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MOTHER NATURE NEEDS HER SOX: REVIEWING THE IMPETUS AND GOALS OF THE INCREASED FINANCIAL REGULATIONS OF THE SARBANES-OXLEY ACT AND HOW THEY PARALLEL THE NEEDS OF TODAY'S ENVIRONMENTAL PROTECTION AGENCY

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ABSTRACT

As climate change and natural disasters appear to be increasingly prevalent across the United States, the question of how to respond to these threats looms large. Arguably, the Environmental Protection Agency ("EPA") represents the tip of that responding spear. The agency, literally dedicated to protecting the environment, is positioned to drive industry environmental standards, set sustainable metrics, and even determine thresholds for habitable life.

Looks can be deceiving, though. This Note examines the current state of the EPA, and the minimal effect it currently has on penalizing and deterring industry environmental degradation. It specifically focuses on a number of high-profile use cases of industry pollution, and the EPA's response. Based on the apparent impotence of those responses, this Note then draws a direct parallel to the Securities and Exchange Commission ("SEC") during the late nineties and early aughts, before the Sarbanes-Oxley act was passed.

The corporate incentives of violating the EPA standards today directly parallel the incentives of businesses committing securities fraud back then. In short, there lacked a sufficient deterrent to counterbalance the incentives of increasing shareholder value through any means (even illegal ones).

After the financial world was rocked with the repeated scandals of corporations like Enron, Worldcom, Tyco, etc., Congress responded by passing the Sarbanes-Oxley Act. The Act has three key objectives that resonate with today's EPA: 1) clearer accountability; 2) expanded criminal

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liability; and 3) enhanced criminal penalties. The Sarbanes-Oxley Act worked because it drove accountability into the executive boardroom.

The final piece of this Note replicates the model of Sarbanes-Oxley and examines the implications of a similar act in the context of the EPA through the same use cases detailed above. While the Sarbanes-Oxley Act was directed to protecting shareholder value, the EPA equivalent would have an even broader mandate, protecting the world itself.

INTRODUCTION

On December 2, 1970, the Environmental Protection Agency (“EPA”) was officially established under the watchful gaze of Republican President Richard Nixon.¹ The EPA’s mission was “to protect human health by safeguarding the air we breathe, water we drink and land on which we live.”² Today, half a century later, that mission remains alive.³ Given this remarkable consistency, one could be forgiven for wondering why the EPA is, if not ineffective, not more effective.⁴

Despite regulatory inroads in many key environmental areas, the EPA’s success appears limited.⁵ Incidents like the Oroville Dam crisis in California and lead-contaminated, drinking water in Flint, Michigan highlight the need for an estimated \$655 billion minimum investment into drinking and wastewater infrastructure over the next twenty years.⁶ Meanwhile, severe weather and fires cost the federal government an estimated \$357 billion in direct costs alone over the past ten years.⁷ Further,

¹ *Milestones in EPA and Environmental History*, EPA, <https://www.epa.gov/history/milestones-epa-and-environmental-history> [<https://perma.cc/GST6-RCNT>] (last visited Nov. 24, 2020).

² *Id.*

³ *Our Mission and What We Do*, EPA, <https://www.epa.gov/aboutepa/our-mission-and-what-we-do> [<https://perma.cc/GE6V-BFWH>] (last visited Nov. 24, 2020) (“The mission of EPA is to protect human health and the environment.”); see also *EPA Working Together FY 2018–2022 U.S. EPA Strategic Plan*, EPA (2019), <https://www.epa.gov/sites/production/files/2019-09/documents/fy-2018-2022-epa-strategic-plan.pdf> [<https://perma.cc/P2U3-ZF2P>].

⁴ See, e.g., U.S. GOV’T ACCOUNTABILITY OFF., GAO-16-722T, ENVIRONMENTAL PROTECTION STATUS OF GAO RECOMMENDATIONS TO EPA 5 (2016) (“As of May 23, 2016, EPA had implemented 174 of the 325 recommendations [GAO] made in fiscal year 2006 through fiscal year 2015, and the recommendations fall into six broad categories that relate to EPA programs and operations.”).

⁵ See, e.g., Clean Air Act, 42 U.S.C. § 7401 *et seq.* (1970) (an example of a regulatory inroad the EPA has leveraged).

⁶ U.S. GOV’T ACCOUNTABILITY OFF., GAO-17-559, DRINKING WATER AND WASTEWATER INFRASTRUCTURE 1, 15 (2016).

⁷ U.S. GOV’T ACCOUNTABILITY OFF., GAO-18-223, CLIMATE CHANGE ANALYSIS OF REPORTED FEDERAL FUNDING 12 (2018); but see Anthony Leiserowitz et al., *Climate Change in the*

“[i]n 2018 alone, there were fourteen separate billion-dollar weather and climate disaster events across the United States, with a total cost of at least \$91 billion. . . .”⁸ Moving from financial cost to human health, the EPA reports that over half of the nationally assessed rivers and streams in America are “impaired,” along with seventy percent of assessed lakes, reservoirs, and ponds.⁹ It would seem, at least arguable, that the organization tasked with “[protecting] human health and the environment” should be addressing these issues.¹⁰

Further, this ineffectiveness cannot be attributed to a lack, or waning, of public interest. According to one recent survey, the environment was cited as a top-ten policy priority for United States adults in 2019, while another study found that “[a] majority of Americans are worried about harm from extreme events in their local area including extreme heat (69%), droughts (64%), flooding (60%), and/or water shortages (59%).”¹¹ Belying this apparent popularity, the EPA’s budget has, on average, only increased by an average of 2.18% annually from 2009 to 2019, barely outpacing average annual inflation during the same time period.¹² Public support, it would seem, is not enough to address its mandate.

In addition to budgeting concerns, the EPA has been effectively hamstrung from both external and internal forces. Externally, lobbying firms have had an immense amount of influence on the passage of environmentally conscious bills.¹³ Further, this lobbying appears exceedingly

American Mind, YALE PROGRAM ON CLIMATE CHANGE COMMUNICATION (2019), https://climatecommunication.yale.edu/wp-content/uploads/2019/06/Climate_Change_American_Mind_April_2019c.pdf [<https://perma.cc/6RLC-XV23>] (Only “[a]bout four in ten Americans [(38%)] think people in the United States are being harmed ‘right now’ by global warming.”).

⁸ U.S. GOV’T ACCOUNTABILITY OFF., GAO-19-625T, CLIMATE CHANGE OPPORTUNITIES TO REDUCE FEDERAL FISCAL EXPOSURE 1 (2019).

⁹ *Summary of Water Quality Assessments for Each Waterbody Type*, EPA (Nov. 10, 2020), https://ofmpub.epa.gov/waters10/attains_nation_cy.control#total_assessed_waters [<https://perma.cc/6RC7-EJDT>]; see *About the Online ATTAINS Separate Impaired and Assessed Waters Reports*, EPA (Nov. 15, 2019), <https://www.epa.gov/waterdata/about-online-attains-separate-impaired-and-assessed-waters-reports> (“A [waterbody] is considered ‘impaired’ if any one of its assessed uses is not met.”).

¹⁰ *Our Mission and What We Do*, *supra* note 3.

¹¹ Pew Rsch. Ctr., *Public’s 2019 Priorities: Economy, Health Care, Education and Security All Near Top of List* (Jan. 24, 2019), <https://www.people-press.org/2019/01/24/publics-2019-priorities-economy-health-care-education-and-security-all-near-top-of-list/> [<https://perma.cc/C8KR-B346>]; Leiserowitz et al., *supra* note 7, at 4.

¹² *EPA’s Budget and Spending, Planning, Budget, and Results*, EPA (June 24, 2020), <https://www.epa.gov/planandbudget/budget> [<https://perma.cc/RV9T-TVH7>]; *Current US Inflation Rates: 2009–2020*, US INFLATION CALCULATOR, <https://www.usinflationcalculator.com/inflation/current-inflation-rates/> [<https://perma.cc/FT4S-BHCJ>] (last visited Nov. 24, 2020).

¹³ See, e.g., Kyle C. Meng & Ashwin Rode, *The Social Cost of Lobbying over Climate Policy*,

one-sided, as exemplified by one recent study that noted interested corporations were the primary actors in most climate change lobbying (as opposed to environmental organizations).¹⁴ While free to infer otherwise, it seems unlikely that the changes being lobbied for by these corporations are strengthening the EPA, or furthering its mission.

Internally, the EPA has also not been inured to partisanship. In May of 1981, Anne Gorsuch Burford became Administrator of the EPA.¹⁵ Credited with cutting the EPA's budget by twenty-two percent, Ms. Gorsuch is alleged to have boasted "she reduced the thickness of the book of clean water regulations from six inches to a half-inch."¹⁶ Unwittingly blazing a trail that would be followed today, her refusal to cooperate in an investigation into her agency's adherence to the Comprehensive Environmental Response, Liability and Compensation Act ("CERCLA"), led to her being the first agency director cited for contempt of Congress.¹⁷ Scott Pruitt, a more recent example, acted as President Donald Trump's EPA administrator from February 17, 2017 until July 6, 2018.¹⁸ His time as head of an agency striving to "protect human health and the environment" was marked with opposition to the Clean Power Plan, deregulated fuel emissions standards, suspension of the Clean Water Rule, and a shrinking of the EPA's footprint, among others.¹⁹

9 NATURE CLIMATE CHANGE 472, 472 (2019) (finding that "lobbying lowered the probability of enacting the Waxman-Markey [cap-and-trade] bill by 13 percentage points, representing an expected social cost of US\$60 billion (in 2018 [US] dollars)").

¹⁴ Robert J. Brulle, *The Climate Lobby: A Sectoral Analysis of Lobbying Spending on Climate Change in the USA, 2000 to 2016*, 149 CLIMATIC CHANGE 289, 289, 298 (2018) ("[C]orporations with direct interest in the outcomes of climate legislation are the primary . . . actors engaged in climate-related lobbying. While environmental organizations and the renewable energy sector also have major direct interests . . . they are relatively minor players in . . . lobbying at the federal level.>").

¹⁵ Phil Wisman, *EPA History (1970–1985)*, EPA (Nov. 1985), <https://archive.epa.gov/epa/aboutepa/epa-history-1970-1985.html> [<https://perma.cc/A7CU-UTS6>].

¹⁶ Patricia Sullivan, *Anne Gorsuch Burford, 62, Dies; Reagan EPA Director*, WASH. POST (July 22, 2004), <http://www.washingtonpost.com/wp-dyn/articles/A3418-2004Jul21.html> [<https://perma.cc/6682-XKGL>].

¹⁷ Philip Shabecoff, *House Charges Head of E.P.A. with Contempt*, N.Y. TIMES (Dec. 17, 1982), <https://www.nytimes.com/1982/12/17/us/house-charges-head-of-epa-with-contempt.html> [<https://perma.cc/AP4S-FPHB>].

¹⁸ Rebecca Hersher & Brett Neely, *Scott Pruitt out at EPA*, NPR (July 5, 2018), <https://www.npr.org/2018/07/05/594078923/scott-pruitt-out-at-epa> [<https://perma.cc/59YR-M86U>]; Coral Davenport, *Senate Confirms Scott Pruitt as E.P.A. Head*, N.Y. TIMES (Feb. 17, 2017), <https://www.nytimes.com/2017/02/17/us/politics/scott-pruitt-environmental-protection-agency.html> [<https://perma.cc/Q94L-GYLW>].

¹⁹ *Our Mission and What We Do*, *supra* note 3; Daniel Bush & Joey Mendolia, *All of the*

Even when the EPA is not facing dismantling from within, it is hard to argue its regulations are successfully acting as viable deterrents. As an example, consider the EPA announcement, in September of 2019, that it reached a settlement with Hyundai to pay \$47 million as a civil penalty for violations of the Clean Air Act.²⁰ The EPA and United States Department of Justice representatives hailed this settlement as “holding Hyundai accountable” and emphasized that they “will not tolerate such schemes that skirt the Clean Air Act, designed by Congress to improve air quality.”²¹ This hard-nosed sentiment seems at odds with the reality that in 2018 Hyundai reported sales of ₩96.8 trillion (Korean Won), the equivalent of about \$81.7 billion U.S. dollars.²² To put that in perspective, Hyundai’s alleged introduction of over 2,000 illegal diesel nonroad vehicles into the United States is worth, under the EPA’s settlement, barely over one half of one percent of their total sales.²³ Sidestepping the debate of what an appropriate percentage would be to deter this conduct, it seems reasonable, at least, that a number in imminent danger of being quantified as zero under a rounding error would not qualify.

In short, the EPA can no longer be considered an effective instrument. It would appear incapable of facing the realities of modern-day environmental issues due to both internal and external failings. Its regulations have moved from a deterrence to simply a cost of doing business, addressed reactively.

However, this is not the first time a federal agency has been apparently powerless to enforce its mandate. In the late 1990s and early 2000s, the financial industry was reeling from repeated high-profile scandals involving corporate fraud.²⁴ Responding to these scandals, Senator

Ways Scott Pruitt Changed Energy Policy, PBS NEWSHOUR (July 5, 2018), <https://www.pbs.org/newshour/nation/all-of-the-ways-embattled-epa-chief-scott-pruitt-has-changed-energy-policy> [https://perma.cc/Z7LN-W33F].

²⁰ EPA Press Off., *EPA and DOJ Reach Clean Air Settlement with Hyundai for Engines and Construction Equipment Illegally Imported and Sold in the United States*, EPA (Sept. 19, 2019), <https://www.epa.gov/newsreleases/epa-and-doj-reach-clean-air-settlement-hyundai-engines-and-construction-equipment> [https://perma.cc/X6P9-B2E6].

²¹ *Id.*

²² CONSOLIDATED STATEMENTS OF INCOME (FOR THE YEARS ENDED DEC. 31, 2018 AND 2017), HYUNDAI MOTOR CO., Annual Report (Form 10-k) (Mar. 6, 2019) [hereinafter *Hyundai Ann. Rep.*].

²³ EPA Press Off., *supra* note 20; *Hyundai Ann. Rep.*, *supra* note 22.

²⁴ *See, e.g.*, William W. Bratton, *Enron and the Dark Side of Shareholder Value*, 76 TUL. L. REV. 1275 (2002) (discussing the Enron scandal); Joshua Kennon, *The Worldcom Scandal Explained*, THE BALANCE (Sept. 16, 2019), <https://www.thebalance.com/worldcom-s-magic-trick-356121> [https://perma.cc/KRH7-MY3Z]; *see generally* William H. Donaldson, *Testimony Concerning Implementation of the Sarbanes-Oxley Act of 2002: Before the Senate Committee*

Paul Sarbanes and Representative Michael Oxley sponsored the now eponymous Sarbanes-Oxley Act, which was signed into law on July 30, 2002.²⁵ The Act is comprised of eleven titles designed to enhance the accountability of publicly traded companies, and protect investors.²⁶ Among those titles were three key objectives: 1) clearer accountability; 2) expanded criminal liability; and 3) enhanced criminal penalties.²⁷ By enhancing the enforcement powers of the SEC, the Sarbanes-Oxley Act hoped to strengthen proactive deterrence, instead of reacting to scandals after the damage had been done.²⁸

The convergence of increasing environmental costs and heightened public awareness juxtaposed against the current impotence of the EPA regulations are paralleled in the events that led to the passage of the Sarbanes-Oxley Act, which, at that time, enjoyed widespread support across the aisle.²⁹ The time has come for another watershed bipartisan moment: the environmental equivalent of the Sarbanes-Oxley Act. Just as financial scandals drove the passage of that bill, so now should the environmental scandals of today and yesterday drive the passage of a new bill. Realizing that even the long arms of a governmental mandate have no power over the capricious environment, the EPA must be armed not with regulatory ripostes, but with deterrents. Deterrents whose aim is directed squarely at corporations responsible for environmental degradation.³⁰ Using the Sarbanes-Oxley Act as a model, this new policy should

on Banking, Housing and Urban Affairs, SEC. EXCH. COMM'N (Sept. 9, 2003), <https://www.sec.gov/news/testimony/090903tswhd.htm> [<https://perma.cc/M8D9-ELZP>] (testimony of William H. Donaldson, Chairman, SEC) [hereinafter *Testimony Concerning Implementation*].

²⁵ Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (2002) [hereinafter *Sarbanes-Oxley Act*]; see *H.R. 3763 (107th): Sarbanes-Oxley Act of 2002*, GOVTRACK, <https://www.govtrack.us/congress/bills/107/hr3763> [<https://perma.cc/VW5T-UYQ4>] (last visited Nov. 24, 2020).

²⁶ Sarbanes-Oxley Act, *supra* note 25; see also *Sarbanes-Oxley*, in *ENCYCLOPEDIA OF SMALL BUSINESS 1000–02* (Arsen J. Darnay & Monique D. Magee eds., 3d ed. 2007) (providing brief summary of each title).

²⁷ Sarbanes-Oxley Act, *supra* note 25 (titles III, VIII, IX, and XI).

²⁸ *Testimony Concerning Implementation*, *supra* note 24 (“The Act also provided welcome new enforcement tools to combat corporate fraud, punish corporate wrongdoers and deter fraud with the threat of stiffer penalties. The [SEC], both on its own and in conjunction with the President’s inter-agency Corporate Task Force, is moving decisively to utilize these new tools to expose and punish acts of corruption, improve corporate responsibility and protect America’s investors.”).

²⁹ *H.R. 3763 (107th): Sarbanes-Oxley Act of 2002*, *supra* note 25 (initially passing the house 334–90, and an updated draft passing the senate 99–0).

³⁰ See, e.g., Tess Riley, *Just 100 Companies Responsible for 71% of Global Emissions, Study Says*, THE GUARDIAN (July 10, 2017), <https://www.theguardian.com/sustainable-business/2017/jul/10/100-fossil-fuel-companies-investors-responsible-71-global-emissions-cdp>

contain three guiding tenets: 1) clearer and stronger corporate accountability regarding environmental hazards; 2) enhanced criminal liability for environmental failures; and 3) expanded criminal liability for environmental failures.

I. HISTORY AND IMPETUS OF THE SARBANES-OXLEY ACT

Before the Sarbanes-Oxley Act was passed, public corporations were primarily regulated by the Securities Act of 1933.³¹ Complementing that regulation was the Securities Exchange Act of 1934, which created the SEC.³² These acts created multiple obligations on corporations including requiring publishing financial information regarding publicly traded securities.³³ As noted by the SEC itself, “[financial disclosures enable] investors . . . to make informed judgments about whether to purchase a company’s securities [and] [w]hile the SEC requires that the information provided be accurate, it does not guarantee it.”³⁴ The goal of these regulations was honesty and transparency to enable investors to make informed decisions about the securities they would purchase.³⁵ As part of this, public corporations were required to be honest in their financial disclosures, which included the corporation, its investment bank, and also its audited financial statements.³⁶ In short, the corporations were effectively on the honor system to tell the truth. Additionally, while theoretically anyone who signed off on an inaccurate statement was civilly liable, this was undercut by a number of exceptions.³⁷ These exceptions meant that proving specific individuals were at fault was difficult, and so the minimal personal risk of “cooking the books” might be overshadowed by the potential benefits. To analogize, this situation would be akin to the captain of a sailing vessel being incentivized to find a faster waterway, sinking her craft in the attempt, and everyone subsequently agreeing to blame the ship.

-study-climate-change [<https://perma.cc/7BVB-GZJP>] (demonstrating an example of why the focus of this legislation should be on corporations, not on individual humans).

³¹ Securities Exchange Act of 1933, ch. 38, Stat. 74; *see also* *The Laws That Govern the Securities Industry*, Sec. Exch. Comm’n, <https://www.sec.gov/answers/about-lawsshtml.html> [<https://perma.cc/L9A3-RH9R>].

³² *See The Laws That Govern the Securities Industry*, *supra* note 31.

³³ *See id.*

³⁴ *Id.*

³⁵ *Id.*

³⁶ *See id.*

³⁷ 15 U.S.C. § 77k(b) (“[N]o person, other than the issuer, shall be liable provided therein who shall sustain the burden of proof” they had already resigned, they had notified the SEC, and/or they believed the statements were true and were not misleading).

The balance of this system would appear to reach its breaking point in the late 1990s and early 2000s, when multiple high-profile companies were embroiled in scandal. As summarized by the former SEC Chairman William H. Donaldson:

The mid-1990s saw the beginning of the full flourish of the so-called “new economy” in America. The stock market reflected the enormity of the changes taking place in the economy . . . [and] brought millions of individuals with their savings into our stock markets for the first time.

Starting in the second quarter of 2000, the bubble burst. Stock prices plummeted. . . . As happened after the crash of 1929, the falling market that began in 2000 led to other revelations. Starting with the unfolding of the Enron story in October 2001, it became apparent that the boom years had been accompanied by fraud, other misconduct and a serious erosion in business principles. The low points in this story are now household names—not just Enron, but also WorldCom, Tyco, Adelphia and others. . . .

In addition to the grossest displays of greed and malfeasance, there were other more subtle but still pernicious developments. During the boom years, corporate America increasingly emphasized a short-term focus, fueled by an obsession with quarter-to-quarter earnings.³⁸

Enron is perhaps the most well-known of the financial scandals.³⁹ An energy trading company, it was created in 1985 from a merger.⁴⁰ Capitalizing on deregulation of the energy markets, Enron quickly catapulted into being a financial juggernaut, with shares peaking at over ninety dollars.⁴¹ In August of 2000, Enron was the seventh largest firm in America by market capitalization.⁴² Solidifying Enron’s apparent Midas

³⁸ *Testimony Concerning Implementation*, *supra* note 24.

³⁹ *Id.*

⁴⁰ Troy Segal, *Enron Scandal: The Fall of a Wall Street Darling*, INVESTOPEDIA, <https://www.investopedia.com/updates/enron-scandal-summary/> [<https://perma.cc/5MX3-ASS4>] (last updated Sept. 22, 2020); C. William Thomas, *The Rise and Fall of Enron*, J. ACCT. (Apr. 1, 2002), <https://www.journalofaccountancy.com/issues/2002/apr/theriseandfallofenron.html> [<https://perma.cc/X5WP-3QBD>]; *see also* CNN Editorial Research, *Enron Fast Facts*, CNN (Apr. 24, 2020), <https://www.cnn.com/2013/07/02/us/enron-fast-facts/index.html> [<https://perma.cc/XC6J-REX9>].

⁴¹ Segal, *supra* note 40; Thomas, *supra* note 40.

⁴² Bratton, *supra* note 24, at 1276.

touch, Fortune Magazine even named it America's most innovative firm, five years in a row.⁴³ However, by 2001 the company's shares were under a dollar, and it had declared bankruptcy.⁴⁴ In the aftermath of its collapse, it was estimated that shareholders' losses totaled \$74 billion, and that Enron had been overstating its earnings since at least 1997.⁴⁵ How could such a high profile organization, employing so many intelligent people, perpetuate such extensive fraud?⁴⁶ While individual motives can only be speculated at, it seems clear that the financial incentives of success undercut any moral moorings that should have prevented this.⁴⁷ In short, there was no compelling reason *not* to do this.

While Enron's bankruptcy represented the largest in American history at that time, it was only the tip of the proverbial iceberg.⁴⁸ Approximately one year later, WorldCom would follow in Enron's ignominious footsteps, becoming the new largest bankruptcy in history.⁴⁹ WorldCom's story sounded like a bad retelling of Enron's. It had fraudulently categorized over \$3.8 billion in operating expenses as capital expenditures, creating the illusion of profits by improperly spreading annual expenses over multiple years.⁵⁰ WorldCom's disclosure led to its stock dropping from "a high of \$65 per share to pennies."⁵¹ Once again, individuals in a company saw the benefits of fraud outweigh the risks and left innocent shareholders to pick up the tab.⁵²

⁴³ *Id.*

⁴⁴ *Id.* at 1276–77.

⁴⁵ Segal, *supra* note 40; see also *Enron Fast Facts*, *supra* note 40.

⁴⁶ See *In re Enron Corp. Sec.*, 235 F. Supp. 2d 549, 613–47 (S.D. Tex. 2002) (describing the scheme); Segal, *supra* note 40 (discussing how Enron manipulated its financials to hide its debt from investors and creditors).

⁴⁷ *In re Enron*, 235 F. Supp. 2d at 633 ("Lead Plaintiff describes Enron's 'corporate culture' as characterized by 'a fixation on the price of Enron stock' and on pushing that price ever higher. . . . Corporate managers and executives were compensated for closing transactions and placing high values on them, regardless of the economic realities of the deals, to generate profit when 'marked to market.' There was pressure to do anything necessary to make the numbers, and it was common knowledge that revenues and earnings were being falsified at the direction of top executives. Bonuses went to those who facilitated the company-wide fraudulent behavior.").

⁴⁸ Bratton, *supra* note 24, at 1276.

⁴⁹ Luisa Beltran, *WorldCom Files Largest Bankruptcy Ever*, CNNMONEY (July 22, 2002), https://money.cnn.com/2002/07/19/news/worldcom_bankruptcy/ [<https://perma.cc/CBS6-ERNP>].

⁵⁰ *In re WorldCom, Inc. Sec. Litig.*, 294 F. Supp. 2d 392, 400–01 (S.D.N.Y. 2003).

⁵¹ *Id.*

⁵² See, e.g., *id.* at 402 ("Ebberts's personal financial situation provided a strong motive for materially misstating WorldCom's earnings.").

Adelphia and Tyco, the two other examples alluded to by the former SEC Chairman William H. Donaldson, further demonstrated how skewed the values of America's executives had become.⁵³ Tyco's CEO and CFO were indicted, and convicted, of stealing over \$600 million from the company and misleading shareholders, "drawing on Tyco's treasury, as they saw fit. . . ."⁵⁴ Adelphia, formerly one of the largest cable television providers in the country, was a similar story.⁵⁵ The SEC charged the Rigas family, owners of Adelphia, with excluding over \$2.3 billion in debt from their financial statements, among other attempts, to make the business appear soluble.⁵⁶ Once again, this multiyear fraud left innocent shareholders stuck holding the equity in another company without real value.⁵⁷

In each of these cases, the fraud was perpetuated by one or more individuals. Corporations cannot falsify records or conceal debt, only people working for those corporations can. Whatever rules were in place to stop those people, they clearly lacked the strength to disincentivize.

This is where the Sarbanes-Oxley Act comes in. Its "sweeping reforms" both empowered the SEC, and created a chilling effect on would-be fraud.⁵⁸ Consider Section 906, which requires that corporate executives must personally certify the accuracy of financial statements and risk facing jail time if the SEC later finds those statements included violations.⁵⁹ By taking criminal liability, and having it apply to individuals within the company instead of simply the company as a whole, the Sarbanes-Oxley Act arguably represents a strong disincentivizing effect that must be weighed when executives consider the benefits of fraud today. This effect is exactly what an environmental equivalent to the Sarbanes-Oxley Act should capture, a legitimate deterrence that would give executives pause when weighing their corporate objectives.

⁵³ See *Testimony Concerning Implementation*, *supra* note 24.

⁵⁴ *People v. Kozlowski*, 47 A.D. 3d 111, 113 (N.Y. App. Div. 2007); see also *Three Tyco Execs Indicted for Fraud*, CNN BUSINESS (Sept. 12, 2002), <http://edition.cnn.com/2002/BUSINESS/asia/09/12/us.tyco/> [<https://perma.cc/KK97-XZKS>]; Associated Press, *Ex-Tyco Executives Get up to 25 Years in Prison*, NBC NEWS (Sept. 20, 2005), http://www.nbcnews.com/id/9399803/ns/business-corporate_scandals/t/ex-tyco-executives-get-years-prison/#.X3Y1ce0pAuV [<https://perma.cc/D8P2-QPFZ>].

⁵⁵ *United States v. Rigas*, 490 F.3d 208, 212 (2d Cir. 2007).

⁵⁶ Press Release, SEC. EXCH. COMM'N, SEC Charges Adelphia and Rigas Family With Massive Financial Fraud (July 24, 2002), <https://www.sec.gov/news/press/2002-110.htm> [<https://perma.cc/V28V-PGRE>].

⁵⁷ *Rigas*, 490 F.3d at 212 ("Adelphia's stock price plummeted by about twenty-five percent to \$20.39; by the time the stock was delisted in May 2002, the price per share was \$1.16. The company filed for bankruptcy in June 2002, wiping out all shareholder value.").

⁵⁸ See *Testimony Concerning Implementation*, *supra* note 24.

⁵⁹ Sarbanes-Oxley Act, *supra* note 25.

While the goals of Sarbanes-Oxley may have represented a departure from previous securities regulation, it must be noted that the efficacy of this Act has not been above dispute. In a commencement address in 2005, then Federal Reserve Chairman Alan Greenspan stated his approval of the Act and the values it represented.⁶⁰ However, others were not so enamored. The Act has been criticized as substantially increasing the cost of compliance, disincentivizing people from serving as corporate officers due to the increased liability, and generally failing to fix the problems it was set out to solve.⁶¹ The truth appears to be somewhere in the middle. A study on the effects of Sarbanes-Oxley conducted a decade after its passage noted:

On the one hand, the law continues to be fiercely and relentlessly attacked in the U.S., particularly in political election battles and during legislative debates . . . On the other hand . . . survey evidence suggests that informed observers . . . do not believe that the Act . . . has been a significant problem, and may well have produced net benefits. . . .⁶²

Unfortunately, the study then punted on the actual effects of Sarbanes-Oxley by admitting “the state of research is such that—even after ten years—no conclusions can be drawn about the net costs and benefits of the Act.”⁶³ Other analyses have come to a similar conclusion, that the answer of Sarbanes-Oxley’s effectiveness is more nuanced than a simple yes or no.⁶⁴

⁶⁰ Alan Greenspan, Chairman, Fed. Rsrv. Bd., Commencement Address at the Wharton School, University of Pennsylvania (May 15, 2005) (transcript available at <https://www.federalreserve.gov/boarddocs/speeches/2005/20050515/default.htm>) (“[T]he act importantly reinforced the principle that shareholders own our corporations and that corporate managers should be working on behalf of shareholders to allocate business resources to their optimum use.”).

⁶¹ See, e.g., William A. Niskanen, *Congress Should Repeal the Sarbanes-Oxley Act*, CATO INST. (Aug. 2, 2006), <https://www.cato.org/publications/commentary/congress-should-repeal-sarbanesoxley-act> [<https://perma.cc/66UG-5DLY>]; Michael Arrington, *Newt Gingrich: Kill Sarbanes-Oxley Act*, TechCrunch (Nov. 5, 2008), <https://techcrunch.com/2008/11/05/newt-gingrich-kill-sarbanes-oxley/> [<https://perma.cc/RR69-JYUD>].

⁶² John C. Coates & Suraj Srinivasan, *SOX after Ten Years: A Multidisciplinary Review*, 28 ACCT. HORIZONS 627, 627–28 (2014).

⁶³ *Id.* at 628.

⁶⁴ See, e.g., Kevin Drawbaugh & Dena Aubin, *Analysis: A Decade on, Is Sarbanes-Oxley Working?*, REUTERS (July 30, 2012), <https://www.reuters.com/article/us-financial-sarbox>

While the discussion of Sarbanes-Oxley's efficacy is no doubt important, I would argue that it is not prescient to an EPA equivalent. Debates on the merits of the Act are defined by its implementation and subsequent enforcement. They can be instructive, but do not signal the sole path a similar act could take.⁶⁵ The focus, therefore, should be on Sarbanes-Oxley's conceptual underpinnings as a deterrent. This is the pole star the EPA's "Sarbanes-Oxley Equivalent" should drive towards, moving from a reactive agency to one that is sufficiently empowered to deter most, if not all, environmental degradation, leaving subsequent literature to expound upon practical implementation or policy fine-tuning.

II. HISTORY AND CURRENT ENFORCEMENT CAPABILITIES OF THE EPA

According to the EPA, its timeline originates in September of 1962 with the publishing of Rachel Carson's *Silent Spring*.⁶⁶ The book described how pesticides were causing mass fauna killings (thus rendering spring "silent").⁶⁷ The next decade saw the newly created EPA spearhead an immense number of new initiatives including the Clean Air Act of 1970, lead-based paint restrictions (1971), defined air pollution danger levels (1971), the banning of DDT (1972), the Clean Water Act (1972), and more.⁶⁸ The list of initiatives continued to grow, and today, the EPA is tasked with administering over thirty environmental laws and executive orders designed to "[protect] the environment and public health."⁶⁹ Supporting that mission across the country are both national and regional offices, each tasked with specific duties.⁷⁰

/analysis-a-decade-on-is-sarbanes-oxley-working-idUSBRE86Q1BY20120730 [https://perma.cc/8SWC-Y9U4] (discussing both positive and negative impacts); Craig Clay & Daniel Kim, *Sarbanes-Oxley: 15 Years of Successes and Challenges*, ACCT. TODAY (Sept. 15, 2017), <https://www.accountingtoday.com/opinion/sarbanes-oxley-marks-15-years-of-successes-and-challenges> [https://perma.cc/B7VH-2ZKJ] (discussing benefits and ongoing challenges).

⁶⁵ See Drawbaugh & Aubin, *supra* note 64 (As of 2012, "[O]nly a handful of people have faced criminal charges . . . [while] Sarbanes-Oxley [has brought] more than 200 civil cases.").

⁶⁶ *Milestones in EPA and Environmental History*, *supra* note 1.

⁶⁷ RACHEL CARSON, *SILENT SPRING* (Anniversary ed. Houghton Mifflin Co. 2002) (1962); see also Rachel Carson, *Silent Spring*, *THE LIFE AND LEGACY OF RACHEL CARSON*, <https://www.rachelcarson.org/SilentSpring.aspx> [https://perma.cc/C33W-9JUR] (last visited Nov. 24, 2020).

⁶⁸ *Milestones in EPA and Environmental History*, *supra* note 1.

⁶⁹ *Laws and Executive Orders*, EPA, <https://www.epa.gov/laws-regulations/laws-and-executive-orders> [https://perma.cc/J3TQ-ECVV] (last updated Sept. 14, 2017).

⁷⁰ *EPA Organization Chart*, EPA, <https://www.epa.gov/aboutepa/epa-organization-chart> [https://perma.cc/D36F-8VGB] (last updated July 1, 2020).

One of these key duties is enforcement and compliance.⁷¹ Enforcement and compliance is a multistep process: first, an “[e]nvironmental problem is identified” which Congress then addresses by passing laws.⁷² Next, the EPA “issues regulations to implement the laws.”⁷³ After that the EPA engages in compliance assistance, compliance monitoring, and enforcement actions to ensure both laws and regulations are understood and being followed.⁷⁴

The EPA has three types of enforcement actions: 1) civil administrative actions; 2) civil judicial actions; and 3) criminal actions.⁷⁵ Civil administrative actions do not involve a judicial court process, and are more akin to just giving a party notice.⁷⁶ Examples include “a notice of violation”; “a Superfund notice letter”; and “an order . . . to come into compliance, or to clean up a site.”⁷⁷ As these orders are not backed by the judiciary, they could be considered the weakest of the EPA’s remedies.

Stronger than civil administrative actions, civil judicial actions are actual, formal lawsuits.⁷⁸ They can range from injunctions to comply with statutory requirements, all the way to orders to pay to clean up a hazardous site.⁷⁹ Finally, there are criminal actions, which “are usually reserved for the most serious violations” and “can result in fines or imprisonment.”⁸⁰ As related by the EPA, civil enforcement can result in: “settlements,” “civil penalties,” “injunctive relief,” and/or “supplemental environmental projects and mitigation.”⁸¹ Criminal enforcement, meanwhile, can result in fines, restitutions, and even incarceration.⁸²

Currently, the EPA’s enforcement is heavily skewed toward civil rather than criminal enforcement. From 2008 to 2018, the EPA initiated more than 1,500 civil judicial and administrative cases annually.⁸³ There

⁷¹ *Basic Information on Enforcement*, EPA, <https://www.epa.gov/enforcement/basic-information-enforcement> [<https://perma.cc/4BZE-X7PG>] (last visited Nov. 24, 2020) (“Enforcing environmental laws is a central part of EPA’s Strategic Plan to protect human health and the environment.”).

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ *Basic Information on Enforcement*, *supra* note 71.

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *Id.*

⁸³ OFF. ENF’T AND COMPLIANCE ASSURANCE, Fiscal Year 2018 EPA Enf’t Compliance Ann.

were fewer than 400 criminal cases opened per year in the same time period.⁸⁴ However, both types of enforcement have seen year-over-year declines.⁸⁵ 2018 saw approximately 2,000 fewer civil enforcement cases initiated than a decade ago in 2008, with a clear decline each year.⁸⁶ Criminal enforcement cases opened, though less expansive to begin with, have also been reduced by more than half since 2008.⁸⁷ In sum, the EPA greatly favors civil over criminal sanctions, and both have seen a stark decline in the last decade. However, to the EPA's credit, "civil enforcement actions are strategic to maximize compliance results, not the number of individual actions."⁸⁸ Essentially, simply measuring the number of cases is not an accurate measure of deterrence or compliance. So, what is an accurate measure of compliance and deterrence?

A. *Environmental Regulation as a Cost of Doing Business*

This is where the parallel of the Sarbanes-Oxley Act appears. The question of what an accurate measure of compliance and deterrence is is answered with: not this. As Enron, Worldcom, Tyco, and the others demonstrated, whatever financial regulations that existed were not strong enough to force employees to either comply with them, or, stated another way, were not strong enough to deter employees from failing to comply with them. In short, the measure of success of the EPA should not be how much it has prevented, but correspondingly how much it has failed to prevent. From that perspective, I would argue that the civil remedies the EPA favors have become little more than a cost of doing business. They do not represent a legitimate deterrence because their incursion does not dissuade companies from pursuing environmentally degrading conduct.

III. VOLKSWAGEN'S EMISSION SCANDAL

Take Volkswagen, which, in 2016 was the subject of a complaint stating approximately 590,000 of its diesel vehicles violated the Clean

Results (Feb. 8, 2019), at 10, <https://archive.epa.gov/epa/sites/production/files/2019-02/documents/fy18-enforcement-annual-results-data-graphs.pdf> [<https://perma.cc/LX2M-8MFY>].

⁸⁴ *Id.* at 7.

⁸⁵ *Id.* at 7, 10.

⁸⁶ *Id.* at 10.

⁸⁷ *Id.* at 7.

⁸⁸ *Enforcement Annual Results for Fiscal Year 2017*, EPA, <https://archive.epa.gov/epa/enforcement/enforcement-annual-results-fiscal-year-2017.html> [<https://perma.cc/3HXT-TC2C>] (last visited Nov. 24, 2020).

Air Act.⁸⁹ The defective vehicles, equipped with devices designed to defeat federal emission tests, covered seven years' worth of models.⁹⁰ To address this widespread violation, the EPA reached three partial settlements against Volkswagen, starting in 2016 and continuing into 2017.⁹¹ The settlements included, among other things, requiring "Volkswagen to fund a \$2.7 billion mitigation trust fund," requiring "Volkswagen to invest \$2 billion in ZEV [zero emission vehicle] charging infrastructure and in the promotion of ZEVs," and "a \$1.45 billion civil penalty for the alleged civil violations of the Clean Air Act."⁹² For a sense of scale, "[t]he agreement was . . . 'the largest civil settlement in automaker history, and the largest false advertising case the Federal Trade Commission has ever seen.'"⁹³ In its annual enforcement results of 2017, the EPA referenced Volkswagen's case, among others, as exemplary, stating, "EPA's civil enforcement actions also deter future violations and ensure a level playing field for the regulated community by assessing penalties, including penalties to cover the economic benefit of noncompliance."⁹⁴ But do they?

On September 18, 2015, the EPA announced a Notice of Violation regarding the Volkswagen Group.⁹⁵ That year, Volkswagen reported post-tax loss of approximately € 1.4 billion (\$1.54 billion 2019 USD).⁹⁶ Apparent in this loss is that it occurred *before* any settlement with the EPA. Volkswagen itself, in discussing the "emissions issue" noted that "provisions totaling € 16.2 billion [17.87 2019 USD] were recognized and charged to operating result, primarily for pending technical modifications, for

⁸⁹ *Volkswagen Clean Air Act Civil Settlement*, EPA, <https://www.epa.gov/enforcement/volkswagen-clean-air-act-civil-settlement> [<https://perma.cc/2TBR-NAPL>] (last visited Nov. 24, 2020).

⁹⁰ *Id.* ("These settlements resolve allegations that Volkswagen violated the Clean Air Act ('CAA') by the sale of approximately 590,000 model year 2009 to 2016 diesel motor vehicles equipped with 'defeat devices.'").

⁹¹ *Id.* ("Through a series of three partial settlements, the EPA has resolved a civil enforcement case against Volkswagen AG, Audi AG, Dr. Ing. h.c. F. Porsche AG, Volkswagen Group of America, Inc., Volkswagen Group of America Chattanooga Operations, LLC, and Porsche Cars North America, Inc. (collectively 'Volkswagen')").

⁹² *Id.*

⁹³ Merrit Kennedy, *Volkswagen To Plead Guilty, Pay \$4.3 Billion in Emissions Scheme Settlement*, NPR (Jan. 11, 2017), <https://www.npr.org/sections/thetwo-way/2017/01/11/509318791/volkswagen-to-plead-guilty-pay-4-3-billion-in-emissions-scheme-settlement> [<https://perma.cc/6TV5-2AWD>] (\$4.3 billion includes both civil and criminal allegations).

⁹⁴ *Enforcement Annual Results for Fiscal Year 2017*, *supra* note 88.

⁹⁵ Volkswagen, 2015 Ann. Rep. (Form 10-k) (Apr. 28, 2016), at 49, https://www.volkswagenag.com/presence/investorrelation/publications/annual-reports/2016/volkswagen/englisch/Y_2015_e.pdf [<https://perma.cc/SWN7-LYZS>].

⁹⁶ *Id.* tbl. Financial data (IFRSs), € million.

repurchases, and customer-related measures as well as legal risks.”⁹⁷ Additionally, Volkswagen noted that “news about irregularities in the software used in certain diesel engines and the resulting public speculation about possible consequences to be expected led to a sharp fall in . . . [stock price].”⁹⁸ In essence, Volkswagen’s billion and a half dollar loss was self-inflicted, in preparation for any potential future legal risks, as well as market-driven by anxious shareholders. The EPA merely announced a notice of violation.

Now, consider 2016, the year of the first EPA partial settlement. Volkswagen reported after-tax earnings of approximately € 5.4 billion (\$5.96 billion 2019 USD).⁹⁹ 2017 and 2018 also saw after-tax year-over-year increases to € 11.6 (\$12.8 2019 USD) and € 12.2 (\$13.46 2019 USD) billion respectively.¹⁰⁰ So, a Clean Air Act violation that involved over half a million vehicles, spanning more than half a decade resulted in what exactly? According to Volkswagen, it spent € 29 billion (\$32 billion 2019 USD) in relation to the “diesel issue” across years 2015 to 2018.¹⁰¹ Note, that number represents its spending *globally*, not simply confined to the United States or the EPA. Further, it appears the majority of that was spent preemptively.¹⁰² To summarize, 2015, the only year Volkswagen’s after-tax earnings appear to be negative due to the “emissions issue” occurred before any EPA settlement was reached. In fact, 2018, the year after all three partial settlements were completed as well as a separate guilty plea in Federal Court, shows Volkswagen with its highest after-tax earnings since 2011, exceeding multiple countries’ gross domestic product.¹⁰³ Financially, it would seem hard to argue the EPA’s involvement

⁹⁷ *Id.* at 53.

⁹⁸ *Id.*

⁹⁹ Volkswagen, 2016 Ann. Rep. (Form 10-k) (Mar. 14, 2017), *Key Figures*, https://www.volkswagenag.com/presence/investorrelation/publications/annual-reports/2017/volkswagen/en/Y_2016_e.pdf [<https://perma.cc/WNY4-VPDS>].

¹⁰⁰ Volkswagen, 2017 Ann. Rep. (Form 10-k) (Mar. 13, 2018), *Key Figures*, https://www.volkswagenag.com/presence/investorrelation/publications/annual-reports/2018/volkswagen/en/Y_2017_e.pdf [<https://perma.cc/8RFU-DELS>]; Volkswagen, 2018 Ann. Rep. (Form 10-k) (Mar. 12, 2019), *Key Figures*, https://www.volkswagenag.com/presence/investorrelation/publications/annual-reports/2019/volkswagen/en/Y_2018_e.pdf [<https://perma.cc/H9XE-337Q>].

¹⁰¹ Volkswagen, 2018 Ann. Rep., *supra* note 100, at 92–94.

¹⁰² *See* Volkswagen, 2015 Ann. Rep., *supra* note 95, at 53 (“[P]rovisions totaling € 16.2 billion were recognized and charged to operating result, primarily for pending technical modifications, for repurchases, and customer-related measures as well as legal risks.”).

¹⁰³ Press Release, *Volkswagen AG Agrees to Plead Guilty and Pay \$4.3 Billion in Criminal*

“deter[red] future violations and ensure[d] a level playing field for the regulated community,” or had any direct tangible effect (setting aside shareholder speculation).¹⁰⁴

IV. GENERAL ELECTRIC’S CONTAMINATION OF THE HUDSON RIVER

Volkswagen is hardly alone as a company settling with the EPA without much appreciable effect. Consider General Electric (“GE”), who, in 2014, agreed to reimburse and fund an investigation totaling \$24 million regarding contamination of the Hudson River.¹⁰⁵ At the same time, GE’s 2015 10k report indicated net earnings of \$15 billion in 2014, making the cost of the investigation less than one quarter of one percent of that year’s earnings.¹⁰⁶ While 2015 showed a loss to net earnings, this was “primarily due to lower Financial Services income,” with no mention of legal suits or settlements being a factor.¹⁰⁷ In fact, discussing its environmental matters, GE states “[o]ur operations . . . involve the use, disposal and cleanup of substances regulated under environmental protection laws. We are involved in a number of remediation actions to clean up hazardous wastes” which have been accounted for in annual expenditures.¹⁰⁸ GE is literally disclosing that its remedial measures with the EPA are simply a cost of doing business to be accounted for and anticipated annually—a position that would seem irreconcilable with true deterrence.

and Civil Penalties and Six Volkswagen Executives and Employees Are Indicted in Connection with Conspiracy to Cheat U.S. Emissions Tests, Dep’t Just. (Jan. 11, 2017), <https://www.justice.gov/usao-edmi/pr/volkswagen-ag-agrees-plead-guilty-and-pay-43-billion-criminal-and-civil-penalties-and> [<https://perma.cc/S2VP-L3CG>]; Volkswagen, 2011 Ann. Rep. (Form 10-k) (Mar. 12, 2012), *Key Figures*, https://www.volkswagenag.com/presence/investorrelation/publications/annual-reports/2012/volkswagen/english/Y_2011_e.pdf [<https://perma.cc/Y68J-6Q3X>]; *Basic Data Collection*, U.N. (2017), <https://unstats.un.org/unsd/snaama/Basic> [<https://perma.cc/3642-8XU5>] (comparing all countries by GPD in U.S. dollars at current prices in the year 2017).

¹⁰⁴ *Enforcement Annual Results for Fiscal Year 2017*, *supra* note 88.

¹⁰⁵ *Case Summary: GE Agrees to Further Investigate Upper Hudson River Floodplain in a Comprehensive Study to Cost About \$20.5 Million*, EPA, <https://www.epa.gov/enforcement/case-summary-ge-agrees-further-investigate-upper-hudson-river-floodplain-comprehensive> [<https://perma.cc/8GWF-HAZ9>] (last visited Nov. 24, 2020).

¹⁰⁶ Gen. Elec., 2015 Ann. Rep. (Form 10-k) (Feb. 26, 2016), at 36, https://www.annualreports.com/HostedData/AnnualReportArchive/g/NYSE_GE_2015.pdf [<https://perma.cc/45BC-LBAW>].

¹⁰⁷ *Id.* at 31, 36.

¹⁰⁸ *Id.* at 93.

V. BP'S OIL SPILL (DEEPWATER HORIZON)

Finally, consider the Deepwater Horizon disaster in 2010, where BP's oil drilling rig explosion in the Gulf of Mexico resulted in "the death of 11 workers on the Deepwater Horizon and the largest spill of oil in the history of marine oil drilling operations."¹⁰⁹ For a sense of scale, "the Exxon Valdez oil spill in 1989—the event that prompted Congress to dramatically increase the civil penalties available under the CWA [Clean Water Act]—was approximately 257,000 barrels, one-twelfth the size of this spill."¹¹⁰ Of the examples discussed, this is perhaps the closest the EPA comes to true deterrence.

Widely publicized, the incident drew heavy public criticism.¹¹¹ In 2015, BP agreed to pay \$5.5 billion in civil penalties under the Clean Water Act.¹¹² Prior to that in 2012, BP reached a plea agreement for an additional \$1.15 billion for criminal violations of the Clean Water Act, as well as additional fines.¹¹³ All told, BP estimated it spent almost \$67 billion from the time of the oil spill to 2018.¹¹⁴ Here, finally, appears to be a serious condemnation of an environmental disaster. That bill represents more than BP's 2018, 2017, and 2016 gross revenues (taken individually).¹¹⁵

Unfortunately, those numbers belie the truth of a commodities-based economy. In late 2014 onward, the price of crude oil dropped by more than fifty percent of what it cost in 2013.¹¹⁶ Since that time, the price has never returned to its former zenith, in large part due to increases in supply from the United States' shale extraction.¹¹⁷ To see this in action,

¹⁰⁹ *Deepwater Horizon—BP Gulf of Mexico Oil Spill*, EPA, <https://www.epa.gov/enforcement/deepwater-horizon-bp-gulf-mexico-oil-spill> [<https://perma.cc/ZQ6N-LNYL>] (last visited Nov. 24, 2020); see generally Nat'l Comm'n on the BP Deepwater Horizon Oil Spill & Offshore Drilling, *Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling* (Jan. 2011), <https://www.govinfo.gov/content/pkg/GPO-OILCOMMISSION/pdf/GPO-OILCOMMISSION.pdf> [<https://perma.cc/P27T-XR4P>].

¹¹⁰ *In re Oil Spill by the Oil Rig "Deepwater Horizon" in the Gulf of Mexico*, 148 F. Supp. 3d 563, 569 (E.D. La. 2015).

¹¹¹ See, e.g., DEEPWATER HORIZON (Participant Media et al. 2016) (a semi-biographical retelling of the oil spill, heavily critical of BP executives, released just six years after the event).

¹¹² *In re Oil Spill*, 148 F. Supp. 3d at 573.

¹¹³ *Id.* ("\$100 million for violating the Migratory Bird Treaty Act, \$5.5 million for eleven counts of seaman's manslaughter, and \$500,000 for one count of Obstruction of Congress.").

¹¹⁴ BP, 2018 Ann. & Transition Rep. (Form 20-F) (Mar. 29, 2019) (BP files a 20-F and not a 10-K because it is not a U.S. company).

¹¹⁵ *Id.*

¹¹⁶ BP, 2015 Ann. & Transition Rep. (Form 20-F) (Mar. 4, 2016) (from \$108.66/barrel in 2013 to \$52.39/barrel in 2015).

¹¹⁷ See *Crude Oil Prices—70 Year Historical Chart*, Macrotrends, <https://www.macro>

compare BP's 2013 profit of \$23.8 billion to 2018's \$9.6 billion.¹¹⁸ In short, BP's profit decreases have been due to market factors, not to any environmental sanctions.

Perhaps more telling is BP's description of the worst oil spill *in history*. In its 2011 financial disclosure, BP noted, unironically, that "the oil industry in general, and in particular the US industry following the Gulf of Mexico oil spill, faces increased regulation that could increase the cost of regulatory compliance and limit our access to new exploration properties."¹¹⁹

To note, BP did identify the Gulf of Mexico oil spill first in its list of financial risk factors in 2011, 2012, 2013, and 2014.¹²⁰ However, that trend ended in 2015, and by 2018 the spill was no longer mentioned as a risk factor.¹²¹ Further, of that \$67 billion BP estimated it had paid, over sixty percent went towards "litigation and claims costs," while only forty percent went towards the *combined* sum of "environmental costs," "spill response costs," and "Clean Water Act penalties."¹²² BP further noted, of that sixty percent towards litigation and claims, "[t]hese costs relate predominantly to BEL [business economic loss] claims and associated administration costs."¹²³ In short, BP spent the great majority of its money on other businesses who claimed the oil spill cost them money, and on paying lawyers to litigate those claims, not on actual rehabilitative efforts.

Compare these litigation costs to the "Clean Water Act penalties" BP incurred after it "released 134 million gallons of oil into the Gulf of Mexico over a period of 87 days, fouling 1,300 miles of shoreline along five states . . . [and] killed thousands of marine mammals and sea turtles, and contaminated their habitats[;]" those penalties only represented approximately six percent of its lifetime costs associated with the oil spill.¹²⁴ It

trends.net/1369/crude-oil-price-history-chart [https://perma.cc/T88R-FB3D]; BP, 2015 Ann. & Transition Rep., *supra* note 116.

¹¹⁸ BP, 2013 Ann. & Transition Rep. (Form 20-F) (Mar. 6, 2014); 2018 Ann. & Transition Rep., *supra* note 114.

¹¹⁹ BP, 2011 Ann. Rep. & Form 20-F, at 60, <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/investors/bp-annual-report-and-form-20f-2011.pdf> [https://perma.cc/SHK6-UAWZ].

¹²⁰ 2011 Ann. Report & Form 20-F, *supra* note 119; BP, 2012 Ann. & Transition Rep. (Form 20-F) (Mar. 6, 2013); 2013 Ann. & Transition Rep., *supra* note 118; BP, 2014 Ann. & Transition Rep. (Form 20-F) (Mar. 3, 2015).

¹²¹ 2015 Ann. & Transition Rep., *supra* note 116; 2018 Ann. & Transition Rep., *supra* note 114.

¹²² 2018 Ann. & Transition Rep., *supra* note 114.

¹²³ *Id.*

¹²⁴ *Id.*; *Deepwater Horizon Oil Spill: Longterm Effects on Marine Mammals, Sea Turtles,*

is undisputable that its oil spill cost BP an enormous sum of money, but it is also hard to dispute that the majority of this enormous sum was earmarked for expenses that were unrelated to actually fixing the clear and obvious destruction of so much of our environment. Even assuming, *arguendo*, that BP feels deterred by this cost, that deterrence would appear driven by the majority private settlements it incurred, and not any actual EPA action.

Credit where due, it must be acknowledged that in its 2018 financial disclosure, BP's chairman noted an industry priority to "play our part in reducing greenhouse gas emissions" with "a progressive and pragmatic approach."¹²⁵ No doubt in furtherance of this goal, and demonstrating the true deterring effect of the EPA's sanctions, BP announced in October of 2018 that it was starting up its "Thunder Horse Northwest Expansion" project, the largest oil platform in the Deepwater Gulf of Mexico.¹²⁶ Meanwhile, despite no longer being a financial risk factor to BP, the toxic effects of its spill remain for the rest of us.¹²⁷

A. *Rethinking the Reactive Approach to Environmental Regulation*

These examples are, of course, vulnerable to an accusation of being cherry-picked, and not emblematic EPA efforts. While they were certainly cherry-picked, this was due, instead, to their high-profile nature and readily available financial disclosures. When pondering the success of the EPA, consider that "air pollution worsened in the United States in 2017 and 2018 . . . after years of sustained improvement."¹²⁸ Further, the United States is only ranked tenth globally in air quality by the World Health Organization when measuring fine particulate pollution (PM2.5),

NOAA (Apr. 20, 2017), <https://oceanservice.noaa.gov/news/apr17/dwh-protected-species.html> [https://perma.cc/YN67-F5NV].

¹²⁵ 2018 Ann. & Transition Rep., *supra* note 114.

¹²⁶ Press Release, *BP Starts Up Thunder Horse Northwest Expansion Ahead of Schedule and Under Budget*, BP (Oct. 18, 2018), <https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-starts-up-thunder-horse-northwest-expansion-ahead-of-schedule-and-under-budget.html> [https://perma.cc/9TFP-MLUC].

¹²⁷ Darryl Fears, *The Toxic Reach of Deepwater Horizon's Oil Spill Was Much Larger—and Deadlier—than Previous Estimates, a New Study Says*, WASH. POST (Feb. 12, 2020), <https://www.washingtonpost.com/climate-environment/2020/02/12/toxic-reach-deepwater-horizons-oil-spill-was-much-larger-deadlier-than-previous-estimates-new-study-says/> [https://perma.cc/7FYT-L3H5].

¹²⁸ Christopher Ingraham, *Air Pollution Is Getting Worse, and Data Show More People are Dying*, WASH. POST (Oct. 23, 2019), <https://www.washingtonpost.com/business/2019/10/23/air-pollution-is-getting-worse-data-show-more-people-are-dying/> [https://perma.cc/6L4R-SPZ2].

which is “a byproduct of burning and commonly comes from power plants, car exhaust and wildfires.”¹²⁹ PM2.5 “is particularly harmful to human health, causing asthma and respiratory inflammation and increasing the risk for lung cancer, heart attack and stroke.”¹³⁰ Additionally, as of 2017, the United States continues to be the second largest producer of carbon dioxide in the world.¹³¹ Further, according to the American Society of Civil Engineers (“ASCE”), America’s 2017 “Infrastructure Report Card” was a cumulative D+.¹³² Notably, “53% of Americans live within 3 miles of a hazardous waste site.”¹³³ Consider also the existence of over 1,300 superfund sites within the United States as of 2019.¹³⁴ These sites, caused by “hazardous waste being dumped, left out in the open, or otherwise improperly managed . . . include manufacturing facilities, processing plants, landfills and mining sites.”¹³⁵ Of those sites, over eighty-five percent have been a “National Priority” for a *decade* or more.¹³⁶ In short, while the United States undeniably enjoys a high standard of living, that does not imply it is the highest, nor that it cannot markedly improve.

The point of these examples is not to discredit the efforts of the EPA. The fact that it is securing settlements at all indicates the EPA’s sincere attempts to regulate the environment. However, these examples do highlight the key parallel to the financial frauds of the 1990s to early 2000s: a reactive approach to deterrence. Companies are caught in wrongdoing, participating in some type of environmental degradation, and pay some type of remediation fee or civil penalty, or both. Regardless of the remediation, and identical to the corporate fraud, the shareholder value has already been lost: the environment has already been degraded. These

¹²⁹ Nadja Popovich, *America’s Skies Have Gotten Clearer, but Millions Still Breathe Unhealthy Air*, N.Y. TIMES (June 19, 2019), <https://www.nytimes.com/interactive/2019/06/19/climate/us-air-pollution-trump.html> [<https://perma.cc/DW56-ZUJ2>].

¹³⁰ *Id.*

¹³¹ Thomas C. Frohlich & Liz Blossom, *These Countries Produce the Most CO2 Emissions*, USA TODAY (July 14, 2019), <https://www.usatoday.com/story/money/2019/07/14/china-us-countries-that-produce-the-most-co-2-emissions/39548763/> [<https://perma.cc/DGY5-G9WX>].

¹³² America’s Infrastructure Grade, Am. Soc’y Civ. Eng’rs (2017), <https://www.infrastructurereportcard.org/americas-grades/> [<https://perma.cc/8LQB-K2D2>].

¹³³ 2017 Infrastructure Report Card: Hazardous Waste, Am. Soc’y Civ. Eng’rs (2017), <https://www.infrastructurereportcard.org/wp-content/uploads/2017/01/Hazardous-Waste-Final.pdf> [<https://perma.cc/KG54-T37Q>].

¹³⁴ *Superfund National Priorities List (NPL) Sites—by Listing Date*, EPA, <https://www.epa.gov/superfund/national-priorities-list-npl-sites-listing-date> [<https://perma.cc/S72G-77NR>] (last visited Nov. 24, 2020).

¹³⁵ *What is Superfund?*, EPA, <https://www.epa.gov/superfund/what-superfund> [<https://perma.cc/YJD7-ED99>] (last visited Nov. 24, 2020).

¹³⁶ *Superfund National Priorities List (NPL) Sites—by Listing Date*, *supra* note 134.

reactive steps are not preventing the spoilage of the earth, they are simply trying to quantify the damage and hope that the price tag can buy a large enough Band-Aid to reverse the problem. This is the fundamental paradigm that needs to be corrected. The EPA's enforcement capabilities must be enhanced so that its penalties pivot from being a post-incurred cost to being a legitimate deterrence, which bears enough weight that companies, and the actors within those companies, refrain from environmentally degrading decisions.

B. Proposed Policy

As stated before, the myriad combinations of implementing policy represent too great an endeavor for this Note to cover. It will, instead, address the goals of the EPA equivalent to Sarbanes-Oxley ("EPA-SOX") and provide a skeleton of such a policy.

The EPA-SOX, just as its progenitor, must focus on deterrence. This is made even more obvious when one considers that while the average economic recession lasts for about 1.5 years and, cynically, involves the valuation of fiat money (made valuable because we agree it is valuable),¹³⁷ environmental damage can last indefinitely, and involves resources that are literally required for life to exist.¹³⁸

To that end, the focus of the EPA-SOX should be threefold: 1) clearer and stronger corporate accountability regarding environmental hazards; 2) enhanced criminal liability for environmental failures; and 3) expanded criminal liability for environmental failures.

The first of these prongs is the most important, and would presumably be utilized the most. In practice, this could look identical to the current disclosures required for corporate financial statements. Essentially, an executive would have to personally attest that their company was following all EPA regulations at the risk of the company and themselves being held liable.¹³⁹ This would allow for direct accountability when

¹³⁷ Cameron Keng, *Recession is Overdue by 4.5 Years, Here's How to Prepare*, FORBES (Oct. 23, 2018), <https://www.forbes.com/sites/cameronkeng/2018/10/23/recession-is-overdue-by-4-5-years-heres-how-to-prepare/#426a4fc740d8> [<https://perma.cc/Q9DQ-R5Q6>].

¹³⁸ See, e.g., Malcolm Burnley, *The Environmental Scandal in Scott Pruitt's Backyard*, POLITICO (Dec. 6, 2017), <https://www.politico.com/magazine/story/2017/12/06/scott-pruitt-tar-creek-oklahoma-investigation-215854> [<https://perma.cc/ZAW7-38W4>] (discussing the superfund site Tar Creek which has been in a superfund for over thirty years and still remains heavily polluted).

¹³⁹ See Sarbanes-Oxley Act § 302, *supra* note 25 ("[T]he principal executive officer or officers and the principal financial officer or officers, or persons performing similar functions, certify in each annual or quarterly report filed [that they have reviewed the financials and that they are accurate].").

companies are found to be violating environmental regulations as well as streamline judicial proceedings.¹⁴⁰ Further, the prioritizing of “a short-term focus, fueled by an obsession with quarter-to-quarter earnings” would be counterbalanced by the knowledge that any environmental violations would result in direct and personal liability.¹⁴¹ Executives would have to put themselves on record that their companies were not violating environmental standards or risk compounding any ongoing violation with fraud and increased penalties.¹⁴²

The second prong of the EPA-SOX is enhanced criminal liability.¹⁴³ It is likely that prosecutors would rarely invoke these criminal penalties, preferring to rely on the more readily available prosecution of fraud, but their existence would still act as a deterrent.¹⁴⁴

To explain this reasoning by analogy, consider that the elements to proving felon in possession of a firearm¹⁴⁵ are much easier than proving the alleged offense of, for example, robbery.¹⁴⁶ In this case, the first prong (certification) will replicate that easier burden (an executive certified their company was complying with environmental regulations; company was not complying with environmental regulations). The enhanced criminal liability therefore appears much more like a Sword of Damocles, to be used in exceptionally egregious cases, and/or to set an example.¹⁴⁷ In essence,

¹⁴⁰ Proving an executive 1) certified their company was following environmental regulations; and 2) that the company actually was not violating any regulations would presumably improve efficiency since half the elements are proved at the outset.

¹⁴¹ *Testimony Concerning Implementation*, *supra* note 24 (describing the economic conditions that led to the economic scandals prompting Sarbanes-Oxley).

¹⁴² It should be noted that this act, along with the Sarbanes-Oxley Act, would only hang over publicly traded companies. However, given that a large portion (if not a majority) of polluters are investor-owned, this does not seem like a concession. *See, e.g.*, Suzanne Goldenberg, *Just 90 Companies Caused Two-Thirds of Man-Made Global Warming Emissions*, *GUARDIAN* (Nov. 20, 2013), <https://www.theguardian.com/environment/2013/nov/20/90-companies-man-made-global-warming-emissions-climate-change> [<https://perma.cc/Q7JA-PFHR>] (in 2013, fifty of the top ninety carbon-polluters were investor owned).

¹⁴³ *See, e.g.*, Sarbanes-Oxley Act §§ 903–06, *supra* note 25 (enhancing the penalty for mail fraud from five years to twenty, stating that willfully certifying false reports can result in fines and/or imprisonment of up to twenty years, etc.).

¹⁴⁴ *See* Drawbaugh & Aubin, *supra* note 64 (noting that in the first ten years of Sarbanes-Oxley, few criminal charges were brought).

¹⁴⁵ *See, e.g.*, 18 U.S.C. § 922(g) (“It shall be unlawful for any person . . . who has been convicted [of a felony to] . . . possess . . . any firearm . . .”).

¹⁴⁶ *See, e.g.*, 18 U.S.C.S. § 2112 (federal statute on robbery whose elements include proving all the elements of larceny in addition to force or the threat of force).

¹⁴⁷ *See, e.g.*, Press Release, *Former CFO of Vancouver Business Management Company Indicted for Certifying False Financial Reports*, DEP’T JUST. (Sept. 20, 2018), <https://www.justice.gov/usao-wdwa/pr/former-cfo-vancouver-business-management-company-indicted>

prong two acts as a looming deterrent, but agency efficiency will likely militate towards settlements based on violations of prong one.

The final prong of the EPA-SOX is expanded criminal liability. This is where the act will deviate most from Sarbanes-Oxley due to the different nature of environmental regulations versus financial regulations. While Sarbanes-Oxley expanded mail fraud, wire fraud, and other essentially securities focused crimes, the EPA-SOX would do the same in the environmental arena.¹⁴⁸ Such crimes would necessarily be properly determined by the EPA itself, but, to provide an instructive example, consider the inclusion of such things as waste released into public waterways, emissions violations, or failures regarding restoration promises.

I remain intentionally vague on prong three because its purpose is akin to that of prong two: looming deterrence. I consider it a catch-all to strengthen the enhanced criminal liability by addressing additional crimes. In practice, prongs two and three could likely be concatenated, but they remain distinct in this Note to explicitly announce their existence and the need to ensure a full-bodied set of criminal rules to ensure compliance.

It must be noted that there is an implicit assumption in these rules that the EPA will not become beholden to the very industries it seeks to regulate.¹⁴⁹ Since this is an existential risk all agencies face, any included treatise on how to prevent agency capture would be woefully incomplete, so it will have to suffice to simply acknowledge it as a risk.¹⁵⁰

C. *Deterrence in Action*

With the skeleton of the EPA-SOX defined, consider again the cases of Volkswagen, GE, and BP.¹⁵¹

-certifying-false-financial [<https://perma.cc/5GU8-5HQL>] (example of criminal charges brought against CFO who violated the Sarbanes-Oxley Act, among others).

¹⁴⁸ See generally Sarbanes-Oxley Act, *supra* note 25 (enumerating multiple actions that represent an expansion of white-collar criminal liability).

¹⁴⁹ See, e.g., Hilary Lambert, *Whose Water Is It?*, 75 AM. J. ECON. & SOCIO. 682 (May 2016) (describing the (in)famous “Halliburton Loophole” instituted in 2005 during the Bush-Cheney administration that exempted fracking from the Clean Air Act, Clean Water Act, Safe Drinking Water Act and others, essentially sidelining the EPA; so named because Dick Cheney was the former CEO of Halliburton).

¹⁵⁰ To paraphrase Justice Stewart, “I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description; and perhaps I could never succeed in intelligibly doing so. But I know it when I see it.” *Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964).

¹⁵¹ See *supra* notes 89–127 and accompanying text.

In Volkswagen's case, former CEO Martin Winterkorn, who was indicted in 2018, "repeatedly denied wrongdoing."¹⁵² His stance reflected the general response of Volkswagen's executives, that this multiyear fraud was, somehow, perpetuated without the blessing or knowledge of its management.¹⁵³ In a world where Mr. Winterkorn was required to formally attest each year that his company was complying with EPA regulations, this defense would, while patently absurd in either case, be much easier to overcome. Moving into the realm of speculation, the knowledge that he was personally making himself and the company liable for fines and even potential imprisonment, would likely (hopefully) have put a damper on any perceived value from violating pollution standards.

Next, consider GE, who explicitly noted its environmental costs and considered them a "remediation action" to be accounted for annually.¹⁵⁴ As noted above, polluting the environment and then earmarking it as a cost may work as a financial exercise, but the degradation has already occurred. Under the EPA-SOX, the EPA would have the tools to more stringently enforce its rules, with the goal of moving from reactive fines to deterrence. In GE's case, the EPA might even need to consider invoking criminal penalties given GE's glib acknowledgment of environmental pollution. Armed with EPA-SOX, the agency could change the paradigm of environmental sanctions from a cost of doing business to a business risk not worth incurring.

Lastly, consider BP's oil spill. The vast majority of BP's costs went towards litigation and claims, not towards actual environmental improvements.¹⁵⁵ Armed with a more efficient regulatory statute, the EPA could press criminal charges against BP's executives. The purpose of this display is twofold: 1) as a bellwether to other companies about the cost of engaging in environmentally degrading business ventures; and 2) to empower the EPA to enforce a stronger monetary fine to address the pollution.

In summing up the case studies, the great irony of EPA-SOX is, unlike the Sarbanes-Oxley Act, it should require no implementation costs to regulated industries.¹⁵⁶ Businesses are *already* supposed to follow EPA

¹⁵² Jack Ewing, *Ex-Volkswagen C.E.O. Charged with Fraud Over Diesel Emissions*, N.Y. TIMES (May 3, 2018), <https://www.nytimes.com/2018/05/03/business/volkswagen-ceo-diesel-fraud.html> [<https://perma.cc/LX7H-5PNV>].

¹⁵³ *Id.*

¹⁵⁴ Gen. Elec., 2015 Ann. Rep., *supra* note 106.

¹⁵⁵ See *supra* notes 109–27 and accompanying text.

¹⁵⁶ See UNDERSTANDING THE COSTS AND BENEFITS OF SOX COMPLIANCE, Protiviti (2016), at 1, https://www.protiviti.com/sites/default/files/united_states/insights/2016-sox-survey

regulations (that apply to them). Requiring that their executives reiterate this by affirming it in a written disclosure adds no overhead. Of course, those businesses that feel they need to improve their environmental adherences before attesting to such a document might incur money, but this can hardly be called an unforeseen cost. To reiterate, the regulations the businesses would need to follow (and currently need to follow) do not expand in the slightest. Only the mechanisms to punish those who do not currently follow those regulations are enlarged. The inevitable lobbying against an EPA-SOX statute would have to navigate the straits of claiming to already be fully compliant, while also refusing to certify that very compliance.

Finally, consider, in general terms, the massive cost of litigation surrounding EPA enforcement actions. This investment represents money that is, by definition, not going towards fixing the environment, and the litigation itself greatly slows the response time to company-made environmental disasters.¹⁵⁷ By requiring certification that companies are complying with environmental regulations, the EPA-SOX would create a de-facto strict liability standard that would streamline litigation and have a strong deterring effect.¹⁵⁸

CONCLUSION

The EPA is not an effective deterrence to the pollution and degradation of the environment. Its regulations are treated as a cost of doing business, if not simply ignored. Given the precarious state that our environment is in, the time has come to equip the EPA with the tools to actually enforce its mandate. By imbuing in the EPA the same power that was bestowed on the SEC via Sarbanes-Oxley, the agency might finally be positioned to actually “protect human health by safeguarding the air we breathe, water we drink and land on which we live.”¹⁵⁹

-protiviti.pdf [https://perma.cc/DJM5-M4NS] (detailing the high cost of compliance to Sarbanes-Oxley).

¹⁵⁷ See, e.g., *In re Oil Spill*, 148 F. Supp. 3d at 573 (2010 oil spill resulted in civil settlement approximately five years later).

¹⁵⁸ See Daniel Nagin, *Deterrence in the Twenty-First Century*, 42 CRIME & JUST. 199 (2013) (one of the best crime deterrents is perceived certainty of punishment).

¹⁵⁹ *Milestones in EPA and Environmental History*, *supra* note 1.