) (Advanced Notice of Proposed Rulemaking). In an interesting bit of commentary about the CAA, former EPA Administrator Stephen Johnson states in the advance notice of proposed rulemaking that "the Clean Air Act, an outdated law originally enacted to control regional pollutants that cause direct health effects, is ill-suited for the task of regulating global greenhouse gases." *Id.* at 44,355. Administrator Johnson goes on further to assert that any regulations adopted under the CAA targeting reductions in greenhouse gas emissions "would largely pre-empt or overlay existing programs that help control greenhouse gas emissions and would be relatively ineffective at reducing greenhouse gas concentrations given the potentially damaging effect on jobs and the U.S. economy." *Id.*

318 *See* ExxonMobil Corp., Annual Report (Form 10-K) (Feb. 28, 2008) [hereinafter ExxonMobil Annual Report].

319 *Id.* at 3.

320 This, and the following references to ExxonMobil's 10-K and 10-Q, is not to suggest that the company is not in compliance with SEC environmental disclosure requirements. I focus on ExxonMobil only because its filings highlight the challenge that publicly traded corporations face in the absence of SEC and accounting profession guidance in disclosing climate change risk. On its website, ExxonMobil certainly does provide information about climate change and its operations. There, for example, ExxonMobil touts the fact that its emissions of greenhouse gases have been reduced by five million metric tons in 2007. ExxonMobil, Reducing Greenhouse Gas Emissions from Energy Production, http://www.exxonmobil.com/Corporate/energy_climate_actions_ops.aspx (last visited July 19, 2009).

321 *Id.* (stating that in 2007, ExxonMobil's equity operations emitted 141 million metric tons of greenhouse gases).

322 *See* Kaswan, *supra* note 6, at 42–78 (summarizing state and regional climate change-focused regulatory efforts).

regional efforts, however, tend to focus on emissions from coal-fired power plants and exclude from coverage other industrial sources that may emit large amounts of greenhouse gases.[323] Perhaps more importantly, these efforts are only state based or regional in their scope, so companies with operations outside of their regulatory jurisdiction may evade a reporting obligation concerning the risks of climate change.

### *B. Disclosure of Climate Change Litigation Risks*

One might think that if a publicly traded company were embroiled in climate change-related litigation, such as the *Kivalina* case,[324] with potentially hundreds of millions of dollars in damages at stake, disclosure in accordance with Item 103 is required. Even here, though, disclosure to investors concerning the litigation may not be required because of the materiality threshold.[325] That is, in light of ExxonMobil's financial strength, even if the company were ultimately found liable for the costs sought in the case, arguably the award would not have a material impact on the company. Further, in the *Kivalina* case, since a governmental entity is not seeking a penalty but rather damages for relocation costs, a publicly traded company could legitimately take the position that, under the current risk-reporting framework, it does not qualify as government environmental litigation that necessitates disclosure. Thus, one of the major risks climate change presents to businesses—litigation—may escape disclosure without violating the SEC reporting regime set out in regulation S-K.[326]

The 10-Q filed on May 6, 2008, by ExxonMobil, one of the defendants in the *Kivalina* case, is instructive here, too. In it, no specific mention is made of the *Kivalina* case; rather, ExxonMobil in its discussion of litigation risks discloses in the Notes to the Condensed Consolidated Financial Statements that:

> A variety of claims have been made against ExxonMobil and certain of its consolidated subsidiaries in a number of pending lawsuits. . . . Based on a consideration of all relevant facts and circumstances, the Corporation does not believe the ultimate outcome of any currently pending lawsuit against ExxonMobil will have a materially adverse effect upon the Corporation's operations or financial condition.[327]

323 For example, the Regional Greenhouse Gas Initiative imposes a cap-and-trade program upon coal-fired power plants, an admittedly significant source of greenhouse gas emissions; as a regulatory program it is far from imposing a comprehensive greenhouse gases reduction program upon all major sources of greenhouse gas emissions in the Northeast. *See* MEMORANDUM OF UNDERSTANDING, *supra* note 6, at 2.

324 See *supra* Part II.B.3.a for a discussion of the *Kivalina* case and other examples of litigation risks.

325 See *supra* note 183 for a discussion of the disclosure requirements imposed by Item 103.

326 See *supra* Part III.B for a discussion of regulation S-K.

327 ExxonMobil Corp., Quarterly Report (Form 10-Q), at 6 (May 6, 2008) [hereinafter ExxonMobil Quarterly Report].

This disclosure is undoubtedly legally proper from a materiality standpoint given the extraordinary strength of ExxonMobil's balance sheet and its recent run of multibillion-dollar quarterly profits.[328] The above generic disclosure of litigation risk could encompass claims ranging from breach of contract, products liability, antitrust, consumer fraud, patent infringement, and CERCLA to toxic torts. It does nothing, however, to inform investors who might be interested in climate change risk that ExxonMobil is a defendant in a suit alleging that its products and operations are contributing to the adverse effects of climate change, with a claim for damages potentially in the hundreds of millions of dollars.

### *C. The Physical Risks of Climate Change*

Under Item 303, management is to discuss material environmental liabilities and the impact that they may have as "known trends or uncertainties" that are reasonably likely to have a material effect on the financial condition or operating performance on the company's business.[329] Similar to the problem with the disclosure of climate change litigation, the materiality threshold provides a legitimate route for many businesses to conclude that nothing need be disclosed because there is no material risk in light of the absence of an overarching federal regulatory program requiring reduced greenhouse gas emissions. Turning to ExxonMobil again as an example, the company has operations in the Gulf of Mexico—an area where hurricanes of increasing frequency and severity due to climate change are a real threat.[330] Here ExxonMobil does disclose that severe weather events, including hurricanes, "can disrupt supplies or interrupt the operation of ExxonMobil facilities."[331] No mention is made in the disclosure, however, that such extreme weather events are expected to increase in frequency and severity as a result of climate change.[332] Thus, the risk that is mentioned may occur more often and with greater severity than disclosed, resulting in the destruction of equipment and longer disruptions to the business.[333] The general risk of adverse weather that ExxonMobil operations face is simply not presented as a risk attendant to climate change.

In sum, one is left to conclude that although Items 101, 103, and 303 may appear to impose a stringent obligation to disclose environmental liabilities, including climate change risks, in practice they fail as a regulatory

328 For 2007, ExxonMobil's revenues were $405 billion with net income of $41 billion. *See* ExxonMobil Annual Report, *supra* note 319, at 50. For the first quarter of 2008, ExxonMobil reported total revenues of almost $117 billion, with net income of approximately $10.89 billion. *See* ExxonMobil Quarterly Report, *supra* note 328, at 3.

329 17 C.F.R. § 229.303(a)(3)(ii) (2008).

330 See *ExxonMobil Annual Report, supra* note 319, at 14 (describing ExxonMobil's presence in the Gulf of Mexico); INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS 751, 864 (Susan Solomon et al. eds., 2007) [hereinafter THE PHYSICAL SCIENCE BASIS].

331 ExxonMobil Annual Report, *supra* note 319, at 2.

332 *See* THE PHYSICAL SCIENCE BASIS, *supra* note 331.

333 *Id.*

mechanism to adequately result in the disclosure of climate change risk to investors. Consequently, this aspect of the current SEC reporting regime requires an overhaul if it is to truly advise investors about the climate change risks that businesses confront.

## VII. A PRESCRIPTION FOR IMPROVED CLIMATE CHANGE LIABILITY DISCLOSURE

The various climate change risks that businesses face are real and present an evolving direct challenge to growth and profitability as the adverse impacts of a warmer planet become better understood and more apparent. But the current disclosure regulations and guidance directed toward environmental liabilities have not kept pace with this relatively new, mounting environmental challenge and the need to account for the multifaceted risk that climate change presents.[334] The last major substantive guidance provided by the SEC regarding the disclosure of environmental liabilities was over a decade ago when the SEC issued SAB No. 92.[335] The last major accounting standard addressing environmental disclosure was *FIN 47*, which has no focus on climate change.[336] Meanwhile, a number of publicly traded companies have directly confronted the risks created by climate change, yet the SEC and the accounting profession have not acted specifically to advise the business community of what is required in terms of climate change-related disclosure.[337]

Individual and institutional investors continue to demand that the SEC take regulatory action concerning climate change-related disclosures in public filings. One effort was initiated by a petition submitted to the SEC on behalf of several states, organizations, and institutional investors requesting that the agency "issue an interpretive release clarifying that material climate-related information must be included in corporate disclosures under existing law."[338] Congress has also proposed legislation requiring the SEC to

334 See *supra* Part VI for a discussion of the failure of SEC regulations to address climate liabilities.

335 *See* SAB No. 92, *supra* note 225, at 32,843. The SEC announced a new initiative to improve disclosure. U.S. Sec. and Exch. Comm'n, 21st Century Disclosure Initiative, http://www.sec.gov/spotlight/disclosureinitiative/plan.shtml (last visited July 19, 2009). The initiative is in its early stages; as such, it is uncertain as to how it will improve disclosure or whether it will include any focus on improving in general environmental disclosure or specifically disclosure of climate change risk.

336 *See* FIN 47, *supra* note 273, at FIN47-1 to -2 (summarizing *FIN 47* and failing to make any mention of climate change).

337 See *supra* Part IV.B for a discussion of the lack of liability disclosure requirements related to climate change.

338 Petition for Interpretive Guidance on Climate Risk Disclosure, No. 4-547, at 2 (filed Sept. 18, 2007), *available at* http://www.sec.gov/rules/petitions/2007/petn4-547.pdf [hereinafter Petition]. The interpretive guidance is needed, according to the proponents:

> Despite growing investor demands, many companies currently release little information about their exposure to climate risk and their preparedness to address those risks. Even in industries characterized by very high greenhouse gas emissions, and in those subject to direct regulation of those emissions, registrants' 10-K reports often contain only cursory descriptions of climate risk, if they contain any description at all.

undertake a rulemaking that would address climate change disclosure.[339] Nonetheless, the SEC continues to provide public companies with inadequate guidance regarding the disclosure of climate change risk.[340] What actions are appropriate for the Commission to take in order to better inform businesses about their obligations under the federal securities laws to disclose climate change-related liabilities so that investors can ultimately reach informed investment decisions?

### *A. The SEC Should Act*

Given the material risks that climate change presents to a number of publicly traded companies, it is well past the time for the SEC to take regulatory action directed towards disclosure of climate change liabilities. At a minimum, the Commission should update its environmental disclosure guidance so that businesses and investors have a better understanding of what is expected. Rather than remain silent, a new emphasis is required by the SEC to advise publicly traded companies that, similar to disclosure regarding material costs to achieve compliance with environmental regulations, pending or threatened governmental enforcement actions, or CERCLA liability, climate change-related liabilities are among the environmental liabilities also triggering disclosure. This new emphasis should lead to improved disclosure and information that is material to the financial decisions of investors.

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*Id.* at 45. The petitioners seek to have the SEC provide guidance that would require the disclosure of climate change information related to 1) the "[p]hysical risks associated with climate change," 2) the "[f]inancial risks and opportunities associated with present or probable greenhouse gas regulation," and 3) "[l]egal proceedings relating to climate change." *Id.* at 53. Several public comments in support of the petition have been received by the SEC and are available online. U.S. Sec. & Exch. Comm'n, Comments on Rulemaking Petition: Request for Interpretive Guidance on Climate Risk Disclosure, http://www.sec.gov/comments/4-547/4-547.shtml (last visited July 19, 2008). The SEC has yet to take formal action with respect to the petition. SIMPSON THATCHER, DISCLOSURE OF CLIMATE CHANGE RISK IN SEC FILINGS 2 (2008), *available at* http://www.stblaw.com/content/publications/pub780.pdf.

339 *See, e.g.*, America's Climate Security Act of 2007, S. 2191, 110th Cong. § 9002 (as introduced by Senate, Oct. 8, 2007) (requiring the SEC within a year of its adoption to issue an interpretive release addressing disclosure of climate change risk and within two years of passage to promulgate climate change disclosure regulations); Greenhouse Gas Accountability Act of 2007, H.R. 2651, 110th Cong. § 6 (as introduced by House, June 11, 2007) (requiring the SEC to adopt new regulations requiring publicly traded companies to provide as part of each issuer's annual 10-K the following information: 1) the volume of greenhouse gas emissions in a tabular format, 2) a summary of the nature of the greenhouse gas emissions, 3) a method by which investors could obtain access to greenhouse gas information submitted to EPA, and 4) information on whether the level of greenhouse gas emissions were independently verified). Neither Senate Bill 2191 or House Resolution 2651 proceeded to a full vote of the either the Senate or House. *See* Library of Cong. THOMAS, H.R. 2651, http://thomas.loc.gov/cgi-bin/bdquery/z?d110:HR02651:@@@D&summ2=m& (last visited July 19, 2009); Library of Cong. THOMAS, S. 2191, http://thomas.loc.gov/cgi-bin/bdquery/z?d110:SN02191:@@@D&summ2=m& (last visited July 19, 2009).

340 *See supra* Part VI.

There is precedent for the SEC to mandate disclosure of a specific type of risk that public companies may face. If one recalls the concerns that were raised about computers and the Year 2000, or "Y2K," problem, when the Commission recognized it as a threat to highly technology-dependent issuers and securities markets, the SEC issued interpretive guidance mandating the disclosure of the material effects that the Y2K problem presented to a company's business or operations.[341] As noted then by the SEC, "The Commission believes that the vast majority of companies have material Year 2000 issues, and therefore expects them to address this topic in their [Management's Discussion and Analysis section]. In almost all cases, this disclosure should be updated in each quarterly and annual report."[342]

What specific actions might the SEC undertake towards assisting publicly traded companies in complying with their disclosure obligations concerning climate change risk, while at the same time providing investors with meaningful knowledge about those risks? Fortunately, in terms of administrative agency burden and ease of compliance for regulated entities—important considerations for any new or additional regulatory obligation—the existing SEC environmental disclosure regulations provide an adequate framework from which to begin.[343] A proposed first step is that the SEC respond to the pending petition for interpretive guidance on climate change risk disclosure[344] and offer Commission guidance on climate change-related disclosures, with an eye towards the goal of improving and standardizing disclosure of such risks in filings submitted to the SEC. This guidance could take the form of a staff accounting bulletin, such as that utilized by the Commission in SAB No. 92, in which the SEC offered businesses guidance to improve CERCLA liability disclosure.[345]

In terms of particular guidance, the SEC should initially reiterate that publicly traded companies are required under existing statutes and regulations to provide the SEC and investors in periodic filings with the disclosure of material information about the risks associated with their operations and businesses, and stress that this obligation includes disclosures concerning climate change-related liabilities.[346] Similar to Item 101,[347] the examples or categories of climate change liabilities in this staff accounting bulletin should include the costs of complying with any international, federal, regional, state, or local climate change initiative, such

341 *See* Statement of the Commission Regarding Disclosure of Year 2000 Issues and Consequences by Public Companies, Investment Advisers, Investment Companies, and Municipal Securities Issuers, 63 Fed. Reg. 41,394, 41,394 (Aug. 4, 1998).

342 U.S. SEC. & EXCH. COMM'N, THIRD REPORT ON THE READINESS OF THE UNITED STATES SECURITIES INDUSTRY AND PUBLIC COMPANIES TO MEET THE INFORMATION PROCESSING CHALLENGES OF THE YEAR 2000 (1999), http://www.sec.gov/news/studies/yr2000-3.htm (last visited July 19, 2009).

343 See *supra* Part IV for a discussion of disclosures of regulatory risk.

344 *See* Petition, *supra* note 339.

345 See *supra* Part IV.B.2. for a discussion of SAB No. 92.

346 *See supra* Part III.A.

347 *See* Regulation S-K, 17 C.F.R. § 229.101(c)(1)(xii) (2008).

as the Kyoto Protocol,[348] the Regional Greenhouse Gas Initiative (RGGI),[349] or the California Global Warming Solutions Act.[350] This would include disclosing information concerning the effect that compliance with new or existing climate change statutory or regulatory regimes would have "upon the capital expenditures, earnings and competitive position" of the businesses required to report.[351] This is not to suggest that there should be the disclosure of speculative warnings about the possible costs that proposed climate change legislation might have upon publicly traded companies. That would not provide meaningful disclosure information. However, if and when legislation is adopted at the federal level, climate change compliance-related cost information should be disclosed. This information should be readily ascertained, but if it is impossible to initially determine, then at a minimum the business should discuss pursuant to Item 303 that new federal law regarding climate change has been adopted and it is anticipated to require the expenditure of substantial new material compliance costs that may negatively affect profitability. The need to disclose at least the possibility of negative financial impacts arising from climate change regulation should receive little valid criticism from the business community because well-managed, forward-thinking businesses have a fiduciary obligation to monitor and consider, along with other financial risks faced by businesses, the risk any likely legislation may have upon the businesses.[352] Further, investors should welcome this financial information concerning climate change risk since it may be material to the decision whether to invest or not to invest.

The guidance should also expressly require that publicly traded companies disclose not only pending litigation related to climate change that presents a material risk, but rather disclose *all* pending climate change litigation, including any climate change-based actions taken by regulators or public interest groups, who might challenge permits or other governmental approvals that the company sought to construct or modify major stationary sources of greenhouse gases.[353] This approach to disclosing climate change litigation is similar to what Item 103 of Regulation S-K presently requires of publicly traded companies in terms of the disclosure of pending government environmental enforcement actions.[354] Under Item 103, publicly traded

348 Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, 37 I.L.M. 22, *available at* http://unfccc.int/resource/docs/convkp/kpeng.pdf.

349 *See* Reg'l Greenhouse Gas Initiative, Inc., Welcome, http://www.rggi.org (last visited July 19, 2009) (describing the RGGI program and the relevant documents, such as the memorandum of understanding between the participating states and implementing regulations).

350 CAL. HEALTH & SAFETY CODE §§ 38500–38599 (West Supp. 2009).

351 *See* 17 C.F.R. § 229.101(c)(1)(xii) (2008).

352 *See* Scott Malone, *Action Needed on Climate Change: Business Group*, REUTERS.COM, July 17, 2007, http://www.reuters.com/article/scienceNews/idUSN1720403420070717 (last visited July 19, 2009) ("A growing number of CEOs view [climate change] as a major issue for their companies." (quoting Charles Holliday, Chairman and Chief Executive of DuPont)).

353 See *supra* Part II.B.3.b. for a discussion of the risks that a business can face in the permitting of new projects that are major stationary sources of pollutants under the CAA.

354 *See* 17 C.F.R. § 229.103 (2008).

companies are required to disclose not only material environmental enforcement litigation, but to include all enforcement litigation brought by the government against a publicly traded company that may result in a monetary sanction, exclusive of interest and costs, of more than $100,000.[355] With the inclusion of a similar, expansive disclosure obligation related to climate change litigation in this new guidance, rather than merely relying on a determination of materiality, companies will avoid the temptation to limit or minimize disclosure by simply declaring that such litigation will not have an adverse material impact and therefore no disclosure is necessary to the SEC or to the investing public. Through the disclosure of all climate change-related litigation, investors will gain relevant information to judge for themselves the risk associated with publicly traded companies as investments.

The new SEC climate change disclosure guidance also should clarify that Item 303, the Management's Discussion and Analysis provisions of Regulation S-K,[356] requires discussion of the effect climate change may have on the business since it is a "known trend."[357] In particular, as but a few examples of possible noteworthy topics that may bear mentioning by management under Item 303 of Regulation S-K, management can discuss what the challenges are that climate change presents to the business in terms of potential new regulations, impact on products, sales, and supplier demands, available energy sources, and potential increased operating and maintenance costs for facilities.[358] In addition, the SEC should advise in the guidance that companies may also, if they so choose, discuss the opportunities climate change presents to the business. This discussion could include changes, if any, in operations, processes, or equipment that management has implemented to reduce the emissions of greenhouse gases directly associated with production. Management could also tout reductions of emissions not directly tied to production, such as those associated with the transportation of products to customers. This would also present management with the opportunity to explain greenhouse gas emission reduction demands placed upon raw material suppliers and other vendors.

Consequently, the expanded Management's Discussion and Analysis section of Item 303 would offer management an opportunity to boast about environmental accomplishments and responsiveness in an effort to attract environmentally conscious customers and socially responsible investors. Wider discussion focusing on climate change would also provide investors with a portrait of the specific challenges a particular business faces and of the steps taken by management to reduce a company's climate change impact.

In order to make sure that it has the viewpoints of stakeholders in the climate change risk disclosure debate and to assist in developing a workable rule or guidance on climate change disclosure, the Commission could undertake a negotiated rulemaking approach under the Negotiated

355 *See id.*
356 *See id.* § 229.303.
357 *Id.* § 229.303(a)(3)(ii).
358 *Id.* § 229.303.

Rulemaking Act of 1990.[359] A proposed climate change disclosure regulation or guidance vetted by stakeholders—regulators, businesses, individual shareholders, and institutional investors—is not likely to result in a new rule or guidance that has buy-in from all stakeholders. It may, nevertheless, narrow the issues, reduce the likelihood of judicial challenge, and ultimately improve the rule or guidance that the SEC eventually provides for the benefit of investors and businesses.[360]

To alleviate concerns that businesses may have about potential SEC enforcement arising out of the inadequacy of prior submissions to the SEC, specifically in terms of an alleged lack of thoroughly disclosed climate change liabilities, the agency should expressly agree as part of the new guidance that it will forego pursuing enforcement actions against publicly traded companies that may have insufficiently disclosed climate change-related risks in filings submitted prior to the effective date of the new climate change disclosure guidance. This agreement by the agency not to pursue disclosure-related enforcement would solely apply to instances where climate change liabilities may not have been fully disclosed, and would not apply to the failure to adequately disclose other types of environmental liabilities or other instances where there was a failure to comply with applicable SEC disclosure regulations. This enforcement forbearance is justified because of the lack of meaningful, specific guidance by the SEC in providing publicly traded companies with the Commission's expectations and directions as how best to account for climate change-related liabilities in various filings submitted to the SEC.

Some may find enforcement forbearance a controversial aspect of this prescription for improving the disclosure of climate change liabilities. There is precedent, however, for the express agreement by an agency not to pursue enforcement for violations related to compliance with environmental-related regulatory obligations. In particular, EPA made this precise policy decision more than a decade ago to encourage environmental auditing and to reach the goal of achieving improved compliance; EPA agreed not to pursue enforcement or to refer matters to the Department of Justice for prosecution, provided that the violations were discovered as a result of an environmental audit or environmental management system, voluntarily disclosed to the agency, and promptly corrected.[361] Since there has been an

359 5 U.S.C. §§ 561–570a (2006). The Negotiated Rulemaking Act of 1990 authorizes federal administrative agencies to participate with stakeholders in a regulatory negotiation, or "reg neg," to develop regulations. *See id.* § 563.

360 *See* Jody Freeman & Laura I. Langbein, *Regulatory Negotiation and the Legitimacy Benefit*, 9 N.Y.U. ENVTL. L.J. 60, 62 (2000) (presenting results of an empirical evaluation of EPA's use of the negotiated rulemaking process and concluding that "reg neg generates more learning, better quality rules, and higher satisfaction compared to conventional rulemaking"). The authors "recommend more frequent use of regulatory negotiation" and recognize that "[t]his recommendation contradicts the prevailing view that the process is best used sparingly, and even then, only for narrow questions of implementation." *Id.* (footnote omitted).

361 *See* Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,617 (Apr. 11, 2000) [hereinafter Audit Policy]. The Audit Policy was first established by EPA in 1995 and amended in 2000. *Id.* at 19,618. The nine conditions of the

absence of clear SEC climate change-related guidance, the SEC could make a similar policy choice to improve the disclosure of climate change liabilities by businesses; this would allow companies to operate free of the risk typically associated with the heavy hand of government enforcement.[362]

But once the enforcement moratorium is over, the SEC should pursue vigorous enforcement of businesses that fail to comply with their obligations to disclose climate change liabilities. Through robust enforcement, the business community and the investing public will quickly understand that the SEC takes climate change disclosure seriously as a regulatory matter, and businesses will need to comply with the agency's new disclosure mandate to avoid enforcement.

Finally, the SEC and EPA should renew coordinated efforts to inform businesses about their obligations to disclose climate change-related risks. As a starting point, EPA should not only inform businesses subject to enforcement for alleged environmental law violations of their obligation to disclose the presence of such litigation under Item 103, as it previously had done,[363] but should also expand its outreach to include information about the obligation to disclose climate change risks to investors as well. When these agencies work together in a coordinated fashion, they will bring about disclosure that may be lacking in a single agency approach. EPA involvement will bring expertise concerning the range of climate change risks that businesses face, as well as any new environmental regulations, and the SEC will provide its expertise on the nuances of disclosure under the federal securities laws. Through this coordinated EPA-SEC effort,

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Audit Policy include 1) discovery of the violation through an environmental audit or compliance management system, 2) voluntary discovery, 3) disclosure within 21 days of discovery, 4) discovery independent of government or third party action, 5) correction of the violation within 60 days of discovery, 6) steps taken to prevent recurrence, 7) no prior, repeat violations, 8) no serious, actual environmental harm, and 9) cooperation with EPA in resolving the violation. *See id.* at 19,625–26. If all nine elements are met, EPA will waive the gravity component of the civil penalty that could have been sought for the disclosed violations. *Id.* at 19,620.

362 Disclosure and prompt correction of violations under the EPA's Audit Policy likely foreclose citizen suits since they are typically barred for wholly past violations. *See* Steel Co. v. Citizens for a Better Env't, 523 U.S. 83, 109–10 (1998) (finding that the citizen suit provision under the Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. §§ 11,001–11,050 (1994), could not proceed for wholly past violations, because a citizen bringing the suit would not have standing); Gwaltney of Smithfield Ltd. v. Chesapeake Bay Found., Inc., 484 U.S. 49, 58–59 (1987) (holding that citizen suits under the CWA for solely past violations are barred). It is unlikely that correction of inadequate disclosure of climate change liabilities would have a similar preclusive effect against shareholder suits, the securities law equivalent of citizen suits under federal environmental laws. Thus, to the extent that shareholders have suffered harm arising from the failure to adequately disclose the risks associated with climate change liability, a securities fraud private action under Rule 10b-5 is still a potential remedy, even under the new guidance proposed above with immunity from government enforcement for prior violations of the disclosure obligations under the federal securities regulations. Consequently, the approach outlined above for generally standardizing and improving the disclosure of climate change risk and liabilities is not entirely risk free for businesses, since reporting laggards potentially could face shareholder suits.

363 See *supra* Part IV.C. for a discussion of EPA's foray into the disclosure of environmental liabilities.

businesses will receive much-needed guidance concerning climate change disclosure, and investors will benefit from improved information about the range of climate change risk that a particular investment opportunity carries.

### *B. A New Role for the Emergency Planning and Community Right-to-Know Act in Improving Disclosure of Climate Change Risk*

Admittedly, there are businesses that have provided credible, informative disclosures in SEC filings addressing climate change risk. General Motors, for example, in its 10-K filed in 2008,[364] disclosed, among a variety of risks that the automaker faces, that "[n]ew laws, regulations or policies of governmental organizations regarding increased fuel economy requirements and reduced greenhouse gas emissions, or changes in existing ones, may have a significant negative impact on how we do business."[365] In further discussing this risk, General Motors advised investors that compliance with higher fuel economy standards will collectively cost the automobile industry over a $100 billion and that "our compliance cost could require us to alter our capital spending and research and development plans, curtail sales of our higher margin vehicles, cease production of certain models or even exit certain segments of the vehicle market."[366] In a disclosure even more specific to climate change, General Motors disclosed to investors in its 10-K that multistate efforts to impose stringent regulations on carbon dioxide emissions from motor vehicles, while subject to court challenge,[367] if adopted "could even be more disruptive to our business than the higher [fuel economy standards]."[368] With respect to climate change litigation risk, General Motors disclosed that, along with several other automobile manufacturers, it was sued by the State of California "for damages allegedly suffered by the state as a result greenhouse gas emissions from the manufacturers' vehicles, principally based on a common law nuisance theory."[369]

The disclosure related to climate change in the General Motors 10-K provides valuable material information investors can use to weigh the climate change risks that the company faces. While General Motors' disclosure goes far to advise investors of climate change risk, is an improvement over the approach taken by ExxonMobil, and meets the applicable disclosure requirements under federal securities laws, it nonetheless fails to provide investors with a key piece of information required to fully assess climate change risk. The missing information is carbon dioxide emissions data associated with General Motors' production

364 Gen. Motors Corp., Annual Report (Form 10-K) (Feb. 28, 2008) [hereinafter G.M. Annual Report] (for the year ending December 31, 2007).

365 *Id.* at 18.

366 *Id.* at 19.

367 *See generally* Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie, 508 F. Supp. 2d 295 (D. Vt. 2007).

368 G.M. Annual Report, *supra* note 365, at 19.

369 *Id.* at 43. See *supra* Part II.B.3.a for a discussion of *California v. General Motors*.

facilities, and it is precisely such information that should become part of the climate change disclosure obligation.

In the discussions swirling around what actions are needed to mitigate the effects of climate change, perhaps no other topic generates as much interest and controversy as proposed reductions in the levels of greenhouse gas emissions, particularly from industrial sources such as coal-fired power plants and manufacturing facilities.[370] To be fully cognizant and to adequately assess this specific risk, one needs to have information about the level of greenhouse gas emissions directly generated by the facilities of a business. This data will provide investors with crucial information that is needed to assess the financial impact that international, federal, state, regional, and local efforts to reduce greenhouse gas emissions may have as substantial new costs are imposed to either lower greenhouse gas emissions or acquire emission credits. Investors can also compare emissions data among businesses within a particular sector, as well as across sectors, to determine which businesses emit lower levels of carbon dioxide and to weigh such information in the investment decision. Management, too, could find this data valuable; through an assessment of the information, management could determine what the financial consequences to the business will be when new climate change laws are enacted and require dramatic cuts in greenhouse gas emissions. Of course, once evaluated, those costs can be disclosed to investors through public filings made to the SEC. It is precisely this type of information—detailed data concerning the level of greenhouse gas emissions associated with its automobile production facilities scattered throughout the United States and the world—that is not provided by the otherwise thorough climate change risk disclosure of General Motors in its 10-K.[371]

Moreover, to appropriately regulate and reduce greenhouse gas emissions through any new regulatory scheme—whether a cap and trade program, carbon tax, or new international treaty efforts—detailed data concerning the volume of greenhouse gas emissions is critical information required to develop an effective regulatory regime and to regulate in an efficient manner that will lead to significant reductions in emissions. That is, to effectively target reductions through regulation from the multitude of industrial sources that emit significant amounts of greenhouse gases, it is necessary to thoroughly understand the level of emissions associated with particular industrial sectors. In the absence of such critical emissions information, regulatory efforts aimed at reducing greenhouse gas emissions may miss large sources altogether or fail to make any real progress towards addressing the climate change problem. Under any greenhouse gas regulatory scheme, routinely monitoring the level of emissions is essential so that trends can be determined and, most important of all, reductions verified. This is where an existing environmental statute, the Emergency Planning and Community Right-to-Know Act (EPCRA),[372] specifically section

370 *See generally* TONI JOHNSON, COUNCIL ON FOREIGN RELATIONS, THE DEBATE OVER GREENHOUSE GAS CAP-AND-TRADE, http://www.cfr.org/publication/14231 (last visited July 19, 2009).

371 *See* G.M. Annual Report, *supra*, note 365.

372 42 U.S.C. §§ 11,001–11,050 (2000).

313 of EPCRA, can play a new and important role in providing detailed information about the level of carbon dioxide emissions that are occurring across a wide variety of industry sectors.

The carbon dioxide emission data compiled through EPCRA from the facilities associated with an existing investment or a new investment opportunity, coupled with the expanded disclosure obligation under new SEC climate change guidance, should dramatically improve the ability of investors to include consideration of climate change risk in the mix of information concerning the decision to buy or sell.[373] This emissions data will especially aid socially-conscious investors in reaching an investment decision that may have climate change implications based on the level of carbon dioxide emitted. Businesses should also benefit from this data by the improved ability to assess where reductions are feasible, as well as by the opportunity to showcase data that demonstrates reductions in carbon dioxide emissions that would reflect a real commitment to taking steps to combat climate change.

### *1. Overview of EPCRA*

EPCRA was enacted in 1986 by Congress in response to the Bhopal, India, catastrophe where forty tons of methyl isocyanate gas was accidentally released from a plant operated by Union Carbide.[374] The accidental release of this deadly gas resulted in thousands of deaths.[375] Given the widespread use of a multitude of chemicals at all manner of industrial facilities in the United States, and the death toll that had occurred in Bhopal, concerns that a similar deadly industrial accident could occur in the United States compelled Congress to act.[376]

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373 *See* Bradley C. Karkkainen, *Information as Environmental Regulation: TRI and Performance Benchmarking, Precursor to a New Paradigm?*, 89 GEO. L.J. 257, 323 (2001) (noting that some investors do evaluate the data submitted by businesses under section 313 of EPCRA "to monitor the environmental performance of firms").

374 *See* U.S. Envtl. Prot. Agency, Emergency Planning and Community Right-to-Know Act Overview, http://www.epa.gov/emergencies/content/lawsregs/epcraover.htm (last visited July 19, 2009) ("EPCRA was passed in response to the concerns regarding the environmental and safety hazards posed by the storage and handling of toxic chemicals. These concerns were triggered by the disaster in Bhopal, India, in which more than 2,000 people suffered death or serious injury from the accidental release of methyl isocyanate."); *see also* 131 CONG. REC. 24,062 (1985) ("On December 3, 1984, more than 2,000 citizens were killed and 200,000 injured in Bhopal, India, when the toxic cloud of methyl isocyanate from a Union Carbide manufacturing facility spread over the sleeping city. Following the Bhopal tragedy, the worst industrial accident in history, the American public asked, 'Could it happen here?'").

375 *See* Somini Sengupta, *Decades Later, Toxic Sludge Torments Bhopal*, N.Y. TIMES, July 7, 2008, at A1 (summarizing the Union Carbide accidental release and its devastating effects on Bhopal). While the Bhopal plant is shuttered, there remains on site hundreds of tons of hazardous wastes that continue to plague many of the residents in the vicinity of the facility. *Id.* Dow Chemical acquired Union Carbide in 2001 but denies any responsibility for the remaining hazardous wastes at the Bhopal site. *Id.*

376 *See* 131 CONG. REC. 34,678 (1985) (statement of Rep. Mavroules) ("Many of my constituents back home have been adamant on their right to know what hazardous wastes are

In order to respond effectively if a similar emergency situation occurred in the United States, through the enactment of EPCRA each state was required to establish an emergency response commission,[377] emergency planning districts,[378] and local emergency planning committees.[379] The two fundamental purposes of these various state and local emergency entities were to protect the public from a catastrophic chemical release and to have in place proactive emergency plans that first responders, informed by the information collected through EPCRA about the specific chemicals present at a given industrial facility, could implement in the event an accidental release of deadly chemicals did occur.[380]

Consistent with its overall goal of protecting the public from the effects of an accidental release of chemicals on a Bhopal scale, EPCRA required a compilation of information by businesses regarding the chemicals in use at industrial facilities.[381] In section 312, EPCRA required industrial facilities to catalog "hazardous chemicals," as defined by the Occupational Safety and Health Act,[382] and submit annually to the state, local emergency planning commission, and local fire department information concerning the locations, types, and volumes of hazardous chemicals stored at a wide range of facilities.[383]

EPCRA section 313 imposed a separate obligation upon a broad spectrum of businesses to provide yearly information to the state and EPA about the release, disposal, and recycling of more than 600 "toxic chemicals" that were manufactured, processed, or otherwise used[384] at a facility in excess of certain regulatory threshold amounts during each calendar year.[385] Once received by the EPA, EPCRA required the agency to compile the toxic chemical data in a publicly available computerized database.[386] The

being generated in their backyards. The community right-to-know provision of H.R. 2817 addresses this concern.").

377 42 U.S.C. § 11,001(a) (2000).

378 *Id.* § 11,001(b).

379 *Id.* § 11,001(c).

380 *Id.* §§ 11,001–11,005.

381 *Id.* § 11,002(a).

382 Occupational Safety and Health Act of 1970, 29 U.S.C. §§ 651–678 (2006).

383 42 U.S.C. § 11,022 (2000).

384 "Manufacture" is defined in EPCRA as "to produce, prepare, import, or compound a toxic chemical," and the term "process" is defined as "the preparation of a toxic chemical, after its manufacture, for distribution in commerce . . . in the same form or physical state . . . [or] as part of an article containing the toxic chemical." *Id.* § 11,023(b)(1)(C). The term "otherwise use" is not statutorily defined under EPCRA.

385 *See id.* § 11,023(a). For chemicals "processed" or "manufactured," the annual threshold that triggers section 313 reporting is 25,000 pounds. *Id.* § 11,023(f)(1)(B)(iii). For chemicals "otherwise used," the annual reporting threshold trigger is 10,000 pounds. *Id.* § 11,023(f)(1)(A). The other requirements that trigger reporting under EPCRA section 313 include 1) that a facility is within the Standard Industrial Code range of 20 to 39, which covers virtually all manufacturing facilities, and 2) that the facility have 10 or more employees. *Id.* § 11,023(b)(1)(A); *see also* U.S. ENVTL. PROT. AGENCY, 2006 TOXICS RELEASE INVENTORY (TRI) PUBLIC DATA RELEASE REPORT (2008), *available at* http://www.epa.gov/tri/tridata/tri06/brochure/TRIbrochure2006.pdf [hereinafter 2006 TRI REPORT].

386 *See* 42 U.S.C. § 11,023(j). The TRI database is accessible via the Internet. *See* U.S. Envtl. Prot. Agency, Toxics Release Inventory Program, www.epa.gov/tri (last visited July 19, 2009).

information compiled in this national toxic chemical inventory, referred to as the Toxics Release Inventory (TRI),[387] in turn "has enabled the Federal government, State governments, industry, environmental groups, and the general public to participate in an informed dialogue about the environmental impact of toxic chemicals in order to assess the need to reduce and, where possible, eliminate chemical releases."[388] Thus, a key goal of EPCRA section 313 is not only to provide EPA and the states with detailed information about the chemicals manufactured, processed, or otherwise used at industrial facilities, but also to make available to the public the data submitted through the TRI reporting process so that the public at large is aware of the chemicals in our midst.

In terms of the specific toxic chemicals that are subject to the EPCRA section 313 reporting requirement, the statute states that they include "those chemicals on the list in Committee Print Number 99-169 of the Senate Committee on Environment and Public Works, titled 'Toxic Chemicals Subject to Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.'"[389] The statute allows a member of the public or a governor to petition EPA requesting the addition of a chemical to the list of toxic chemicals subject to the EPCRA section 313 annual reporting requirement.[390] EPA may also add a chemical to the list if "there is sufficient evidence to establish any one of the following": 1) the chemical is known to cause or can be reasonably anticipated to cause acute human health effects beyond the boundary of a facility from which it is released;[391] 2) the chemical is known to cause or can be reasonably anticipated to cause in humans a variety of adverse health effects including cancer, fetal abnormalities, reproductive dysfunction, neurological disorders, or other chronic health effects;[392] or 3) because of toxicity alone, or toxicity and persistence in the environment or toxicity and tendency to bioaccumulate in the environment, the chemical is known to cause "a significant adverse effect on the

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387 *See* 2006 TRI REPORT, *supra* note 386, at 2 (describing the Toxics Release Inventory).

388 Nat'l Oilseed Processors Ass'n v. Browner, 924 F. Supp. 1193, 1198 (D.D.C. 1996) (citation omitted). As an interesting example of the use of TRI data by an environmental group, see Scorecard, The Pollution Information Site, http://www.scorecard.org (last visited July 19, 2009) [hereinafter Scorecard Home], which allows users to combine TRI information with information about the potential health effects of the chemicals subject to section 313 reporting. Scorecard's site also highlights the top polluters in the United States *See, e.g.*, Scorecard, Pollution Rankings: By Facility, http://www.scorecard.org/ranking/rankfacilities.tcl?fips_state_code=EntireUnitedStates&type=mass&category=total_env&modifier=na&sic_2=All reporting sectors &how_many=100 (last visited July 19, 2009). Interested parties can get a report of TRI release data by zip code through Scorecard, and the site also provides a ranking of chemical releases by state and county. *See* Scorecard Home, *supra*.

389 42 U.S.C. § 11,023(c) (2000). The list of chemicals subject to section 313 reporting is found at 40 C.F.R. § 372.65 (2008).

390 42 U.S.C. § 11,023(e)(1)–(2) (2000). These same parties may also petition EPA to remove a chemical from the list. *Id.*

391 *Id.* § 11,023(d)(2)(A).

392 *Id.* § 11,023(d)(2)(B).

environment . . . in the judgment of the Administrator, to warrant reporting under this section."[393]

*2. Addition of Carbon Dioxide to the List of Chemicals Subject to Section 313*

The primary chemical that scientists believe with increasing confidence is contributing to climate change is carbon dioxide, or $CO_2$.[394] Despite its deleterious effects on the environment through climate change, this compound is not, however, on the list of toxic chemicals subject to the annual reporting requirement of EPCRA section 313.[395] As a consequence, the wide range of industrial sources in the United States that are emitting large quantities of carbon dioxide are not required to provide data concerning this substance under a statute specifically adopted to protect us from the acute or chronic harms associated with "toxic chemicals." This is the situation despite the fact that scientists with greater and greater urgency are advising us that carbon dioxide emissions will have profound effects on our planet by raising temperatures, thereby resulting in concomitant and far from understood negative consequences on a global basis.[396] Setting aside the public health implications associated with this regulatory oversight, data regarding the climate change risks that businesses and investors face is incomplete, as well as difficult, if not impossible, to understand and quantify. Clearly investors are more and more demanding that businesses disclose information related to climate change.[397] Certainly information concerning the emissions of the predominant greenhouse gas is relevant to give investors information about the potential climate change risks associated with an investment opportunity.[398]

393 *Id.* § 11,023(d)(2)(C). The last time EPA added a significant number of new chemicals to the list of toxic chemicals subject to section 313 reporting was in 1994 with the addition of 286 chemicals. *See* Fertilizer Inst. v. Browner, 163 F.3d 774, 776 (3d Cir. 1998).

394 Carbon dioxide is emitted by various sources around the world primarily as a result of the combustion of fossil fuels and is the most commonly encountered and widespread of the six primary greenhouse gases. *See* THE PHYSICAL SCIENCE BASIS, *supra* note 331, at 25 ("Increases in atmospheric $CO_2$ since pre-industrial times . . . dominate[] all other radiative forcing agents considered in this report."); INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2001: THE SCIENTIFIC BASIS 12 (J.T. Houghton et al. eds., 2001) [hereinafter THE SCIENTIFIC BASIS] ("Emissions of $CO_2$ due to fossil fuel burning are virtually certain to be the dominant influence on the trends in atmospheric $CO_2$ concentration during the 21st century." (footnote omitted)).

395 *See* 40 C.F.R. § 372.65 (2008).

396 THE PHYSICAL SCIENCE BASIS, *supra* note 331, at 12–13.

397 *See* Petition, *supra* note 339, at 2–3.

398 Information concerning carbon emissions is available from a variety of sources. The Carbon Disclosure Project is one such source and through an annual survey provides emissions data from participating S&P 500 companies. *See* RISKMETRICS GROUP, *supra* note 315, at 20. Participation in the survey is, however, voluntary; this has caused some to question whether the data and other claims provided are subject to potential "greenwashing", and has raised other doubts about the data provided. *See* CERES & THE WIRTH CHAIR IN ENVTL. & CMTY. DEV. POLICY AT THE UNIV. OF COLO., CLIMATE CHANGE RISKS AND THE SEC: SUMMARY REPORT 6–7 (2004), *available at* http://216.235.201.250/netcommunity/Document.Doc?id=105 (noting that, with respect to climate change risk, data provided through the Carbon Disclosure Project was more robust than that which was provided in SEC filings). The difference between disclosures to the Carbon

Might EPA through a rulemaking subject carbon dioxide to the annual reporting requirements of section 313 so that investors have access through the TRI database to information about the levels at which facilities are emitting carbon dioxide as a surrogate for the climate change risks a business investment might present? If so, another question to consider is what benefits might flow to the public, businesses, and regulators as a result of providing publicly available information concerning the annual releases of carbon dioxide from facilities throughout the country under section 313.

The appropriate provision of EPCRA to review for the EPA's authority to add carbon dioxide to the list of chemicals subject to the TRI data requirements is section 313(d)(2)(C), which authorizes the administrator to add chemicals to the list and to require reporting if, among other reasons not applicable here, because of their toxicity and persistence they cause a significant adverse effect on the environment.[399] Therefore, within the confines of section 313 one has to determine whether carbon dioxide 1) is persistent once emitted into the environment, 2) is toxic, and 3) has an adverse impact on the environment.

Looking at the first listing requirement, based on the scientific evidence, this main heat trapping gas is persistent once it is emitted into the environment. The authoritative IPCC has evaluated existing atmospheric levels of carbon dioxide and has determined that they have dramatically increased from preindustrial revolution levels and continue to rise, which is reflective of the persistence of carbon dioxide once it is emitted into the environment, since levels are not decreasing, but rather increasing.[400] Even the EPA, which previously has been extremely reluctant, to say the least, to take any meaningful regulatory action towards reducing greenhouse gas emissions, agrees with the assessment of the IPCC concerning the

Disclosure Project and the SEC was attributed to the possibility that "[b]ecause liability attaches to SEC disclosure, filings are intensively reviewed by attorneys who focus on risk disclosure . . . . CDP responses, by contrast, carry no risk of liability and thus may be prepared by non-legal personnel, such as environmental management or investor relations professionals." *Id.* at 7. Information about the carbon dioxide emissions from coal-fired power plants is available from EPA through its eGRID website. *See* U.S. Envtl. Prot. Agency, eGRID FAQ, http://www.epa.gov/cleanenergy/energy-resources/egrid/faq.html#content (last visited July 19, 2009). Other significant sources of carbon dioxide emissions, however, are not provided on this site. EPA published on April 10, 2009, a proposed rule requiring mandatory reporting of greenhouse gases by a wide range of industrial facilities. Mandatory Reporting of Greenhouse Gases, 74 Fed. Reg. 16,447, 16,448 (April 10, 2009). As proposed, the rule primarily applies to industrial facilities that emit 25,000 tons per year or more of greenhouse gases. *Id.* at 16,452. One difficulty with the proposed rule, as far as providing detailed greenhouse gas emissions data, is that industrial facilities that contribute significant amounts of greenhouse gases to the atmosphere will escape the need to report under the proposed rule if annual emissions are below 25,000 tons. Thus, even if the proposed rule is adopted, there is still a need to establish a unified, industry-wide, and verifiable source of carbon dioxide emissions data through EPCRA section 313. Moreover, EPCRA section 313 provides information about the total mix of toxic chemicals released that the proposed mandatory greenhouse gas reporting rule does not. See *infra* Part VII.B.3 for a discussion of the benefits associated with adding carbon dioxide to the list of toxic chemicals subject to EPCRA section 313.

399 Emergency Planning and Community Right-to-Know Act, 42 U.S.C. § 11,023(d)(2)(C) (2000).

400 *See* THE PHYSICAL SCIENCE BASIS, *supra* note 331, at 2–3.

persistence of carbon dioxide in the environment.[401] Consider the *Federal Register* notice in which EPA formally denied the waiver sought by California from section 209(a) of the Clean Air Act,[402] where it was noted by then-EPA Administrator Johnson that "[g]reenhouse gases, once emitted, can remain in the atmosphere for decades to centuries";[403] this acknowledgement could further establish the "persistence" element statutorily needed to add carbon dioxide to the list of chemicals subject to the section 313 reporting requirements.[404]

The next step in the listing analysis is to determine whether the "toxic" requirement is met for inclusion on the list of chemicals covered by the section 313 reporting obligation. A review of the warnings provided about carbon dioxide exposure in material safety data sheets (MSDS) leads to the indisputable conclusion that carbon dioxide is toxic.[405] One MSDS is replete with warnings about the hazards associated with exposure to carbon dioxide. For example, in the physical overview provided in the "Hazards identification" section of this carbon dioxide MSDS, the following is provided: "WARNING! . . . CAUSES DAMAGE TO THE FOLLOWING ORGANS: LUNGS, CARDIOVASCULAR SYSTEM, SKIN, EYES, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION."[406] A similar warning is provided under the "Toxicological information" section of the same MSDS.[407] A MSDS

401 EPA went so far as to assert that the agency had no statutory authority to regulate carbon dioxide because it was not a pollutant as defined under the CAA. *Massachusetts v. EPA*, 549 U.S. 497, 511–14 (2007). This bald assertion was made by the agency despite the expansive definition of pollutant under the CAA to include "any air pollution agent or combination of such agents. . . which is emitted or otherwise enters the ambient air." Clean Air Act, 42 U.S.C. § 7602(g) (2000).

402 42 U.S.C. § 7543(b) (2000). Absent a waiver by EPA under section 209(b), it is the federal government and not the states that establish emission standards for automobiles and other mobile sources of pollutants. Section 7543(a), for example, expressly prohibits states from adopting or "attempt[ing] to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part." Section 7543(b), however, authorizes California to seek a waiver from the prohibition on state automobile emission standards since California adopted such standards in the 1960s prior to adoption of section 209 by Congress.

403 *See* California State Motor Vehicle Pollution Control Standards; Notice of Decision Denying a Waiver of Clean Air Act Preemption for California's 2009 and Subsequent Model Year Greenhouse Gas Emission Standards for New Motor Vehicles, 73 Fed. Reg. 12,156, 12,165 (Mar. 6, 2008).

404 *See* 42 U.S.C. § 11,023(d)(2)(C) (2000).

405 Material safety data sheets are prepared by chemical producers and kept on site by customers so that, in their role as employers, customers comply with the command of the Occupational Safety and Health Act regarding chemicals used in the workplace. *See* 29 C.F.R. § 1910.1200(a) (2007) ("The purpose of this section is to ensure that the hazards of all chemicals . . . [are] transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets and employee training.").

406 Airgas, Inc., Material Safety Data Sheet: Carbon Dioxide 1 (Apr. 11, 2005) (on file with author).

407 *Id.* at 3.

prepared by another manufacturer warns that exposure to carbon dioxide "[c]an cause rapid suffocation."[408]

If the explicit warnings on these two MSDSs are not enough to establish that carbon dioxide is toxic within the legislative intent of EPCRA section 313,[409] one can consider the fatal effects from the exposure to sudden naturally occurring carbon dioxide "burps" that have happened periodically from lakes in Africa.[410] One reported release occurred in 1986 in Cameroon when carbon dioxide was released from Lake Nyos: "Heavy and deadly, the gas rolled down hills, into valleys and villages, suffocating everything in its path. By next morning, 1,700 people were dead."[411] There is, consequently, no legitimate dispute that at sufficient levels carbon dioxide is a deadly toxic chemical. It thus appears that the toxicity listing requirement is met for inclusion under section 313.

The final step in considering whether it is appropriate to include carbon dioxide on the list of chemicals subject to section 313 of EPCRA is to determine if the compound has an adverse impact on the environment. Although there are still those who may dispute the science of climate change, according to the consensus of the highly regarded scientists of the IPCC, who for years have been researching climate change and the role that carbon dioxide plays, there is little room for serious debate that increasing levels of carbon dioxide are not having an adverse impact upon the environment.

According to the IPCC scientists, it is becoming increasingly certain that ever-rising levels of greenhouse gases,[412] principally carbon dioxide associated with the combustion of fossil fuels,[413] are causing an increase in the temperature of the Earth.[414] If unabated, the emissions of carbon dioxide

408 Praxair Tech., Inc., Material Safety Data Sheet: Carbon Dioxide 1 (May 1999) (on file with author).

409 The statute unhelpfully defines "toxic chemical" as a "substance on the list described in section 11,023(c) of this title." 42 U.S.C. § 11,049(10) (2000). Hence, there is a need to analyze under section 313(d)(2)(C) of the statute, *id.* § 11,023(d)(2)(C), whether carbon dioxide meets the criterion for addition as a covered toxic chemical.

410 Marguerite Holloway, *Trying to Tame the Roar of Deadly Lakes*, N.Y. TIMES, Feb. 27, 2001, at F3.

411 *Id.*

412 Greenhouse gases include carbon dioxide, methane, nitrous oxide, chlorofluorocarbons, hydrofluorocarbons, perfluoromethane, and sulfur hexafluoride. *See* THE SCIENTIFIC BASIS, *supra* note 395, at 38 tbl.1 (listing examples of greenhouse gases affected by human activities); *id.* at 243 (discussing sources of greenhouse gases). These substances are referred to as "greenhouse gases" because, similar to the glass in a greenhouse, the mix of these gases in the atmosphere allows the radiant energy or warmth generated by the sun through, but impedes the dissipation of heat from the Earth's surface to the atmosphere, resulting in a gradual warming of the Earth. *Id.* at 24–25.

413 *Id.* at 185 (estimating that close to 75% of carbon dioxide emissions are from the combustion of fossil fuels). Another factor leading to increased carbon dioxide levels is deforestation. *Id.* at 39. Scientifically, the rapid rise in carbon dioxide levels is significant because it is "the most important anthropogenic greenhouse gas" due to its heat-trapping properties. *See* THE PHYSICAL SCIENCE BASIS, *supra* note 331, at 2.

414 The observed increase in the temperature of the Earth in the 20th century according to the United Nation's Intergovernmental Panel on Climate Change was approximately 0.6 ± 0.2 degree Celsius and is projected to increase by another 1.4 degrees to 5.8 degrees Celsius between 1990 and 2100. CLIMATE CHANGE 2001, *supra* note 61, at 3.

and other greenhouse gases will continue to increase the planet's temperature or cause "climate change" resulting in, according to scientists, a devastating worldwide negative impact on the environment.[415] The specific negative impacts predicted by scientists on the environment will vary from region to region. As previously summarized, they generally include rising sea levels as glaciers and the large Arctic and Antarctic polar ice caps and mountain glaciers melt, coupled with sea thermal expansion from higher ocean temperatures, causing widespread flooding of low lying coastal areas;[416] disruption of existing weather patterns potentially resulting in increased frequency or severity of storms and other extreme weather events, such as droughts, heat waves, and hurricanes;[417] decreased agricultural production;[418] greater risk of plant and animal species extinction;[419] adverse human health effects, including malnutrition, increased mortality, and morbidity;[420] and further threats to human health through the introduction of new infectious diseases, particularly those caused by vectors as their range expands with the rise in temperatures.[421] Indeed, the scientific evidence is mounting that the predicted effects of climate change are occurring much more rapidly than anticipated.[422] This is particularly true with respect to the rate at which the polar ice caps and mountain glaciers are melting,[423] which

415 Of course, since its inception, the Earth's climate has not been static, but periodically goes through dramatic changes such as the Ice Age. The importance of climate change today, as the term is used, is that the change in climate that is taking place is caused at least in part by anthropogenic, or man-made, emissions of greenhouse gases related to human activity. *See* THE SCIENTIFIC BASIS, *supra* note 395, at 731.

416 *See* ENVTL. LAW INST., REPORTING ON CLIMATE CHANGE: UNDERSTANDING THE SCIENCE 39–42 (Bud Ward ed., 3d ed. 2003) (discussing the effects of sea level changes). Rising sea levels and flooding will impact island nations and those with substantial river delta populations, such as Bangladesh, Egypt, Nigeria, and Thailand, particularly hard, rendering some of those countries uninhabitable under a worst case scenario. *See* MARK MASLIN, GLOBAL WARMING: A VERY SHORT INTRODUCTION 84–85 (2009) (providing examples of the impact of sea-level rise on coastal regions). Based on recent developments involving Greenland and the West Antarctic ice sheets, the level of sea level rise may be underestimated by the United Nation's Intergovernmental Panel on Climate Change (IPCC). *See* Michael Oppenheimer et al., *The Limits of Consensus*, 317 SCIENCE 1505, 1505–06 (2007) (pointing out that estimates of ocean level increases resulting from climate change performed as part of the research conducted by the IPCC did not include the fact that the Larsen B ice shelf in the Antarctic had melted in March 2002 and may contribute to a greater rise in sea levels than that predicted by the IPCC).

417 ENVTL. LAW INST., *supra* note 417, at 30.

418 Darwin C. Hall, *Ocean Thermal Lag and Comparative Dynamics of Damage to Agriculture From Global Warming*, *in* 3 THE LONG-TERM ECONOMICS OF CLIMATE CHANGE: BEYOND A DOUBLING OF GREENHOUSE GAS CONCENTRATIONS 115, 115 (Darwin C. Hall & Richard B. Howarth eds., 2001).

419 *See* CLIMATE CHANGE 2001, *supra* note 61, at 14. The numerous species that live in the Polar Regions and depend on ice for their very survival are especially at risk. *See* Paul Nicklen, *Life at the Edge*, NAT'L GEOGRAPHIC, June 2007, at 32, 40 ("Some scientists even believe the Arctic will be void of summer ice, dooming species such as polar bears to extinction in less than a century.").

420 CLIMATE CHANGE 2001, *supra* note 61, at 7.

421 *Id.*

422 *See* Andrew C. Revkin, *Arctic Melt Unnerves the Experts*, N.Y. TIMES, Oct. 2, 2007, at F1.

423 *See* Tim Appenzeller, *The Big Thaw*, NAT'L GEOGRAPHIC, June 2007, at 56, 58 ("From the high mountains to the vast polar ice sheets, the world is losing its ice faster than anyone thought possible."); *see also* Revkin, *supra* note 423 (reporting on the melting of the Arctic ice

will result in rising sea levels and associated substantial coastal flooding occurring sooner than anticipated.

Simply put, all the required statutory elements necessary under section 313 to add carbon dioxide to the list of EPCRA toxic chemicals are present. Consequently, the EPA administrator could use the existing EPCRA statutory framework to subject carbon dioxide (and other heat trapping gases as well) to the section 313 data collection and reporting requirement, so that businesses with covered facilities that manufacture, process, or otherwise use threshold quantities would have to report the amounts released of this gas by July 1 of each year. This would serve to provide investors and the public at large with information about the carbon dioxide emissions associated with many publicly traded companies, and could do so without new legislation.[424] All this new reporting regime would require is a rulemaking by the EPA.

The proposed rule adding carbon dioxide may face opposition and a court challenge if adopted since there is precedent for a previous successful challenge to the EPA's addition of a chemical to the section 313 list that impacted the atmosphere. In *American Chemistry Council v. Johnson*,[425] the court concluded that the inclusion of methyl ethyl ketone (MEK) under section 313 was improper under EPCRA.[426] The court found that MEK was added not because it was toxic, but because when emitted, MEK reacted in the atmosphere to form ozone, which is a toxic chemical under section 313.[427] Thus, the question before the court was whether it was proper under EPCRA to list MEK as a precursor to a toxic chemical.[428] The court held no since toxicity was a key requirement under the section 313 statutory scheme.[429]

The *American Chemistry Council* case upholding a challenge to the addition of MEK is readily distinguishable and should not serve as valid precedent under which to challenge the addition of carbon dioxide to the section 313 list. Unlike the addition of MEK in that case to the section 313 list, here carbon dioxide is proposed for listing because of its direct effect on

cap during the summer of 2007, noting that "[a]stonished by the summer's changes, scientists are studying the forces that exposed one million square miles of open water—six Californias—beyond the average since satellites started measurements in 1979," and further commenting that "[t]he pace of change has far exceeded what had been estimated by almost all simulations used to envision how the Arctic will respond to rising concentrations of greenhouse gases linked to global warming").

424 Senate Bill 1387, the National Greenhouse Gas Registry Act of 2007, proposes to amend section 302 of EPCRA by establishing a greenhouse gas registry, and would require certain facilities to submit annually to state emergency response commissions a report detailing greenhouse gas emissions. *See* S. 1387, 110th Cong. §§ 3, 313 (as introduced in Senate, May 14, 2007). Rather than amending the statute, adding carbon dioxide to the list of section 313 chemicals is simpler and all toxic chemicals, as defined by EPCRA, including carbon dioxide, could be viewed together as part of the section 313 TRI database.

425 406 F.3d 738 (D.C. Cir. 2005).

426 *Id.* at 743.

427 *Id.* at 740.

428 *Id.* ("That leaves the issue before us—whether this contribution to the creation of a concededly toxic chemical is adequate to support listing on the TRI.").

429 *Id.* at 743.

the environment and not because it is a precursor to a chemical that negatively impacts human health and the environment.[430] Moreover, carbon dioxide is toxic, as that term was defined by the challengers and accepted by the court in *American Chemistry Council* to include "chemicals that cause harm through exposure."[431] Finally, in light of the substantial deference to agency action typically applied by the courts in challenges to section 313 listings,[432] the determination by the EPA administrator that carbon dioxide is within the scope of toxic chemicals subject to section 313 reporting should withstand court scrutiny. The breadth of negative effects already occurring from increasingly higher atmospheric levels of carbon dioxide, coupled with its toxicity, as well as the future negative effects that are widely anticipated, support the inclusion of carbon dioxide and other greenhouse gases within the definition of "toxic" because of the "harmful or destructive" effects of these substances on the environment.[433]

Paired with new guidance from the SEC that existing regulations concerning disclosure of environmental liabilities also encompass the disclosure of climate change-related liabilities, the addition of carbon dioxide under the annual EPCRA section 313 TRI reporting requirement would provide investors with much needed information about the carbon dioxide emissions associated with the facilities owned and operated by publicly traded companies. Based on the amount of carbon dioxide emitted, along with any material liabilities associated with such emissions, investors who are concerned about climate change could make reasoned decisions as to where to invest. To foster cooperation between the SEC and EPA in terms of climate change disclosure, both agencies can instruct publicly traded companies that they also are required to note in SEC filings the availability of carbon dioxide data on the TRI database for those businesses subject to EPCRA section 313 reporting obligation.[434]

430 *Id.* at 740 (finding that by adding methyl ethyl ketone to the section 313 list, "EPA rested entirely on the proposition that MEK . . . 'contribute[s] to the formation of tropospheric ozone[,] which is known to cause significant adverse effects to human health and the environment.'" (alteration in original) (quoting Methyl Ethyl Ketone; Toxic Chemical Release Reporting; Community Right-to-Know, 63 Fed. Reg. 15,195, 15,199 (Mar. 30, 1998))).

431 *Id.*

432 *See, e.g.*, Nat'l Oilseed Processors Ass'n v. Browner, 924 F. Supp. 1193, 1200–01 (D.D.C. 1996) (denying challenge to the addition by EPA of several chemicals to the list of toxic substances covered by section 313 of EPCRA by deferring to the agency's discretion and scientific expertise), *aff'd*, 120 F.3d 277 (D.C. Cir. 1997); *see also* Fertilizer Inst. v. Browner, No. CIV.A. 98-1067(GK), 1999 WL 33521297, at *3 (D.D.C. Apr. 15, 1999) (noting that "[a]ll parties recognize that the Court is bound by a highly deferential standard of review for agency action" in a challenge to the EPA's decision not to remove phosphoric acid from the list of section 313 toxic chemicals).

433 *See generally Nat'l Oilseed Processors Ass'n*, 924 F. Supp. at 1198 (listing the factors required to consider a substance "toxic").

434 This may require a rulemaking by the SEC since it would involve more than an agency interpretation of existing disclosure requirements under Items 101, 103, and 303.

*3. The Benefits Reaped by Imposing Section 313 Obligations on $CO_2$*

The reporting framework already established by EPCRA presents an ideal forum in which to provide emissions data and other information concerning the primary greenhouse gas, carbon dioxide, in an effort to provide investors with more information about the climate change risks presented by a specific investment opportunity. First, companies have had almost two decades of experience with the annual section 313 reporting process, so adding an obligation to report one more chemical does not impose a substantial additional regulatory burden. Second, while not all businesses or chemicals are covered by the section 313 reporting obligation, a wide swath of carbon-intensive industrial facilities are covered and thus carbon dioxide emissions data from numerous facilities would be captured by an expansion of section 313 to include carbon dioxide.[435] Consequently, since a wide range of businesses have facilities that are covered by the section 313 reporting obligation, a great number of businesses would disclose through the TRI database information about carbon dioxide emissions.[436] Third, from the perspective of the investor who is interested in weighing not only the climate change risk a business may present, but also the broader environmental risks, the totality of multitoxic chemical data provided in the TRI database presents a fairly comprehensive overview of the array of toxic chemicals released from the facilities operated by a business subject to section 313. In a single database, if carbon dioxide fell under the section 313 reporting umbrella, an investor could glean information not only about climate change risk, but also valuable information concerning the other toxic chemicals released in substantial quantities. This would provide the investor with useful knowledge for making a broader evaluation of environmental risk associated with an investment opportunity's facilities.[437]

In addition to providing investors with information about climate change risk, the annual reporting under EPCRA section 313 of carbon dioxide emissions and the inclusion of this information in the TRI database would have other beneficial environmental effects. Direct environmental benefit could occur because management may decide upon voluntary

435 The businesses subject to the EPCRA section 313 annual reporting obligation include those in Standard Industrial Classification Codes 20 through 39, which includes virtually all manufacturing facilities. *See* Emergency Planning and Community Right-to-Know Act, 42 U.S.C. § 11,023(b)(1)(A) (2000).

436 To provide investors with data concerning overall carbon emissions from all the facilities owned or operated by a single corporation or parent corporation, EPA could amend the TRI reporting instructions to require that a business with more than one reporting facility not only provide data on a facility-by-facility basis but also include the total emissions of carbon dioxide for all facilities owned and operated by the business or its subsidiaries.

437 *See* Karkkainen, *supra* note 374, at 261 ("TRI establishes a broadly accessible, objective, open-ended, cross-media metric of facility-level environmental performance that is not tied to any particular regulatory standard. Because TRI data are reported in standard units, they can be aggregated to produce profiles and performance comparisons at the level of the facility, firm, industrial sector, community, metropolitan region, state, watershed or other critical ecosystem, and the nation as a whole.").

measures to reduce carbon emissions once the magnitude of releases is established at those facilities where such data had previously been lacking. This voluntary reduction effort may result from internal pressure from management to take action to reduce carbon dioxide emissions,[438] or it may come externally as a result of new regulation or investor and public pressures to combat climate change by emissions reductions.[439] Importantly, there is support for the view that the inclusion of carbon dioxide in the TRI database may result in voluntary emissions reductions of carbon dioxide and other greenhouse gases. According to the EPA, since facilities were required to report data beginning in 1987 concerning the releases of toxic chemical subject to section 313, there has been through 2006 a fifty-nine percent reduction in the reported releases of toxic chemicals subject to the TRI reporting process.[440] The precise reasons for the reductions may be varied,[441] but nonetheless reductions have occurred, and including carbon dioxide on the list of section 313 chemicals could result in similar emissions reductions as well once businesses, regulators, legislators, investors, and the public have access to data concerning carbon dioxide. The potential of this additional benefit is especially promising given the increasingly intense focus that climate change is receiving and the role of carbon dioxide in this worldwide environmental phenomenon.[442] Shedding light on the annual emissions of carbon dioxide by a wide variety of industrial sectors, through inclusion of carbon dioxide as a section 313 reportable toxic chemical, would provide a powerful incentive for businesses to take action to reduce emissions or face the ire of investors, the public, regulators, and Congress.[443]

Another potential benefit to businesses is that it could lead to increased profits. Businesses that are successful in achieving significant reductions in carbon dioxide emissions could point to verifiable TRI data and tout those reductions to the public in general through advertising; the information might allow companies to capture market share as green or sustainable

438 *See id.* ("[TRI data] enables managers to engage in both internal and comparative *benchmarking* to establish performance baselines, set improvement targets, track progress toward those targets, and hold operational units within the firm accountable for meeting them.").

439 *See id.* at 261–62 ("The ready availability of TRI data also enhances transparency and accountability. It subjects the environmental performance of facilities and firms to an unprecedented degree of scrutiny by their peers, competitors, investors, employees, consumers, community residents, environmental organizations, activists, elected officials, regulators, and the public in general.").

440 *See* 2006 TRI REPORT, *supra* note 386, at 4.

441 *See* Karkkainen *supra* note 374, at 328 (positing that more empirical research is needed regarding the effect of TRI on the behavior of businesses because "TRI-driven improvements in environmental performance may appear overdetermined, with multiple mechanisms—enlightened self-regulation, market forces, community pressures, and the implicit threat of regulation at both local and national levels—piling up as potential casual explanations").

442 *See id.* at 327–28 ("TRI data can cause reputational damage, potentially affecting relations with customers, suppliers, employees, or investors . . . . [H]owever, TRI may also generate opportunities for positive environmental image-building.").

443 *See id.* at 329 ("[A]dverse TRI performance data may stir citizen activism in the host community, instigating 'informal regulation.' This may, in turn, lead to reputation-damaging publicity and demands for stricter regulatory scrutiny, thereby prompting investors to reassess the firm's value and causing share prices to fall.").

businesses and could presumably increase profits and shareholder value. The many consumers who are interested in environmental protection in general and climate change in particular would potentially look to purchase the products of companies that could make verifiable claims of carbon dioxide reductions supported by TRI data. Conversely, consumers and investors may actively boycott products from those businesses that cannot make claims of reduced carbon dioxide emissions or whose emissions have increased as shown by TRI data. Mindful of the advantage in the marketplace that the businesses that achieved reductions presented,[444] investors could increasingly monitor TRI data as one important measure of climate change risk to consider in the buy or sell information equation.

The substantial risks that climate change presents are a real threat to the bottom line of countless businesses across many diverse sectors of our economy. These risks are not adequately disclosed to investors, despite the command of the federal securities laws that issuers will apprise investors of risk through disclosure. In part, this lack of disclosure arises from the absence of clear SEC guidance advising publicly traded companies how to account for climate change risk in their periodic filings submitted to the Commission. An absence of federal action targeting reductions in greenhouse gas emissions is another factor responsible for inadequate disclosure of climate change risk. One other contributing factor to the inadequate climate change risk disclosure is the difficulty businesses confront in quantifying with any precision the costs associated with the risks.

The solution I pose to this conundrum will provide investors, regulators, businesses, and the public with much needed information about the risks that climate change presents. Specific SEC guidance within its existing regulatory structure, coupled with the addition of carbon dioxide to the EPCRA section 313 list of toxic chemicals, will provide the basis for new and improved disclosure. Absent such information, investors cannot fully evaluate investment opportunities, regulation may prove ineffectual, businesses could face significant unanticipated expenses, and the public at large may suffer, yet again, the financial consequences arising from the failure to act.

444 *See generally id.* (discussing the "underlying genius of TRI" as leading to positive business outcomes).