

Charging Practices in Hazardous Waste Crime Prosecutions*

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This article provides an empirical testing ground for speculative claims about special dangers inherent in criminal enforcement of environmental laws. Critics of criminal enforcement maintain that the criminal provisions in environmental statutes lay a trap for the unwary, particularly in the context of hazardous waste violations. Apart from their concerns about the complexity of environmental law and the obscurity of regulatory standards, criminal enforcement critics are distrustful of prosecutorial discretion as a mechanism to screen out unavoidable technical violations.

This article examines how prosecutors have used the Resource Conservation and Recovery Act (RCRA) as a criminal enforcement tool. Drawing on nearly 140 hazardous waste prosecutions, the article analyzes whom the government prosecutes for hazardous waste crimes, what kinds of violations culminate in criminal charges, the business contexts in which the violations occur, and the interplay between RCRA and other criminal statutes. Contrary to assumptions found in the theoretical literature, the data show that prosecutors assign priority to prosecuting knowledgeable economic actors who operate outside the regulatory system and to prosecuting those who technically operate within the system but deliberately undermine it through misrepresentation and concealment. Rather than constituting isolated and inadvertent technical violations, offenses that lead to criminal prosecution commonly involve obviously illegal—and often pervasive—criminal conduct.

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I. INTRODUCTION

Illegal hazardous waste dumpsites are environmental time bombs. While the harm caused by improper hazardous waste disposal may not be immediately apparent, by the time it becomes manifest it may be both irreversible and severe. In its most severe forms environmental contamination from hazardous waste can increase risks of latent disease,¹ poison drinking water supplies,² or destroy an entire community.³ The stakes are undeniably high.

The true dimensions of the hazardous waste problem are as yet unknown and may be unknowable. But by the mid-1970s, it had become clear that environmentally responsible hazardous waste disposal was the exception rather than the rule⁴ and that improper disposal practices had released massive quantities of toxic contaminants

¹ HOUSE COMM. ON INTERSTATE AND FOREIGN COMMERCE SUBCOMM. ON OVERSIGHT AND INVESTIGATIONS OF THE 96TH CONG., REPORT ON HAZARDOUS WASTE DISPOSAL 12, 14 (Comm. Print 1979) [hereinafter REPORT ON HAZARDOUS WASTE DISPOSAL] (reporting that residents of some Colorado and Florida communities that were built on sites once used for mining and manufacturing operations were exposed—and had been over time—to excessive levels of radiation from radioactive mine waste that contaminated the land beneath and around their homes); see also Sydney M. Wolf, *Hazardous Waste Trials and Tribulations*, 13 ENVTL. L. 367, 428 (1983).

² REPORT ON HAZARDOUS WASTE DISPOSAL, *supra* note 1, at 13 (finding that local water supplies near dumpsites in Hardeman County, Tennessee; Montague, Michigan; Lathrop, California; and parts of two Long Island counties had become unusable, and that the primary groundwater source for Niagara Falls, New York, was in peril).

In the year and a half before pervasive national regulations for monitoring hazardous waste were due to become effective, chemical contamination caused twenty-six public water systems to be shut down in Massachusetts alone. Michael Knight, *Toxic Wastes Hurriedly Dumped before New Law Goes Into Effect*, N.Y. TIMES, Nov. 16, 1980, at 1.

³ In the early 1970s, Times Beach, Missouri, hired a firm to spray oil on its unpaved streets to control dust. The firm, which also hauled toxic chemical waste from a downstate pharmaceutical company, sprayed the city's streets with dioxin-contaminated waste oil. In 1982, flooding from the nearby Meramec River washed high levels of dioxin into the northern part of the town. Fearful that the floodwaters would contaminate the residents' homes, the government evacuated all 2,200 Times Beach residents. The following year, the EPA took the unprecedented step of buying out the entire town, which was later razed. See Editorial, *A Toxic Ghost Story*, ST. LOUIS POST-DISPATCH, July 24, 1999, at 30; *Contaminated Town is Relegated to History*, N.Y. TIMES, Apr. 14, 1985, at 26; *Incinerator Burns Last of Times Beach*, L.A. TIMES, June 27, 1997, at A18; Casey Bukro, *Ghost Town's Fear Replaced by Anger*, TORONTO STAR, Mar. 3, 1992, at A17.

See also *infra* note 37 (describing the consequences of a public health emergency created by improper hazardous waste disposal at Love Canal in New York).

⁴ According to EPA estimates, industry disposed of only 10 percent of hazardous waste in environmentally sound ways. REPORT ON HAZARDOUS WASTE DISPOSAL, *supra* note 1, at 1 & n.1 (citing 43 FR 58974 (Dec. 18, 1978)).

into the environment.⁵ And since no one policed this harmful activity, there was little incentive to discontinue it.⁶

It was against this backdrop that Congress enacted the Resource Conservation and Recovery Act (RCRA) in 1976.⁷ Reflecting growing recognition that the unregulated transportation and disposal of hazardous waste posed serious threats to human health and the environment, RCRA created a comprehensive regulatory scheme to enable the Environmental Protection Agency (EPA) to monitor hazardous waste along the continuum from cradle to grave. When the Justice Department established a formal environmental criminal enforcement program in 1983,⁸ RCRA prosecutions began to play a pivotal role in the government's evolving enforcement priorities.⁹

⁵ *Id.* at 2.

⁶ See *Hazardous Waste Disposal: Hearing Before the House Subcomm. on Oversight and Investigations of the Comm. on Interstate and Foreign Commerce*, 96th Cong. 745 (1979) (testimony of James W. Moorman, Assistant Attorney General for Land and Natural Resources, U.S. Department of Justice).

⁷ 42 U.S.C. §§ 6901–6987 (1994).

⁸ During its first decade of operation, the criminal enforcement program was plagued by controversy. On the one hand, the Environmental Crimes Section was criticized as unwilling to prosecute difficult but meritorious cases. See *EPA's Criminal Enforcement Program: Hearing before the Subcomm. on Oversight and Investigations of the Comm. on Energy and Commerce*, 102d Cong. 1–6 (1992) [hereinafter *1992 Hearing*] (opening statement of John D. Dingell, Chairman); *id.* at 9–55 (Memorandum from John D. Dingell to Members of the Subcomm. on Oversight and Investigations (Sept. 9, 1992)); JONATHAN TURLEY, PRELIMINARY REPORT ON CRIMINAL ENVIRONMENTAL PROSECUTION BY THE UNITED STATES DEPARTMENT OF JUSTICE 6–14 (1992).

But other critics faulted the Environmental Crimes Section for what they perceived as its zealotry in prosecuting small businesses and business owners and its reluctance to prosecute major corporations and their executives. See *EPA's Criminal Enforcement Program: Hearing Before the Subcomm. on Oversight and Investigations of the Comm. on Energy and Commerce*, 103d Cong. 2 (1993) [hereinafter *1993 Hearing*] (opening statement of John D. Dingell, Chairman); *1992 Hearing, supra*, at 10 (Memorandum from John D. Dingell to Members of the Subcommittee on Oversight and Investigations); Robert W. Adler & Charles Lord, *Environmental Crimes: Raising the Stakes*, 59 GEO. WASH. L. REV. 781, 786 (1991).

⁹ Although the EPA established an Office of Criminal Enforcement in 1981, development of a coherent and effective criminal enforcement program was hobbled by serious leadership problems at EPA, the lack of authority to use conventional law enforcement tools, and the absence of interagency cooperation. See generally Judson W. Starr, *Turbulent Times at Justice and EPA: The Origins of Environmental Criminal Prosecutions and the Work that Remains*, 59 GEO. WASH. L. REV. 900 (1991); see also Kathleen F. Brickey, *Environmental Crime at the Crossroads: The Intersection of Environmental and Criminal Law Theory*, 71 TUL. L. REV. 487, 494–95 (1996) [hereinafter Brickey, *Environmental Crime at the Crossroads*]; Helen J. Brunner, *Environmental Criminal Enforcement: A Retrospective View*, 22 ENVTL. L. 1315, 1318–1325 (1992); Andrew S. Hogeland, *Criminal Enforcement of Environmental Laws*, 75 MASS. L. REV. 112, 112–14 (1990); Richard J. Lazarus, *Assimilating Environmental Protection into Legal Rules and the Problem with*

Critics of environmental criminal enforcement contend that the criminal provisions in environmental statutes lay a trap for the unwary. They argue that prosecutors should make sparing use of criminal enforcement tools because the environmental criminal provisions place innocent people at risk of conviction for unavoidable technical violations of obscure regulatory standards.¹⁰ They question the fairness of criminal enforcement of environmental standards they believe are uniquely complex and indeterminate.¹¹ And they object generally to what they cast as minimal culpability requirements,¹² too much prosecutorial discretion,¹³ and relaxed evidentiary burdens¹⁴ in environmental prosecutions.¹⁵

Environmental Crime, 27 LOY. L.A. L. REV. 867, 869–70 (1994); Daniel Riesel, *Criminal Prosecution and Defense of Environmental Wrongs*, 15 ENVTL. L. REP. 10,065, 10,065–66 (1985).

¹⁰ See, e.g., Donald A. Carr, *Preface*, to ENVIRONMENTAL CRIMINAL LIABILITY: AVOIDING AND DEFENDING ENFORCEMENT ACTIONS at v, vi–vii (Donald A. Carr ed., 1995) (warning that structural problems in environmental criminal statutes place innocent actors at risk of criminal prosecution); David S. Krakoff & Fred R. Wagner, *Advising Clients in the Post-Weitzenhoff Era*, 10 CRIM. JUST. 10, 14 (Fall 1995) (predicting that the decision in *United States v. Weitzenhoff*, 35 F.3d 1275 (9th Cir. 1993), will subject innocent conduct to criminal penalties); Richard J. Lazarus, *Meeting the Demands of Integration in the Evolution of Environmental Law: Reforming Environmental Criminal Law*, 83 GEO. L.J. 2407, 2487 (1995) (cautioning that it is unwise to blindly trust prosecutors to refrain from prosecuting those who are morally innocent but who technically fall within the environmental criminal provisions); Kevin Phillip Cichetti, Note, *United States v. Weitzenhoff: Reading Out the “Knowingly” from “Knowingly Violates” in the Clean Water Act*, 18 U.S.C. § 1319(c)(2)(A), 9 ADMIN. L.J. AM.U. 1183, 1185–87 (1996) (arguing that the mens rea requirements should be changed so that innocent conduct will not be punished).

¹¹ See, e.g., Carr, *supra* note 10, at v (finding prosecutors’ reliance on unfair but legally plausible prosecution theories troublesome); Kevin A. Gaynor et al., *Environmental Criminal Prosecutions: Simple Fixes for a Flawed System*, 3 VILLANOVA ENVTL. L.J. 1, 11 (1992) (arguing that minimal culpability standards foster unprincipled and unpredictable applications of the law and allow treatment of “virtually any environmental violation” as a crime); Lazarus, *supra* note 10, at 2453–55, 2479–80, 2486–89, 2515 (asserting that in light of the scope and complexity of the regulations and the current culpability requirements, it may be unfair to impose felony penalties for environmental crimes); Christopher H. Schroeder, *Cool Analysis Versus Moral Outrage in the Development of Federal Environmental Criminal Law*, 35 WM. & MARY L. REV. 251, 252–53 (1993) (suggesting that while discussions of the general criminal features of environmental statutes have their place in the development of environmental criminal law, attention to the environmental features of the statutes helps to explain the growth of this field of law; those who view environmental standards as creating a moral obligation are disposed to favor more rigorous criminal enforcement).

My earlier article on the intersection of environmental and criminal law theory explains why I believe this indiscriminate claim is unwarranted. See generally Brickey, *Environmental Crime at the Crossroads*, *supra* note 9.

¹² See, e.g., Lazarus, *supra* note 10, at 2453–55, 2510–17 (calling for reform of environmental mens rea requirements to encompass only violators who are morally culpable); R. Christopher Locke, *Environmental Crimes: The Absence of “Intent” and the Complexities of Compliance*, 16 COLUM. J. ENVTL. L. 311, 313, 320–21 (1991) (characterizing the current culpability standards as minimal and a deviation from traditional mens rea requirements); Judson W. Starr et al.,

Some worry that RCRA prosecutions may be especially problematic because the factual issues are so technical and the outer boundaries of liability so obscure.¹⁶ To determine whether material is hazardous waste, for example, one must make a series of “technical, precise, factual inquiries.”¹⁷ Thus, to know that a waste is hazardous, “the defendant would have to know what industrial processes produced the material, what its boiling point was under one set of prescribed physical conditions, what concentration of toxic constituents would leach out under a second set of prescribed physical conditions, and how the material would chemically react with other specific substances under yet another set of prescribed physical conditions.”¹⁸ The clear implication is this: if people of ordinary experience cannot make informed judgments about characteristics that make a waste hazardous, they should not be at risk of criminal prosecution for innocent mistakes. Stated differently, when the meaning of technical regulatory terms is not self-evident—“particularly to one who transports

Prosecuting Pollution, LEGAL TIMES, May 31, 1993, at 6 (decrying the deceptively low threshold for environmental criminal liability).

¹³ See, e.g., Gaynor et al., *supra* note 11, at 11, 31 (stating that the decision to treat a violation criminally, civilly, or administratively should not be made “on the whim of an Assistant U.S. Attorney”); Robert A. Kagan, *Regulatory Enforcement*, in HANDBOOK OF REGULATION AND ADMINISTRATIVE LAW 383, 408 (David H. Rosenbloom & Richard D. Schwartz eds., 1994) (suggesting that for many, discretion “raises the specter of inconsistency, arbitrary treatment, bias, and corruption”); Lazarus, *supra* note 10, at 2487–89, 2512 (criticizing blind reliance on prosecutorial discretion as a mechanism to ensure that only the truly culpable are prosecuted and arguing that critical policy matters “should not be left to judicial speculation or to the whim of a single federal prosecutor”).

¹⁴ See Kenneth Berlin, *Criminal Liability of Corporate Officers, Directors, and Employees under U.S. Environmental Laws*, in ENVIRONMENTAL CRIMINAL LIABILITY: AVOIDING AND DEFENDING ENFORCEMENT ACTIONS 112, 133 (Donald A. Carr ed., 1995) (stating that courts have lowered the burden of proof by accepting the public welfare offense analogy and the responsible corporate officer doctrine); Locke, *supra* note 12, at 321 (stating that courts have relaxed the standards for proving scienter).

¹⁵ For a critique of these unsubstantiated claims, see Kathleen F. Brickey, *The Rhetoric of Environmental Crime: Culpability, Prosecutorial Discretion, and Structural Reform*, 84 IOWA L. REV. 115 (1998) [hereinafter Brickey, *The Rhetoric of Environmental Crime*].

¹⁶ Lazarus, *supra* note 10, at 2471–72 (stating that the vagaries of proving whether a material should be deemed “waste” or whether waste is “hazardous” requires pursuit of a series of “technical, precise, factual inquiries” for each complex component of a RCRA violation); Starr et al., *supra* note 12, at 6 (stating that whether a solvent-laden rag used to clean machinery is hazardous waste depends on how the solvent got on the rag; if the solvent was poured on the machinery and then wiped with a clean rag, the rag is hazardous waste; if the solvent was poured directly onto the rag and then used to wipe the machine, the rag is not hazardous waste); John-Mark Stensvaag, *The Not So Fine Print of Environmental Law*, 27 LOY. L.A. L. REV. 1093, 1093 (1994) (observing that hazardous waste regulations are so complex that they “defy the comprehension of any one person”); see also Lazarus, *supra* note 10, at 2433–38.

¹⁷ Lazarus, *supra* note 10, at 2472.

¹⁸ *Id.* at 2471–72.

or disposes of the material, but did not produce it”—criminal enforcement is “necessarily problematic.”¹⁹

Critics base their claims about the dangers inherent in environmental criminal enforcement on speculative inferences about who is—or is likely to be—caught up in the criminal enforcement net and why. Relying largely on intuitive judgments, commentators rarely place their concerns in the context of what kinds of violations prosecutors actually pursue.²⁰ This article reveals how perceptions found in the theoretical literature are at odds with the realities of hazardous waste crime and its prosecution.

Part II explains how RCRA responded to a national environmental emergency and why the regulatory scheme required meaningful criminal penalties to be effective. Although RCRA’s comprehensive approach to curtailing unsafe waste management practices was a welcome addition to the panoply of modern environmental statutes, successful achievement of its goals was frustrated by the sheer magnitude of the problem, by strong economic incentives to avoid its costly requirements, and by other similar hurdles. Thus, reliance on the threat of criminal enforcement to deter avoidable violations became an essential complement to civil and administrative compliance programs.

Part III describes the database, explains the methodology of the study, and defines key terms.

Part IV examines how prosecutors have used RCRA as a criminal enforcement tool. Its analysis of charging practices in hazardous waste prosecutions over a ten-year period provides an empirical testing ground for speculative hypotheses about who does what to whom. Part IV begins by inquiring into the role that hazardous waste prosecutions play in the overall environmental criminal enforcement scheme and by examining specific charging practices in RCRA prosecutions. The data reveal that RCRA prosecutions are an integral part of the criminal enforcement effort, that the charges in hazardous waste prosecutions often reflect the interplay of complementary regulatory schemes, and that hazardous waste crimes often go hand in hand with the commission of other white collar crimes.

Part IV then examines whom the government prosecutes for hazardous waste crimes. This examination reveals that it is common for prosecutors to charge multiple actors as co-defendants in a single case, and that the multi-party aspects of these charging decisions are often barometers of the nature and scope of the underlying criminal activity. The focus then turns to the occupational status of individuals prosecuted for hazardous waste crimes. The data show that most

¹⁹ *Id.* at 2435.

²⁰ *Cf.* Michael J. Penders, *Innocents at Risk?: The Rhetoric and Reality of Environmental Criminal Enforcement*, 2 ENVTL. LAW. 835, 840, 843 (1996) (reviewing ENVIRONMENTAL CRIMINAL LIABILITY: ADVOCATING AND DEFENDING ENFORCEMENT ACTIONS (Donald A. Carr, ed. 1995)) (stating that commentators seldom consider what types of knowing violations are prosecuted; a high percentage involve deception and other deliberate misconduct, and many defendants have an established history of prior violations).

individual defendants in RCRA prosecutions have responsible positions within the organizational setting where criminal violations occur. Typically, they are knowledgeable economic actors who are in a position to prevent the violation from occurring.

After examining which industries are most commonly involved in RCRA prosecutions, Part IV concludes with a look at available data on specific characteristics of hazardous waste crimes—including the nature and location of illegal storage and disposal sites and the kinds of wastes involved. Taken together, the data show that much of the conduct that results in criminal prosecution is flagrantly illegal and that the waste is unmistakably hazardous.

The data presented in this study are consistent with the conclusion that, on balance, speculative concerns about unfair criminal enforcement of hazardous waste laws are ill founded. Charging practices in RCRA prosecutions are consistent with Department of Justice enforcement policy in the prosecution of white-collar crime generally and with articulated EPA environmental enforcement priorities. Most individuals who are prosecuted for hazardous waste crimes bear responsibility for the business processes that lead to the violations and are thus appropriate parties to hold accountable. And contrary to the stereotyped example of isolated and unavoidable technical violations, most RCRA prosecutions are brought against businesses and business owners, officers and managers who operate outside the regulatory system and against those who are within the system but seek to undermine it by committing crimes of misrepresentation and concealment.

II. THE HAZARDOUS WASTE CRISIS

A. *Background*

Hazardous waste is a byproduct of an increasingly industrialized society. Although technological innovations from the early days of the Industrial Revolution generated new types of hazardous waste byproducts,²¹ the end of World War II was the watershed event. As industrial output shifted from military to predominantly domestic production, the quantity of hazardous industrial byproducts of post-war manufacturing operations soared. At war's end, industry and the government produced 500 thousand metric tons of hazardous waste in the United States every year. By the 1980s, the figure had reached an estimated 275 million metric tons.²²

²¹ DONALD J. REBOVICH, *DAINGEROUS GROUND: THE WORLD OF HAZARDOUS WASTE CRIME* 2 (1992) [hereinafter REBOVICH, *DAINGEROUS GROUND*].

²² U.S. ENVIRONMENTAL PROTECTION AGENCY, *RCRA ORIENTATION MANUAL I-1* (1990 ed.). The true extent of the hazardous waste problem is hard to quantify, partly because the number of generators, transporters, and treatment, storage, and disposal facilities is unknown, and partly because of the nature of hazardous waste itself. Hazardous waste includes both liquids and solids and a wide array of chemicals. The mixing of nonhazardous with hazardous waste can increase the quantity that is classified as hazardous. For example, water used to rinse out a tank containing

The post-war era marked dramatic changes in both the quantity and character of industrial waste byproducts. The use of petroleum as a primary ingredient in manufacturing synthetic organic chemicals presaged the growth of the organic chemistry industry and the development of new products like plastics, electronic components, and modern construction materials. Although synthetic organic chemicals contributed to advanced industrial production and the emergence of lucrative markets,²³ they also spawned a new generation of waste materials that raised troubling concerns. Waste byproducts of these chemicals are resistant to biodegradation²⁴ and thus pose greater danger over a longer period of time.²⁵ Although most organic residues are expected to remain toxic for about fifty years, the residues of some persistent organic chemicals and metals can remain toxic for hundreds or even thousands of years.²⁶

Not surprisingly, the post-war surge in industrial production outpaced both the development of safe waste management practices and the growth of a waste management industry equipped to handle the burgeoning volume of hazardous materials.²⁷ Thus, as increased industrial productivity generated more and more waste, the cost of legitimate hazardous waste disposal steadily rose.²⁸ In consequence, authorities believed that 90 percent of hazardous waste generated in the decades before the enactment of RCRA was disposed of unsafely, and that much of it found its way into the environment.²⁹ More troubling still, although there were

hazardous wastes may itself become hazardous when mixed with the wastes. Thus, the amount of water used to clean the tank—as well as changes in industrial practices and processes—plays a direct role in the amount of hazardous waste a firm generates. THEODORE M. HAMMETT & JOEL EPSTEIN, NAT'L INST. OF JUSTICE, U.S. DEPT. OF JUSTICE, LOCAL PROSECUTION OF ENVIRONMENTAL CRIME 8 (1993).

²³ REBOVICH, DANGEROUS GROUND, *supra* note 21, at 2–3. Since the post-World War II era, the nation's production of organic chemicals increased from fewer than 20 billion pounds a year to more than 220 billion pounds. The organic chemical industry is the largest single producer of hazardous waste and annually generates nearly 70 percent of the 580 billion pounds of solid hazardous wastes—more than a ton for every person in the United States by 1980s standards. The organic chemical industry is responsible for most hazardous waste contained in air emissions and wastewater. DAVID J. SAROKIN, ET AL., CUTTING CHEMICAL WASTES 14–19 (1985).

²⁴ REPORT ON HAZARDOUS WASTE DISPOSAL, *supra* note 1, at 12 (questioning whether such wastes should ever be disposed of in landfills).

²⁵ See SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS, HOUSE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE OF THE 96TH CONG., REPORT ON WASTE DISPOSAL SITE SURVEY IX–X, XXI (Comm. Print 1979) [hereinafter WASTE DISPOSAL SITE SURVEY] (noting that organic residues are often problematic wastes).

²⁶ Wolf, *supra* note 1, at 411. Although the length of time that most metal elements can be assumed to remain toxic is 5 hundred years, the toxicity of some metals can last up to 10 thousand years. *Id.*

²⁷ RCRA ORIENTATION MANUAL, *supra* note 22, at I-1.

²⁸ REBOVICH, DANGEROUS GROUND, *supra* note 21, at 3.

²⁹ REPORT ON HAZARDOUS WASTE DISPOSAL, *supra* note 1, at 1 & n.1.

an estimated 30 thousand hazardous waste disposal sites in the country,³⁰ their contents, locations, and disposal practices were largely unknown. In an effort to gain some understanding of the dimensions of the problem, Congress conducted a survey of waste disposal practices employed by the nation's fifty-three largest domestic chemical producers between 1950 and 1978. The study found that the companies had operated approximately 1,600 plant facilities that disposed of industrial and/or hazardous wastes at nearly 3,400 known sites.³¹ Wastes containing some form of organic residues were present at 75 percent of the sites.³²

Ironically, the government's first ambitious programs to reduce environmental pollution contributed to the hazardous waste crisis in their own right. The Clean Water Act³³ required industries to remove toxic and hazardous materials from effluents discharged into navigable waters. The Clean Air Act³⁴ similarly required industries and municipalities to install scrubbers in smokestacks to remove hazardous particulates from emissions released into the air. Yet neither Act addressed how and where to properly dispose of the hazardous waste these steps inevitably produced. In accordance with conventional wisdom that industrial waste could be commingled with household garbage in municipal and nontoxic landfills, the regulated community routinely disposed of the hazardous byproducts of environmental compliance by depositing them in solid form onto the ground.³⁵ Thus, industry and government alike treated the ground in and onto which hazardous wastes came to rest as a "bottomless sponge" capable of absorbing hazardous and toxic residues with little or no effect.³⁶

³⁰ *Id.* (citing 43 FR 58946 (Dec. 18, 1978)).

³¹ In 1978 alone, these companies generated 66 million tons of chemical process wastes. What percentage of those wastes would be classified as hazardous was unknown, but EPA estimated that more than 10 percent, or 39 million tons, of all industrial wastes generated in 1977 were hazardous. WASTE DISPOSAL SITE SURVEY, *supra* note 25, at X.

³² *Id.* at XXI. The companies disposed of 94 percent of the waste they generated between 1950 and 1978 on-site at the chemical plants. *Id.* at IX-X. Although the companies knew where some off-site disposal locations were, more than 900 haulers transported nearly 5 million tons of chemical process wastes containing hazardous or toxic substances to unknown locations. *Id.* at XI.

The most common methods of disposal were landfills; pits, ponds, and lagoons; incineration; and reprocessing and recycling. *Id.* at XVIII. Of the nearly 2,000 sites using only one disposal method, 35 percent fell in the category of "other" methods of disposal that included evaporation, burning in open pits, and discharging into navigable waters. *Id.* at XXI.

³³ 33 U.S.C. §§ 1251-1387 (1994).

³⁴ 42 U.S.C. §§ 7401-7642 (1994).

³⁵ REPORT ON HAZARDOUS WASTE DISPOSAL, *supra* note 1, at 29.

³⁶ Wolf, *supra* note 1, at 413 (quoting House Ground Water Contamination Hearings).

B. *The Resource Conservation and Recovery Act*

By the mid-1970s it had become clear that improper hazardous waste disposal was a severe national problem. Although its precise dimensions remained unknown, Congress and the public began to recognize that environmental disasters like those in Love Canal³⁷ and the Valley of the Drums³⁸ were not isolated occurrences but were, instead, the proverbial tip of the iceberg. Findings like these prompted the government to sound a warning that even an immediate and extraordinary effort to solve the hazardous waste crisis could not adequately protect the public for years to come.³⁹

Congress responded to growing concerns about unsafe disposal of hazardous waste by enacting RCRA in 1976. RCRA was designed to "eliminate[] the last remaining loophole in environmental law, that of unregulated land disposal of discarded material and hazardous wastes."⁴⁰ To accomplish that goal, RCRA created a comprehensive regulatory scheme that monitors hazardous waste from cradle to

³⁷ Love Canal provided the nation's first serious warning that hazardous waste contamination could decimate an entire community. After years of disposing of hazardous chemicals contaminated with dioxin and pesticides in Love Canal in New York, Hooker Chemical Company deeded the dumpsite to the Niagara Falls Board of Education in 1953. The city built a public school on the banks of the canal and allowed residential development in adjacent areas. In 1978, the New York State Health Department declared a public health emergency after women in the homes closest to the canal experienced unusually high rates of miscarriages. Officials evacuated more than two hundred families living closest to the canal. Beverly J. Paigen, *Methods for Assessing Health, in HAZARDOUS WASTE MANAGEMENT: IN WHOSE BACKYARD?* 37, 37-38 (Michalann Harthill ed., 1984).

Although the Health Department concluded that the families in the 850 remaining homes were not at increased risk, a privately administered health questionnaire revealed a geographical clustering of serious health problems, including birth defects, asthma, and diseases of the central nervous system and the urinary system. REPORT ON HAZARDOUS WASTE DISPOSAL, *supra* note 1, at 18-24; Paigen, *supra* at 37-45. The government spent millions of dollars to relocate the families from the first two rows of homes. In the end, more than a thousand households were evacuated, and the state of New York installed a clay cap over the most severely contaminated sixteen acres. Over time, the state extended the clay cover to more than forty surrounding acres. DANIEL MAZMANIAN & DAVID MORELL, *BEYOND SUPERFAILURE: AMERICA'S TOXICS POLICY FOR THE 1990S* 3 (1992).

³⁸ In Shepardsville, Kentucky, a hauler dumped more than 17 thousand drums of chemical waste on a seven-acre site in his own back yard, which came to be known as the Valley of the Drums. In addition to environmental contamination caused by hazardous materials leaking from the deteriorating drums, an undetermined amount of waste had also been buried or dumped on the ground at the site. When the EPA tested soil and surface waters leading to the Ohio River from the dump site in 1979, it identified two hundred organic chemicals and thirty heavy metals, including alkyl aromatics, ketones, alcohols, and organic acids. REPORT ON HAZARDOUS WASTE DISPOSAL, *supra* note 1, at 10; Wolf, *supra* note 1, at 412; ALAN A. BLOCK & FRANK R. SCARPITTI, *POISONING FOR PROFIT: THE MAFIA AND TOXIC WASTE IN AMERICA* 38 (1985).

³⁹ REPORT ON HAZARDOUS WASTE DISPOSAL, *supra* note 1, at 2.

⁴⁰ *Id.* at 29 (quoting Committee on Interstate and Foreign Commerce, H.R. REP. NO. 1491, to accompany H.R. REP. NO. 14496, 94th Cong., 2d Sess., at 4 (1976)).

grave.⁴¹ Congress directed the EPA to devise and implement regulatory standards applicable to generators and transporters of hazardous wastes and to those who own or operate hazardous waste treatment, storage, and disposal facilities.⁴² The regulatory scheme also required EPA to develop standards for issuing permits that spell out the terms and conditions under which the permit holder may treat, store, or dispose of hazardous wastes.⁴³ Although RCRA provided both civil and criminal enforcement mechanisms, criminal violations originally carried only misdemeanor penalties for first time offenders.⁴⁴

In 1979, congressional oversight hearings on hazardous waste disposal revealed that the EPA had made little progress toward developing and implementing the requisite regulatory standards or toward conducting an inventory of existing hazardous waste disposal sites.⁴⁵ But the committee report also identified deficiencies in the statute itself⁴⁶ that Congress addressed in 1980⁴⁷ and 1984⁴⁸ amendments to the Act. Among other things, the amendments strengthened RCRA's criminal enforcement mechanisms by reclassifying existing RCRA crimes as felonies,⁴⁹ by adding false statements and record-keeping violations to the list of

⁴¹ "Hazardous waste" is solid waste that may significantly contribute to death or serious illness or may pose a substantial threat to human health or the environment. 42 U.S.C. § 6903(5) (1994). See *infra* notes 93–96 and accompanying text.

⁴² 42 U.S.C. § 6922 (regulating generators); § 6923 (regulating transporters); § 6924 (regulating owners and operators). As of 1990, the EPA reported that more than 210,000 hazardous waste generators and 4,700 hazardous waste transportation, storage, and disposal facilities were subject to RCRA regulation. HAMMETT & EPSTEIN, *supra* note 22, at 8.

⁴³ 42 U.S.C. § 6925.

⁴⁴ The maximum criminal penalty for a first conviction was a fine of up to \$25,000 per day of violation and/or a prison sentence of no longer than one year. Subsequent violations were felonies subject to a maximum fine of \$50,000 per day of violation and a prison term of up to two years. 42 U.S.C. § 6928(d) (1982).

⁴⁵ REPORT ON HAZARDOUS WASTE DISPOSAL, *supra* note 1, at 2, 32–46.

⁴⁶ Included among the deficiencies the report identified were RCRA's failure to regulate abandoned sites, to give either EPA or the Justice Department subpoena powers, to consider the problem of inactive disposal, and to provide adequate funding for state hazardous waste programs. *Id.* at 47–50.

⁴⁷ The Solid Waste Amendments of 1980, Pub. L. No. 96-482, 94 Stat. 2334 (1980) (codified as amended at 42 U.S.C. §§ 6901–6981 (1994 & Supp. IV 1998)) [hereinafter 1980 Amendments].

⁴⁸ The Hazardous and Solid Waste Amendments of 1984, Pub. L. No. 98-616, 98 Stat. 3221 (1984) (codified as amended at 42 U.S.C. §§ 6901–6992 (1994 & Supp. IV 1998)) [hereinafter 1984 Amendments].

⁴⁹ See 1980 Amendments, *supra* note 47, § 13, 94 Stat. at 2340–42 (authorizing a felony penalty—imprisonment of up to two years—for transporting hazardous waste to an unpermitted facility and for treating, storing, or disposing of hazardous waste without a permit or in violation of a permit); 1984 Amendments, *supra* note 48, § 232, 98 Stat. at 3256–57 (increasing felony penalty for same offenses to imprisonment of up to five years and creating new felony of transporting hazardous waste without a manifest) (codified as amended at 42 U.S.C. § 6928(d)(1)–(2), (d)(5) (1994)).

RCRA felonies,⁵⁰ and by creating the first endangerment crime in federal environmental law.⁵¹

The upgrading of RCRA's criminal penalty scheme had two salutary effects: (1) it enhanced the deterrent value of the criminal provisions by signaling that penalties for criminal noncompliance are not just another cost of doing business; and (2) it provided Justice Department lawyers greater incentives to invest the time and resources required to prosecute criminal RCRA violations.⁵²

C. Compliance Disincentives

Despite RCRA's pervasive regulatory scheme, hazardous waste management practices continue to pose serious threats to human health and the environment.

Today, all of the major environmental statutes impose felony sanctions for most criminal violations. *See, e.g.*, 15 U.S.C. § 2615 (1994) (Toxic Substances Control Act "TSCA"); 33 U.S.C. § 1319(c) (1994) (Clean Water Act "CWA"); 42 U.S.C. § 7413(c) (1994) (Clean Air Act "CAA"); 42 U.S.C. § 9603(b), (c) (1994 & Supp. IV 1998) (Comprehensive Environmental Response, Compensation, and Liability Act "CERCLA"); 7 U.S.C. § 136f (1994) (Federal Insecticide, Fungicide, and Rodenticide Act "FIFRA").

The Criminal Fine Enforcement Act, also enacted in 1984, raised the maximum authorized fines for virtually all federal felonies, including RCRA and other environmental felonies, to \$250,000 for individual defendants and \$500,000 for organizational defendants. *See* 18 U.S.C. § 3571.

⁵⁰ The 1980 amendments imposed misdemeanor penalties for knowingly making false statements in compliance documents and knowingly destroying, altering, or concealing required records. *See* 1980 Amendments, *supra* note 47, § 13, 94 Stat. at 2340. The 1984 amendments augmented these violations to felonies punishable by a maximum prison term of two years. *See* 1984 Amendments, *supra* note 48, § 232, 98 Stat. at 3257 (codified as amended at 42 U.S.C. § 6928(d)(3)-(4) (1994)).

⁵¹ The endangerment statute prohibits placing another person in imminent danger of death or serious bodily injury by transporting, treating, storing, or disposing of hazardous waste. As originally enacted, the statute required proof that the defendant's conduct manifested "unjustified and inexcusable disregard for human life" or "extreme indifference to human life." 1980 Amendments, *supra* note 47, § 13, 94 Stat. at 2340-42. In response to concerns that this proof requirement was so onerous that it would prevent the endangerment statute from becoming an effective enforcement tool, H.R. Rep. No. 98-198, pt. 1, at 55 (1983), Congress repealed this restrictive language and substituted the requirement that the defendant must be shown to have "knowingly" placed another in danger of death or serious injury. 1984 Amendments, *supra* note 48, § 232, 98 Stat. at 3257 (codified as amended at 42 U.S.C. § 6928(e) (1994)). Knowing endangerment is a felony punishable by a maximum term of fifteen years and/or a fine of up to \$250 thousand if the defendant is an individual, or a maximum fine of \$1 million for organizations convicted of committing this offense.

Congress subsequently added endangerment offenses to the Clean Water and Clean Air Acts' criminal provisions. *See* 33 U.S.C. § 1319(c)(3) (1994) (Clean Water Act); 42 U.S.C. §§ 7413(c)(4), (c)(5)(A) (1994) (Clean Air Act).

⁵² *See* James M. Strock, *Environmental Criminal Enforcement Priorities for the 1990s*, 59 GEO. WASH. L. REV. 916, 924 (1991).

Although some improper transportation and disposal practices are undoubtedly the product of accident or mistake, they more commonly reflect calculated business decisions based on financial considerations.⁵³ That point is nowhere better illustrated than by the frantic pace at which companies dumped and abandoned hazardous and toxic waste in the months before RCRA's regulatory scheme came into effect. Aided by a multitude of cut-rate disposal services run by unscrupulous owners, companies hurriedly disposed thousands of tons of chemical waste before the regulatory deadline. They dumped hazardous waste in city sewers, intentionally spilled it from moving trucks onto roads, abandoned it in shopping center parking lots and rented warehouses, and shipped it hundreds of miles by rail to fictitious addresses—all to avoid responsibility under the new rules.⁵⁴

The problem was particularly severe in New England, which had no major approved disposal sites when RCRA regulations became effective. In New Jersey, a special Governor's Commission found that improper hazardous waste handling created an "imminent threat" to public health.⁵⁵ The Commission estimated that about 60 percent of the 4 to 5 million tons of hazardous waste generated annually in that state was dumped in the Atlantic Ocean.⁵⁶ New York's Department of Environmental Conservation estimated that 30 percent of about 1.2 million tons of hazardous waste generated in New York each year was disposed of illegally.⁵⁷ And in Massachusetts, chemical contamination shut down 26 public water systems during the 18 months preceding RCRA's regulatory deadline.⁵⁸

Because proper transportation and disposal of hazardous waste is so costly, illegal hazardous waste management practices are almost invariably driven by economic considerations. The problem may be especially acute for some small businesses, whose disposal costs could consume a high percentage of their modest net revenue.⁵⁹ Depending on the nature and location of the waste, proper disposal

⁵³ See Mark Seis, *Five Types of Environmental Criminals*, in ENVIRONMENTAL CRIME: ENFORCEMENT, POLICY, AND SOCIAL RESPONSIBILITY 255, 272 (Mary Clifford ed., 1998) (stating that most environmental crimes are committed to avoid the cost of implementing antipollution technology or to avoid the expense of legal waste disposal); REBOVICH, DANGEROUS GROUND, *supra* note 21, at 3 (observing that the steady increase in the cost of legitimate hazardous waste disposal often is a controlling consideration for corporations that decide to circumvent the law). The financial incentive to dispose of hazardous waste illegally is particularly strong for corporations that generate the largest volumes of waste and for small companies that would otherwise have to allocate a large percentage of their assets to comply with all regulatory requirements. *Id.*

⁵⁴ Knight, *supra* note 2, at 1.

⁵⁵ *Id.* at 28 (quoting the New Jersey Governor's Commission).

⁵⁶ *Id.* The Commission also had reason to believe that much of the remaining hazardous waste was disposed of illegally.

⁵⁷ *Id.*

⁵⁸ *Id.* at 1.

⁵⁹ HAMMETT & EPSTEIN, *supra* note 22, at 9 (indicating that a small dry-cleaning establishment may pay an average of \$200 per month to legally dispose of perc sludge, when net monthly revenues may be only \$2,000).

can cost as much as \$1,000 per barrel.⁶⁰ In some parts of the country, proper waste disposal averages from \$2,000 to \$4,000 a truckload⁶¹ and could cost as much as \$10,000 for a tank carload of common commercial solvents and de-greasing chemicals.⁶² Simply put, for hazardous waste generators located in parts of the country with few major approved disposal sites, transportation costs may be prohibitive.⁶³

Thus, a subculture of unscrupulous hazardous waste haulers (called "sludge runners") employs expedient disposal practices like driving tank trucks with open spigots down highways on rainy days⁶⁴ and mixing hazardous waste with diesel fuel for sale as home heating oil.⁶⁵ Similarly, dishonest haulers participate in the widespread practice of "cocktailing" toxic liquids by pouring them over construction and demolition materials, which an unsuspecting landowner may accept as "clean fill."⁶⁶ Examples like these underscore how bottom-line business decisions can and do affect environmental compliance policies. Indeed, one explanation for the

⁶⁰ P.R. Beseler, *Operation Crystal Clear*, FBI L. ENFORCEMENT BULL. 1, 2 (May 1995); see also REBOVICH, *DAANGEROUS GROUND*, *supra* note 21, at 3 (observing that pharmaceutical companies pay an average of \$125 per fifty-five gallon drum to properly dispose of hazardous wastes, and that proper treatment and disposal of other hazardous wastes can cost as much as \$550 per drum); Wayne Brewer, *Traditional Policing and Environmental Enforcement*, FBI L. ENFORCEMENT BULL. 6, 8 (May 1995) (stating that, depending on the chemical, legal disposal of hazardous waste can cost from \$15 to \$1,000 per fifty-five gallon drum).

Fees paid to haulers include the cost of licenses, insurance, equipment, transportation, and disposal at approved sites. Beseler, *supra* at 2.

⁶¹ Julienne Salzano, *Sludge Runners Keep on Trucking*, FBI L. ENFORCEMENT BULL. 22, 24 (May 1995).

⁶² Knight, *supra* note 2, at 28 (reporting statements by a spokesman for EPA's New England office).

⁶³ REPORT ON HAZARDOUS WASTE DISPOSAL, *supra* note 1, at 26-27 (noting the testimony of officials from several states regarding the difficulty of finding reasonably accessible safe sites for disposal of hazardous waste from major illegal dumpsites in their states).

⁶⁴ Salzano, *supra* note 61, at 24-25 (noting that the rain made it more difficult for law enforcement officials to detect the spill). This practice contributed to corrosion of the metal supports of the Mianus River Bridge in Connecticut, which suddenly collapsed in 1983. *Id.* at 22.

⁶⁵ *Id.* at 24. They sell the contaminated oil to apartment houses, housing projects, industrial plants, hospitals, and other facilities with large furnaces that can tolerate impure fuels. The New York Environmental Protection Agency attributed unusually high concentrations of airborne toxins in a section of Brooklyn to the routine burning of contaminated oil by many apartment houses in the area. *Id.* at 23. The illegal fuel mixtures are similar in weight and appearance to No. 2 heating oil and are difficult to distinguish from pure fuel oil. *Id.* at 24.

⁶⁶ Seis, *supra* note 53, at 172-73. The dumper of toxic liquids may have been paid handsomely by another customer to properly dispose of them. The disposer of the construction and demolition material, who may not know about the dumping, will gladly cart the debris to the landowner to avoid paying the tipping fee charged for dumping at a licensed landfill. The practice of cocktailing created an epidemic of illegal construction and demolition material dumpsites in the state of New York. *Id.* at 173.

frenzied pace of toxic dumping in the Northeast in the months before RCRA's regulatory deadline is that New England was the only region in the country that had no major approved disposal sites. That being true, New England industries that produced or used hazardous materials would have had to transport the waste to disposal sites as far away as North Carolina.⁶⁷

The scarcity of approved sites created similar problems in other parts of the country as well. Thus, when Kentucky began the cleanup of the Valley of the Drums—an illegal dumpsite that contained 17 thousand partially buried barrels of hazardous waste—officials had difficulty locating a safe place to dispose of it. Only a handful of sites nationwide were certified to accept that type of waste, and only one of them was less than one thousand miles away. In consequence, state officials estimated that transportation costs could reach several million dollars.⁶⁸

Yet federal and state efforts to establish additional qualified disposal sites to meet increased industrial demand have met with limited success. Vigorous public opposition to locating new disposal facilities “in my back yard” is a major obstacle to siting them. Although a 1973 EPA study of public attitudes toward hazardous waste facilities concluded that most people would view the siting of a facility in their community favorably,⁶⁹ by 1980 more than half would relocate or actively protest the establishment of a hazardous waste facility within one hundred miles of their homes.⁷⁰ If the site were within a radius of six to nine miles, 80 percent of the respondents said they would leave or actively oppose it.⁷¹

Public resistance to being in close proximity to hazardous waste disposal sites often translates into successful community efforts to block new facilities through lawsuits, legislative changes in state and local laws, and other forms of community activism.⁷² Thus, strong public opposition combined with geological and

⁶⁷ Knight, *supra* note 2, at 28. Although some major sites were located near Buffalo, they closed their doors to out-of-state businesses in anticipation of increased local demand for their services. *Id.*

⁶⁸ REPORT ON HAZARDOUS WASTE DISPOSAL, *supra* note 1, at 26–27. Colorado officials also had difficulty locating a safe disposal site for 70,000 cubic feet of radium-contaminated soil found in and around Denver. *Id.* at 26. The Colorado Health Department estimated that cleaning up the contamination could cost as much as \$25 million. *Id.* at 5.

⁶⁹ Bill S. Forcade, *Public Participation in Siting*, in HAZARDOUS WASTE MANAGEMENT: IN WHOSE BACKYARD? 111, 111 (Machalann Harthill ed. 1984) (citing L.L. LACKEY ET AL., ENVIRONMENTAL PROTECTION AGENCY, PUBLIC ATTITUDES TOWARD HAZARDOUS WASTE DISPOSAL FACILITIES (1973)).

⁷⁰ Forcade, *supra* note 69, at 111–12 (citing Resources for the Future, Public Opinion on Environmental Issues; Results of a National Public Opinion Survey (1980)). The objections remained even if it were stipulated that the disposal facility would be safe and would be inspected regularly for potential problems.

⁷¹ *Id.* at 112.

⁷² A striking example of this phenomenon occurred in Minnesota in the 1970s. In 1975, the Minnesota Pollution Control Agency received a \$3.7 million grant from the EPA to establish a chemical landfill. The purpose of the grant was to demonstrate that these kinds of facilities can be

meteorological constraints sharply limit the number of practicable options for locating new sites.⁷³ As a congressional committee report lamented twenty years ago, the critical shortage of safe hazardous waste disposal sites will only worsen as the volume of waste production inevitably remains on the rise.⁷⁴ Thus, the expense and inconvenience of implementing legal hazardous waste management practices—particularly proper waste disposal—will continue to provide powerful economic incentives for businesses to ignore RCRA's regulatory requirements to gain a competitive edge.⁷⁵

operated in an environmentally safe manner. The agency initially identified a list of forty potential sites, which it winnowed down to twelve. Community reactions were strong. Local governmental bodies in surrounding communities adopted resolutions forbidding the siting of waste disposal facilities in their area and promised to fight the proposed project with every available means. After all of the proposed sites were rejected because of public opposition, the agency identified four additional potential locations. Public opposition to these sites was also strong. Unable to establish the landfill in accordance with the grant deadlines, the agency abandoned the project and returned the grant money to the EPA in 1978. REPORT ON HAZARDOUS WASTE DISPOSAL, *supra* note 1, at 27–28.

A community affairs group in Alabama was successful in halting a proposed toxic waste storage facility in the nearby port of Mobile by working to change local laws that were used to assist Waste Management Inc. in establishing the facility. WASTE MANAGEMENT INC.: AN ENCYCLOPEDIA OF ENVIRONMENTAL CRIMES & OTHER MISDEEDS 1 (Greenpeace Report, 1991).

⁷³ REPORT ON HAZARDOUS WASTE DISPOSAL, *supra* note 1, at 28 (noting the desirability of minimizing the use of landfills to dispose of hazardous waste and the need to develop technologies for recycling some and neutralizing other hazardous wastes).

⁷⁴ *Id.* at 5. Public opposition to the establishment of waste disposal sites in nearby communities is not limited to the siting of landfills. After Times Beach, Missouri, was evacuated because of extensive dioxin contamination, more than thirty neighboring communities and school districts joined in opposition to an EPA proposal to build an incinerator in the abandoned town to burn dioxin contaminated soil. Yvonne Samuel Kirkwood, *Municipality Asked to Join Foes of Dioxin Incinerator*, ST. LOUIS POST-DISPATCH, July 5, 1990, at 1. The city of Eureka considered trying to annex the Times Beach area in order to gain more leverage to block the federal plan. Virgil Tipton, *Eureka Seeks to Annex Times Beach, Block EPA*, ST. LOUIS POST-DISPATCH, Jan. 9, 1990, at 3A. The plan proceeded nonetheless, and the last of the contaminated soil was incinerated in 1997. *Incinerator Burns Last of Times Beach*, L.A. TIMES, June 27, 1997, at A18.

⁷⁵ Arnold I. Burns, *What is the U.S. Justice Department Doing to Enforce Hazardous Waste Regulations?*, 8 ORGANIZED CRIME DIG. 4, 5–6 (July 22, 1987) (observing that, like other white collar crimes, environmental crimes involving hazardous and toxic wastes are often motivated by greed). Mr. Burns was then the Deputy Attorney General of the United States.

III. METHODOLOGY

This article is part of a large-scale empirical study of federal environmental crime prosecutions. This Part describes the data and the database, explains the methodology of the study, and defines key terms.

A. *The Database*

The core of this phase of the project is an EPA database containing summaries of environmental criminal prosecutions compiled by EPA's National Enforcement Investigations Center from Fiscal Years 1983 through 1992.⁷⁶ Although the EPA discontinued the practice of compiling a comprehensive set of annual summaries in 1993,⁷⁷ the Office of Enforcement and Compliance Assurance began publishing annual Enforcement Accomplishments Reports the same year.⁷⁸ The annual reports provide highlights of the agency's administrative, civil and criminal enforcement accomplishments for the preceding fiscal year, including summaries of civil and criminal cases the EPA considers significant.

The annual reports were useful to this study of hazardous waste prosecutions partly because they provided historical enforcement data and partly because they updated some of the prosecution summaries in the ten-year EPA database. Because ongoing compilation of the summaries ended in Fiscal Year 1993, most summaries of cases filed late in FY 1993 provided only a brief statement of facts about the case—usually a short sentence identifying who the defendants were—and a

⁷⁶ U.S. ENVIRONMENTAL PROTECTION AGENCY ENFORCEMENT AND COMPLIANCE ASSURANCE OFFICE OF CRIMINAL ENFORCEMENT, SUMMARY OF CRIMINAL PROSECUTIONS RESULTING FROM ENVIRONMENTAL INVESTIGATIONS, FISCAL YEARS 1983 THROUGH 1992 [hereinafter EPA SUMMARY]. A sample prosecution summary is reproduced in Appendix A.

⁷⁷ The Office of Criminal Enforcement stopped compiling the prosecution summaries because of a reduction in force. Letter from Isabelle L. Ward, Paralegal, Office of Criminal Enforcement, to Dorie Bertram, Assistant Law Librarian, Washington University (Sept. 25, 1995) (on file with author). The Office of Criminal Enforcement has since resumed work on the prosecution summaries in an effort to bring them up to date. No projected completion date is currently available.

⁷⁸ See EPA OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE, ENFORCEMENT AND COMPLIANCE ASSURANCE ACCOMPLISHMENTS REPORT FY 1995 (July 1996) [hereinafter 1995 ENFORCEMENT ACCOMPLISHMENTS REPORT]; EPA OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE, ENFORCEMENT AND COMPLIANCE ASSURANCE ACCOMPLISHMENTS REPORT FY 1994 (May 1995); EPA OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE, ENFORCEMENT AND COMPLIANCE ASSURANCE ACCOMPLISHMENTS REPORT FY 1993 (April 1994); EPA OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE, ENFORCEMENT AND COMPLIANCE ASSURANCE ACCOMPLISHMENTS REPORT FY 1992 (April 1993) [hereinafter 1992 ENFORCEMENT ACCOMPLISHMENTS REPORT]. My study did not incorporate data for prosecutions that were summarized for the first time in the annual Accomplishment Reports because the Reports included new cases on a selective basis with no stated criteria for selecting them. Thus, it was impossible to determine whether these cases represented a fair cross section of more recent prosecutions.

statement of what charges were lodged. In some cases, the annual enforcement accomplishment reports helped to flesh out the record by providing additional factual details, subsequent case history—such as dismissals, guilty pleas or verdicts—and/or sentencing data.⁷⁹

The prosecution summaries in the EPA database provide data on approximately 330 prosecutions in which about 835 defendants were charged. These prosecutions are cases that EPA investigated and referred to the Department of Justice for prosecution and that culminated in the filing of criminal charges.

The EPA summaries provide a rich source of detailed information about federal environmental crime prosecutions. Their succinct chronologies of the prosecutions ordinarily include: docket number and court, names of individual and organizational defendants, facts which sometimes but not always include defendants' occupational status or responsibilities, industrial activities involved, type of waste, storage and disposal sites or methods, criminal charges filed including citation of statutory authority, disposition of the charges, sentencing information, and dates for each step of the case including date of filing, trial date or date when plea was entered, and date of sentencing.⁸⁰

As valuable as they are, however, the prosecution summaries provide an incomplete record of environmental prosecutions. First, while the summaries are based on "the best available information,"⁸¹ the EPA makes no claim that they include all criminal referrals that yielded formal charges. Second, some environmental prosecutions are the products of criminal investigations initiated by the Justice Department, the FBI, or other regulatory agencies independently of the EPA.⁸² Thus, the prosecution summaries in the database do not represent the entire universe of environmental prosecutions during the ten-year period.

The prosecution summaries yield no data about investigations that closed without filing formal criminal charges, moreover. Although some data on declinations to prosecute are available in the aggregate, information about the nature of closed investigations and why or how they were closed is not.⁸³ Thus, while the

⁷⁹ A sample prosecution summary update is reproduced in Appendix B.

⁸⁰ A sample prosecution summary is reproduced in Appendix A.

⁸¹ EPA SUMMARY, *supra* note 76.

⁸² According to a General Accounting Office study, more than 61 percent of criminal case referrals originated in EPA, and about 34 percent originated with Department of Justice investigators—principally the FBI—between Fiscal Years 1988 and 1993. The remaining 5 percent originated in other agencies. *EPA's Criminal Enforcement Program: Hearing Before the Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce*, 103rd Cong. 66, at 77–78 (1993) (Statement of L. Nye Stevens, Deputy Assistant Comptroller General) [hereinafter GAO Statistics]. Almost all FBI investigations during this period were conducted jointly with EPA or other agencies, but exact statistics were not available. *Id.* at 78 n.14.

⁸³ See *id.* at 75 & n. 11 (noting that Justice provided the GAO information only on cases that resulted in formal charges and did not include information about other investigatory matters, and stating that the FBI refused to provide GAO access to its electronic data, failed to provide all of the

declination rate for environmental prosecutions was substantially higher than the overall declination rate between Fiscal Years 1988 and 1993,⁸⁴ little else is known about investigations that did not culminate in a decision to prosecute.

B. *Capturing the Data*

While the prosecution summaries provide an empirical gold mine, capturing the data is a daunting task. First, the summaries are in narrative form. They do not provide tabulated quantitative or qualitative data. Thus, it was necessary to identify and define relevant categories and to develop an elaborate set of protocols for coding and recording the data. Second, some discrepancies in data reporting occurred during the ten-year period. The discovery of reporting variances made some categories of otherwise relevant information unusable, required periodic reassessment of what level of detail it was feasible to include, and ultimately required redesigning the study.⁸⁵

Because this part of the project is specifically focused on hazardous waste crime, I generated a separate database that includes all of the cases from the EPA database in which RCRA violations were charged. I created a series of templates to facilitate systematic recording of the data. The templates that are relevant to this study include: (1) case identification and charging document tables that contain basic case

requested statistical information, and said that information on how FBI investigations were closed was not available).

⁸⁴ Overall about two-thirds of offenses investigated by United States Attorneys ripen into actual prosecutions. U.S. DEP'T OF JUSTICE, BUREAU OF JUSTICE STATISTICS, SOURCEBOOK OF CRIMINAL JUSTICE STATISTICS 1995, at 465 tbl. 5.16 (1995). In contrast, only half of the environmental cases these prosecutors investigate culminate in a decision to prosecute. GAO Statistics, *supra* note 82, at 81–82, 90–91, App. II, tbl. II.1, tbl. II.3. These figures are not precisely comparable due to methodological differences in reporting the data, however. The Justice Department statistics are based on the number of putative *defendants* who were not prosecuted. The GAO figures are based on the number of *cases* that were not prosecuted after investigation. The comparison of cases and defendants is nonetheless useful because each case in which prosecution was declined had at least one putative defendant. Since environmental prosecutions characteristically involve multiple defendants, *see infra* text accompanying notes 151–162, it seems likely that the comparison understates the declination rate for environmental cases.

⁸⁵ Thus, for example, in cases where the government filed superseding charges, my original plan was to track how the charges in the superseding indictment differed from the original charges. I abandoned this idea upon discovery that some of the summaries provided specifics about the superseding indictment but that others provided none. *Compare* United States v. Goldsmith, No. 1:90-CR-356 (N.D. Ga. Oct. 10, 1990), EPA SUMMARY, *supra* note 76, at 152 (stating that the grand jury returned a three count superseding indictment containing an additional charge of illegal storage of hazardous waste at a nonpermitted storage facility) *with* United States v. Enviroisure Mgmt. Corp., No. CR-90-00025C (W.D. N.Y. Feb. 13, 1990), EPA SUMMARY, *supra* note 76, at 147 (stating only that a superseding indictment was returned). Similarly, variations in reporting made it impossible to consistently track the disposition of specific charges against some defendants. A sample prosecution summary appears as Appendix A.

information, including the case name, docket number, court, year, EPA region, charging document (indictment or information), the number and nature of the charges,⁸⁶ the number of defendants, and, where applicable, cross references to related prosecutions; (2) defendant profile tables that include: (a) the name and title or occupational status of each individual defendant⁸⁷ and the industry and industry sector in which the individual was employed;⁸⁸ and (b) the names and types of entity defendants, their relationships if any, and the industry and industry sector in which their operations occurred; and (3) an offense profile table that includes information on the nature and quantity of the waste, method of storage or disposal, disposal site, and other discrete offense characteristics.

The data were recorded in accordance with strict protocols and entered in an Excel spreadsheet for analysis. Using a comprehensive table of cases I developed for the project, I also created a separate spreadsheet that contains basic case information about all of the prosecutions in the EPA database.

C. *Definitions*

A few key terms require definition and explanation.

1. *Environmental Crime Prosecution*

As used in this article, the term “environmental crime prosecution” means a federal criminal prosecution that charges at least one criminal violation of a federal environmental law. As the government may prosecute a single defendant—either an individual or an entity—or multiple defendants in the same criminal case,⁸⁹ references in this study to environmental crime prosecutions are to *cases filed* rather than to defendants charged with criminal violations.

2. *RCRA Prosecution*

While the charges in an environmental crime prosecution may be limited to violations of a single environmental act such as RCRA, a majority of environmental prosecutions include charges under more than one act, such as RCRA and the Clean Water Act. For statistical purposes, EPA’s Office of Criminal Enforcement lists each case under one statute that it considers the primary statutory authority for the prosecution.⁹⁰ Thus, for example, EPA may list RCRA as the primary statutory

⁸⁶ See *infra* notes 105–150 and accompanying text.

⁸⁷ The occupational categories I used are described *infra* Part IV.E.

⁸⁸ The industry and industry sector categories I used are described *infra* Part IV.F.

⁸⁹ See *infra* Part IV.D.1–2.

⁹⁰ 1992 ENFORCEMENT ACCOMPLISHMENTS REPORT, *supra* note 78, app. at 19 (explaining that cases are classified under one predominant statute); see EPA SUMMARY, *supra* note 76, CROSS

authority in a case that charges both RCRA and Clean Water Act violations. If a prosecution is listed as a RCRA case, any fines imposed are credited to the RCRA enforcement program.⁹¹

Prosecutions that are listed under a different primary statute may also have a substantial RCRA component. In consequence, in a case in which EPA lists the Clean Water Act as the primary statutory authority, most of the charges—including the offense of conviction—may actually be RCRA violations.⁹² That being true, adherence to the EPA case classification would arbitrarily exclude cases relevant to this empirical study. Thus, in the context of this study, the term “RCRA prosecution” includes some cases in which another environmental statute was designated as the primary statutory authority.

In this article, “RCRA prosecution” and “hazardous waste crime prosecution” are used interchangeably to mean an environmental crime prosecution that charges at least one criminal violation of RCRA. Although the EPA classified more than 80 percent of the prosecutions in this study as RCRA prosecutions, it classified nearly 20 percent under some other primary statutory authority.

REFERENCE INDEX BY PRIMARY STATUTE AUTHORITY AND REGION [hereinafter CROSS REFERENCE INDEX].

⁹¹ 1992 ENFORCEMENT ACCOMPLISHMENTS REPORT, *supra* note 78, app. at 19. That would be true even though some of the defendants were convicted of Clean Water Act violations. *See infra* note 92 and accompanying text.

⁹² *See, e.g.,* United States v. Melle, No. G89-142CR (W.D. Mich. Oct. 5, 1989), EPA SUMMARY, *supra* note 76, at 123 (charging sole defendant with omitting material information on required labeling for barrels containing hazardous waste (RCRA), transporting hazardous waste without a manifest (RCRA), transporting hazardous waste to an unpermitted facility (RCRA), and failure to notify regulators of the release of hazardous waste (CERCLA); defendant pled guilty to RCRA transportation charge); EPA SUMMARY, *supra* note 76, Cross Reference Index at xxx (listing *Melle* as a CERCLA prosecution).

Conversely, a prosecution that charges violations of RCRA and the CWA may be listed as a RCRA case, even though the CWA is the primary statutory authority for the prosecution and even though the CWA violation—not RCRA—is the offense of conviction. *See, e.g.,* United States v. Robert Derecktor of Rhode Island, Inc., No. 86-022 (D. R.I. May 20, 1986), EPA SUMMARY, *supra* note 76, at 48 (charging lead corporate defendant with TSCA, CERCLA, CWA, RCRA, CAA, and HMTA violations; charging its president with TSCA, HMTA, and CERCLA violations; and charging second corporation with TSCA and CERCLA violations; lead corporate defendant pled guilty to CWA, CAA, and CERCLA violations, and president pled guilty of TSCA violations); EPA SUMMARY, *supra* note 76, Cross Reference Index at i (listing *Robert Derecktor of Rhode Island, Inc.* as a RCRA prosecution).

3. Hazardous Waste

“Hazardous waste” is a term of broad import. The statute defines hazardous waste to mean a solid waste that may cause an increase in mortality or an incapacitating or irreversible illness, or that may pose a substantial threat to human health or the environment if improperly handled or disposed of.⁹³ Hazardous waste is an “identified waste” if it has a specific physical characteristic—such as toxicity, ignitability, volatility, or reactivity⁹⁴—or a “listed waste” if it is included on a list of specific wastes that EPA has determined to be hazardous.⁹⁵

A 1980 EPA study of 350 hazardous waste sites categorized hazardous wastes that threatened environmental and human harm into six principal groups: solvents and related organics; PCBs and PBBs; pesticides; inorganic chemicals (including ammonia, cyanide, acids, and bases); heavy metals (including mercury, cadmium, and chromium); and waste oils and greases.⁹⁶

IV. PROSECUTORIAL PRACTICES IN RCRA PROSECUTIONS

In view of the compelling economic motivation that many businesses have to disregard RCRA’s regulatory requirements and the magnitude of the risk that noncompliance poses to public health and the environment, it is not surprising that prosecutors came to regard criminal enforcement as an integral component of an effective compliance program. This Part provides an analysis of prosecutorial practices in hazardous waste prosecutions.

A. Level of Criminal Enforcement

The prosecution summaries show that in the first ten years of the government’s efforts to establish a formal criminal enforcement program, the Justice Department prosecuted nearly 350 environmental cases referred to it by the EPA.⁹⁷ About

⁹³ 42 U.S.C. § 6903(5) (1994) provides:

The term “hazardous waste” means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may—

(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

⁹⁴ 40 C.F.R. §§ 261.21, 261.22, 261.23, 261.24 (2000).

⁹⁵ 40 C.F.R. § 261.3 (2000).

⁹⁶ Wolf, *supra* note 1, at 410–11.

⁹⁷ In some of the prosecutions, all of the defendants were charged in the same indictment or information. In others, some or all of the defendants were charged in separate indictments or informations bearing different docket numbers. I treated prosecutions in which there were multiple

40 percent of these prosecutions included one or more RCRA charges.⁹⁸ As might be expected, the number of RCRA prosecutions initiated per year increased over time, but the increase was relatively gradual. Table 1 displays the details.

**Table 1: RCRA Prosecutions by Year
Fiscal Years 1983–1992**

Fiscal Year	Annual Totals	Percent
1983	4	3%
1984	6	4%
1985	9	6%
1986	14	10%
1987	9	6%
1988	17	12%
1989	12	9%
1990	19	14%
1991	18	13%
1992	31	22%
10-year total	139	100%

During this time RCRA cases also became a larger percentage of the total mix of environmental prosecutions. Figure 1 shows the increase over time.

The data set reveals wide geographical disparities in criminal enforcement practices throughout the ten EPA regions shown in Figure 2. Each region has an office that sets regional environmental enforcement priorities, which directly affect the level of criminal enforcement by United States Attorneys' offices located within the region.⁹⁹

indictments and/or informations with separate docket numbers as a single case if they were described in the same EPA SUMMARY and arose out of a common set of facts.

⁹⁸ EPA SUMMARY, *supra* note 76.

⁹⁹ The regional offices are located in Boston (Region I), New York (Region II), Philadelphia (Region III), Atlanta (Region IV), Chicago (Region V), Dallas (Region VI), Kansas City (Region VII), Denver (Region VIII), San Francisco (Region IX), and Seattle (Region X).

Figure 1
Environmental Prosecutions by Year
Fiscal Years 1983-1992

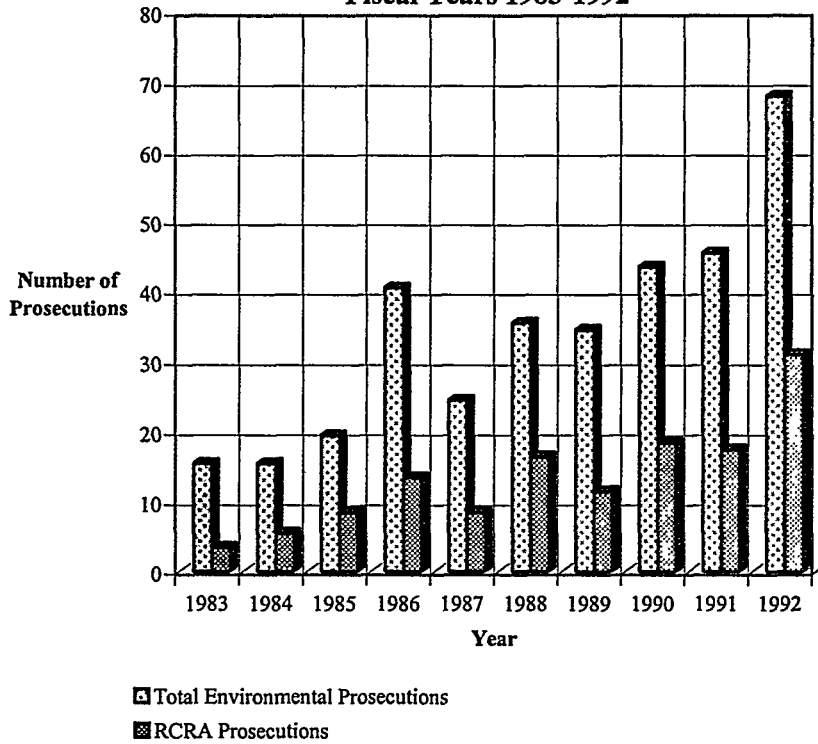
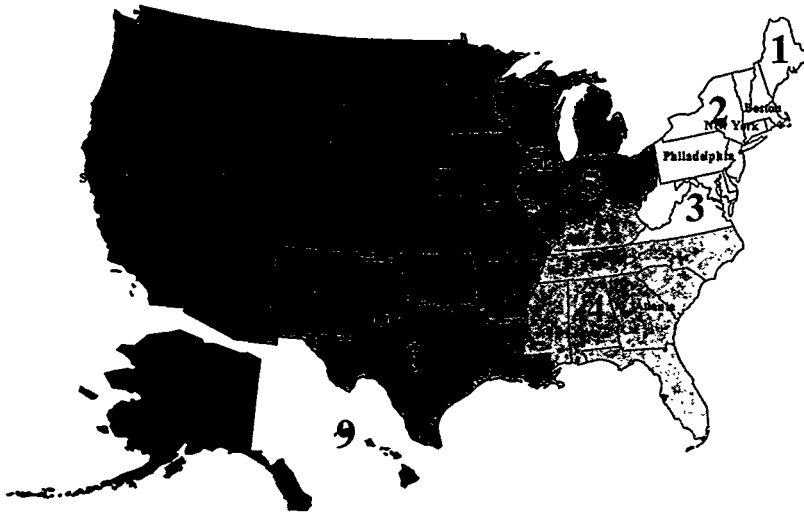


Figure 2
EPA Regions and Regional Offices



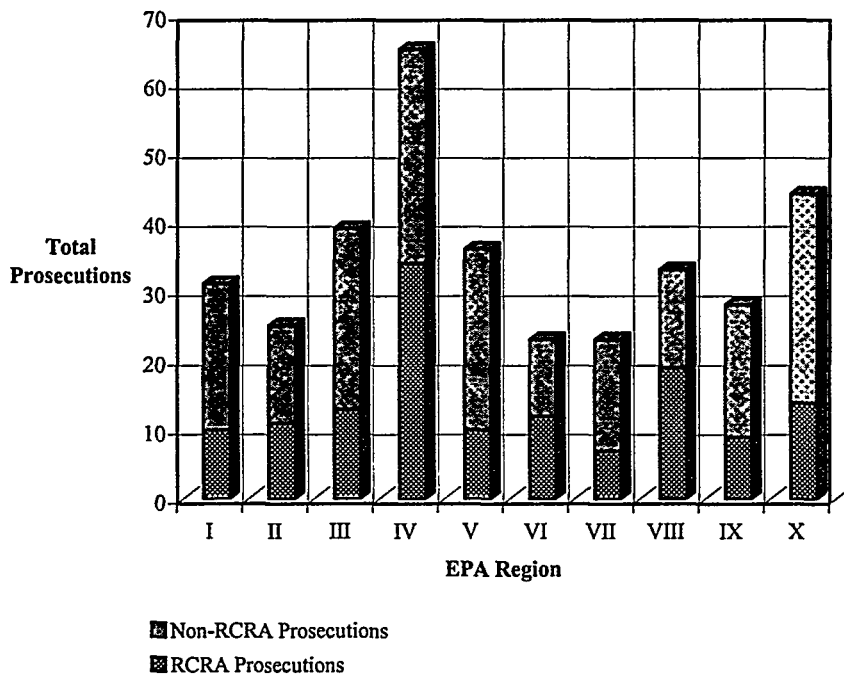
As Table 2 reveals, prosecutors in the Southeast pursued significantly more criminal RCRA cases than their counterparts in other regions of the country. Prosecutions in Region IV accounted for nearly 25 percent of all RCRA prosecutions during the reporting period. Region VII, which had the weakest RCRA criminal enforcement record, generated the fewest RCRA prosecutions but was not alone in averaging one or fewer RCRA prosecutions a year.

**Table 2: RCRA Prosecutions by Region
Fiscal Years 1983–1992**

EPA Region	Region Totals	Percent
Region I	10	7%
Region II	11	8%
Region III	13	9%
Region IV	34	24%
Region V	10	7%
Region VI	12	9%
Region VII	7	5%
Region VIII	19	14%
Region IX	9	6%
Region X	14	10%
All Regions	139	100%

The relative levels of RCRA enforcement in Regions IV and VII are consistent with the general levels of environmental criminal enforcement in those regions as well. Overall, Region IV had the highest—and Region VII the lowest—number of environmental prosecutions during the reporting period. What is notable, however, is the difference in emphasis prosecutors in the two regions placed on RCRA enforcement. As Figure 3 shows, more than half of all environmental prosecutions in Region IV included RCRA charges, but in Region VII, prosecutors charged RCRA violations in fewer than one-third of the criminal cases.

Figure 3
Environmental Prosecutions by Region
Fiscal Years 1983-1992



B. *Case Classification*

Charging practices in environmental prosecutions vary considerably from case to case. An indictment may contain single or multiple counts and may charge violations of one or more laws. For the sake of clarity in analyzing charging practices, I have subdivided RCRA prosecutions into two categories—"pure environmental prosecutions" and "hybrid environmental prosecutions."¹⁰⁰

1. *Pure Environmental Prosecutions*

Pure environmental prosecutions are cases in which each charge in the indictment alleges a criminal violation of an environmental statute. Because RCRA prosecutions are the focus of this study, every indictment included in it will charge at least one criminal RCRA violation. Indictments in pure environmental prosecutions may charge criminal violations of other environmental statutes as well. Thus, for example, an indictment may charge only that the defendant disposed of hazardous waste without a permit, in violation of RCRA. But the indictment need not be so limited. If the waste was dumped into the ocean rather than onto the ground, the indictment could charge both illegal disposal (RCRA) and illegal discharge of pollutants into navigable waters in violation of the Clean Water Act. For the sake of simplicity, I occasionally refer to the former cases as "RCRA-only" prosecutions.

2. *Hybrid Environmental Prosecutions*

Prosecutors in environmental prosecutions often charge that, in addition to committing environmental crimes, the defendant committed a collateral crime, or crimes like conspiracy,¹⁰¹ mail fraud,¹⁰² or making false statements to the government.¹⁰³ Because the charges in these cases are split between environmental crimes and collateral crimes, I classify them as hybrid environmental prosecutions.

¹⁰⁰ In an earlier article, I developed a three-tiered classification system for analyzing cases in a database of judicial opinions I created for another phase of this environmental crime project. See Brickey, *The Rhetoric of Environmental Crime*, *supra* note 15, at 135–44. The third class consisted of cases in which prosecutors could have, but did not, charge criminal violations of environmental laws. Those cases were prosecuted under different legal theories like conspiracy, false statements, and mail fraud. As the empirical study in this article focuses on RCRA prosecutions, the third class of cases is, by definition, inapposite.

¹⁰¹ See 18 U.S.C. § 371 (1994) (punishing conspiracies to commit an offense against the United States and conspiracies to defraud the United States).

¹⁰² See 18 U.S.C. § 1341 (1994) (prohibiting, *inter alia*, causing the use of the mails in furtherance of a scheme to defraud).

¹⁰³ See 18 U.S.C. § 1001 (1994) (prohibiting making false statements within the jurisdiction of a federal department or agency).

With very few exceptions, the collateral crimes are defined in the federal criminal code, which is codified in Title 18 of the United States Code.¹⁰⁴ Thus, I use the shorthand term “Title 18 crimes” to generically describe collateral crimes charged in hybrid environmental prosecutions.

3. Discussion

Slightly more than half of the RCRA cases in the database were pure environmental prosecutions. Nearly two-thirds of these were cases in which only RCRA violations were charged. Pure environmental prosecutions in which the government charged violations of multiple environmental acts most often charged violations of RCRA and the Comprehensive Environmental Response, Conservation and Liability Act (CERCLA),¹⁰⁵ or of RCRA and the Clean Water Act (CWA). Details of these charging patterns are reported in Table 3.

Hybrid environmental prosecutions constitute roughly 45 percent of the RCRA cases in the database. Nearly half of the hybrid prosecutions involved a combination of charges brought exclusively under RCRA and Title 18, as reported in Table 4. Charging practices in hybrid prosecutions involving violations of multiple environmental acts were consistent with patterns found in pure environmental prosecutions. Thus, RCRA and CERCLA violations were combined with the greatest frequency, followed by RCRA and CWA offenses.

¹⁰⁴ One case in the RCRA database deviates from this pattern and charges a combination of RCRA violations and violations of Title 21 of the United States Code, where federal drug offenses are defined. *See* United States v. Angerami, No. 2-90-CR-000021 (N.D. Ga. Nov. 3, 1990), EPA SUMMARY, *supra* note 76, at 156. In *Angerami*, six defendants were charged with conspiring to manufacture and possess, with intent to distribute, methamphetamine. The RCRA charge was based on their improper disposal of hazardous waste generated by the manufacturing activity.

A similar case involving the construction and operation of one of the largest cocaine manufacturing laboratories in the United States recently resulted in the imposition of a fifteen-year prison sentence—the longest environmental jail term ever imposed—for illegal abandonment of hazardous waste. United States v. Fargas, No. 1:99-CR-00537-001 (N.D.N.Y. Dec. 16, 1999), summarized in 15 NAT'L ENVTL. ENFORCEMENT J., Feb. 2000, at 31.

¹⁰⁵ 42 U.S.C. §§ 9601–9626, 9651–9662, 9671–9675 (1994). CERCLA is also known as the Superfund law.

**Table 3: RCRA Charging Patterns in
Pure Environmental Prosecutions
Fiscal Years 1983–1992**

Environmental Charges	Number of Cases	Percent
RCRA	50	68%
RCRA + CERCLA ¹⁰⁶	11	15%
RCRA + CWA ¹⁰⁷	8	11%
RCRA + CERCLA + CWA	1	1%
RCRA + Other ¹⁰⁸	4	5%
Total	74	100%

**Table 4: RCRA Charging Patterns in
Hybrid Environmental Prosecutions
Fiscal Years 1983–1992**

Environmental Charges	Number of Cases	Percent
RCRA	30	47%
RCRA + CERCLA	12	19%
RCRA + CWA	10	16%
RCRA + CERCLA + CWA ¹⁰⁹	9	14%
RCRA + Other ¹¹⁰	3	5%
Total	64	100%

¹⁰⁶ One of these prosecutions also charged violation of the Toxic Substances Control Act (TSCA).

¹⁰⁷ One of these prosecutions also charges violation of the Refuse Act.

¹⁰⁸ "Other" charges include violations of the Clean Air Act, the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), the Refuse Act, and TSCA.

¹⁰⁹ Three prosecutions also charged, variously, violations of the Clean Air Act, the Hazardous Materials Transportation Act (HMTA), the Ocean Dumping Act, and TSCA.

¹¹⁰ "Other" charges include violations of FIFRA, HMTA, and the Refuse Act.

As a comparison of Tables 3 and 4 shows, however, in the hybrid prosecutions these charges were far more likely to be joined with charges that the defendant violated a third environmental act. And, in contrast with charging patterns found in pure environmental prosecutions, the comparative data show a marked overlap between CERCLA and CWA charges in the hybrid cases. RCRA charges were combined with both CERCLA and CWA charges in more than 15 percent of the hybrid cases but in fewer than 5 percent of the pure environmental prosecutions. Tables 3 and 4 also show that prosecutors rarely charged violations of other environmental acts in either category of RCRA prosecutions.

The prevalence of combined charges under RCRA and CERCLA may be explained by their complementary regulatory schemes. While RCRA regulates hazardous waste management practices, CERCLA regulates the release of "hazardous substances"¹¹¹—a term that includes RCRA hazardous wastes—into the environment. CERCLA imposes a duty on responsible parties¹¹² to notify authorities when a "reportable quantity" of hazardous substances is released into the environment.¹¹³ The following example illustrates how the statutes work in tandem. The manager of a waste treatment facility dumps hazardous waste onto the ground without a permit. The dumping constitutes illegal disposal of the waste in violation

¹¹¹ The term "hazardous substance" includes hazardous and toxic substances under the CWA, RCRA hazardous wastes, hazardous air pollutants under the Clean Air Act, and other substances that EPA designates as hazardous under CERCLA or the Toxic Substances Control Act. 42 U.S.C. §§ 9601(14), 9602(a) (1994); *see* 40 C.F.R. Pt. 302. The EPA can designate as hazardous any substance whose release into the environment may pose "substantial danger to the public health or welfare or the environment." 42 U.S.C. § 9602(a) (1994).

A substance is "released" if it is spilled, leaked, poured, dumped, discharged, disposed of, emitted, leached, or injected into the environment. 42 U.S.C. § 9601(22) (1994).

¹¹² The duty to notify is imposed on any person who is "in charge" of a vessel or facility. 42 U.S.C. § 9603(a) (1994). Although the statute does not specify who is in charge, the notification requirement is intended to reach those who are in a position to prevent, detect, and abate the release. Thus, a person may be "in charge" of a facility even though he does not have exclusive control over it and even though he has relatively low level supervisory responsibilities. *United States v. Carr*, 880 F.2d 1550, 1554 (2d Cir. 1989) (upholding CERCLA conviction of military installation's maintenance foreman, who directed workers to dispose of paint waste in a pond and later instructed them to bury leaking cans).

The term "vessel" includes all manner of watercraft. 42 U.S.C. § 9601(28) (1994). "Facility" includes virtually any place where hazardous substances could be found. It includes structures, pits, ponds, containers, pipes and pipelines, aircraft and motor vehicles, and "any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located." 42 U.S.C. § 9603(b)(2) (1994).

¹¹³ 42 U.S.C. § 9602(a) (1994). A release is reportable only if it equals or exceeds the reportable quantity. The statute delegates the responsibility for designating what constitutes a reportable quantity to the EPA. Substances that EPA has designated as hazardous and their reportable quantities are set out in 40 C.F.R. Table 302.4. If the EPA has not designated a reportable quantity for a hazardous substance, the quantity is one pound. 42 U.S.C. § 9602(b) (1994).

of RCRA. If the amount of waste is a reportable quantity, the release of the waste into the environment triggers a CERCLA duty to notify authorities. Failure to report the release is a felony under CERCLA. Thus, the illegal disposal charge (RCRA) dovetails with the failure to notify charge (CERCLA), and both violations could logically arise in a single prosecution.¹¹⁴

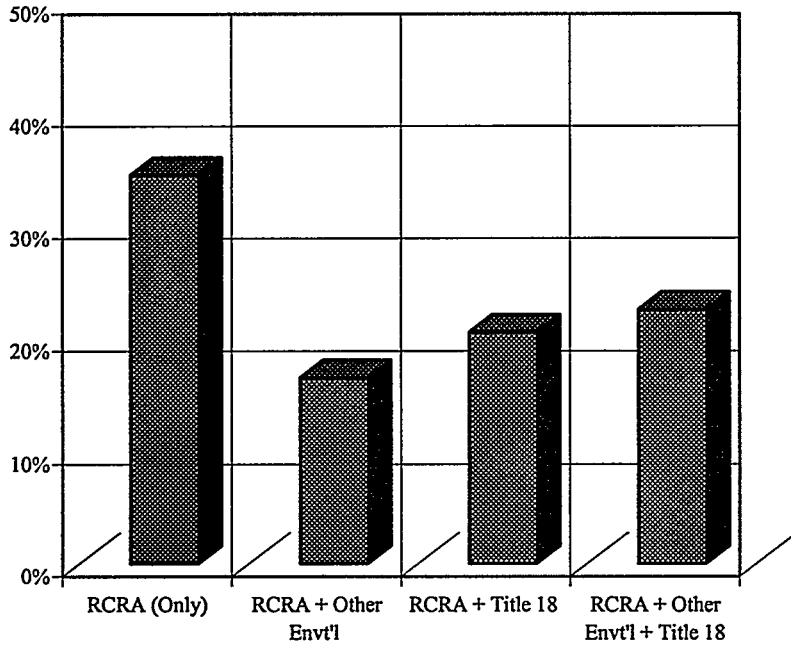
As shown in Figure 4, regardless of whether they are pure or hybrid cases, most RCRA prosecutions are multidimensional. Nearly two-thirds charged both RCRA violations and violation of another environmental statute—principally the CWA or CERCLA—and/or commission of a Title 18 crime. Thus, charging patterns in the RCRA prosecutions often bring to bear the interplay of complementary regulatory schemes. Stated differently, the majority of RCRA prosecutions are based not on a single isolated act, like disposing of a solvent-laden rag,¹¹⁵ but on a course of conduct that more often than not involves multiple violations of several criminal statutes.

¹¹⁴ Although it is typical for defendants in the same prosecution to be charged with violating the same statute or statutes, that practice is by no means universal. Indeed, a small percentage of defendants named in RCRA prosecutions had no RCRA charges pressed against them. The prosecution in *United States v. Eagle Picher Industries, Inc.*, No. 85-343 (D. Colo. Dec. 11, 1985), EPA SUMMARY, *supra* note 76, at 38, (*Eagle Picher I*), aptly illustrates the point. Eagle Picher manufactured high-tech nickel-cadmium batteries for aerospace, aircraft, and other uses. The hazardous byproducts of the manufacturing operation included sodium hydroxide, potassium hydroxide, cadmium, and nickel. See *United States v. Eagle Picher Industries, Inc.* (D. Colo.) (*Eagle Picher II*), summarized in 1995 ENFORCEMENT ACCOMPLISHMENTS REPORT, *supra* note 78, at A-89. The prosecution in *Eagle Picher I* proceeded on the theory that Eagle Picher's environmental engineer ordered the burial of five drums of toxic wastes. The government charged the engineer with disposing of hazardous waste without a permit in violation of RCRA, and with making false statements to the EPA in violation of 18 U.S.C. § 1001 (1994 & Supp. V 1999). Instead of charging Eagle Picher under RCRA, the government charged the company with failure to notify authorities of a reportable release of a hazardous substance, in violation of CERCLA. *Id.*; see *supra* note 105. Thus, even though the crimes shared common factual predicates, the charges against the defendants proceeded under different legal theories.

Eagle Picher pled guilty to the CERCLA charge, but failed to learn from experience. In 1995, the company pled guilty to new CERCLA charges based on its failure to notify authorities of a reportable release of a hazardous substance at its battery manufacturing plant. Company documents revealed that two unreported discharges of hazardous substances had contaminated the Fountain Creek aquifer, a tributary to navigable waters. *Eagle Picher II*, summarized in 1995 ENFORCEMENT ACCOMPLISHMENTS REPORT, *supra* note 78, at A-89.

¹¹⁵ See Judson W. Starr et al., *Prosecuting Pollution*, LEGAL TIMES, May 31, 1993, at 6.

Figure 4
RCRA Charging Patterns by Statute Type
Fiscal Years 1983-1992



Title 18 charges in the hybrid prosecutions shed additional light on the dynamics of criminal RCRA violations. Although Title 18 charges were brought under nearly twenty different statutes,¹¹⁶ conspiracy and false statements offenses were by far the most commonly charged, as seen in Table 5. Conspiracy charges were filed in nearly 70 percent of the hybrid prosecutions. Because criminal conspiracies require an agreement to the commission of illegal acts, RCRA prosecutions that include conspiracy charges target planned courses of conduct, involve multiple criminal actors, and require proof of "conventional" culpability.

**Table 5: Title 18 Charging Patterns in
Hybrid RCRA Prosecutions
Fiscal Years 1983–1992**

Title 18 Charge	Number of Cases	Percent
Conspiracy ¹¹⁷	43	67%
False Statements	22	34%
Mail Fraud	7	10%
Other	9	14%

Table 5 also shows that violations of Title 18's general false statements statute were charged in about 35 percent of the hybrid cases. To violate the false statements statute, the actor must knowingly make a false statement within the jurisdiction of a federal department or agency. Violations of the false statements statute are crimes of deceit and concealment. RCRA prosecutions that include false statements violations charged defendants with making false statements on industrial waste questionnaires,¹¹⁸ falsely claiming exemption from EPA regulations,¹¹⁹ lying about

¹¹⁶ All but one of the non-environmental charges was brought under Title 18. One aberrational hybrid case involved narcotics charges under Title 21. *See supra* note 104.

¹¹⁷ Eleven cases (14 percent) charged both conspiracy and false statements violations.

¹¹⁸ *See United States v. K.W. Thompson Tool Co., Inc.*, No. 85-08 (D. N.H. Mar. 18, 1985), EPA SUMMARY, *supra* note 76, at 24 (charging, inter alia, metal casting and firearms manufacturer and its vice-president with making false statements in response to industrial waste questionnaire); *United States v. Yaron*, No. 83-00170 (E.D. Pa. May 2, 1983), EPA SUMMARY, *supra* note 76, at 7 (charging president/owner/chief-operator of commercial research lab with making false statements on EPA hazardous waste activity questionnaire).

¹¹⁹ *See United States v. Van Hoesen*, No. 84-00838 (N.D. Ill. Nov. 15, 1984), EPA SUMMARY, *supra* note 76, at 22 (charging, inter alia, manager of chemical recycling facilities with lying to EPA by falsely claiming exemption from regulations).

how hazardous industrial waste products were generated and stored,¹²⁰ and misrepresenting that electroplating wastes had been incinerated.¹²¹ Significantly, when charges filed under RCRA's false statements provision are added to the mix,¹²² fully 70 percent of the hybrid prosecutions involved allegations that one or more defendants lied to government officials or falsified required records or reports relating to waste management practices and compliance.¹²³

Allegations of fraud also compounded the underlying hazardous waste crime in a number of hybrid prosecutions. While the most prevalent charge was mail fraud—10 percent of the hybrid cases—prosecutors alleged various other forms of fraud,

¹²⁰ *United States v. Protex*, No. 87-CR-115 (D. Colo. Apr. 24, 1987), EPA SUMMARY, *supra* note 76, at 60 (charging, inter alia, chemical products manufacturer and its comptroller with multiple counts of making false statements about how hazardous waste products were generated and stored).

¹²¹ *United States v. Harwell*, No. 85-28 (N.D. Ga. Dec. 10, 1985), EPA SUMMARY, *supra* note 76, at 37 (charging, inter alia, president and vice-president of waste treatment company with misrepresenting that electroplating wastes had been incinerated and also misrepresenting when they had been poured into city sewage system; false statements were filed with state environmental protection agency).

¹²² 42 U.S.C. § 6928(d)(3) (1994); *see, e.g.*, *United States v. A-1 Disposal*, No. G89-32 (W.D. Mich. Feb. 15, 1989), EPA SUMMARY, *supra* note 76, at 104 (charging, inter alia, industrial waste disposal company and its president with making false statements and omitting material information by painting over or removing hazardous waste labels); *United States v. Enviroisure Mgmt. Corp.*, No. CR-90-00025C (W.D.N.Y. Feb. 13, 1990), EPA SUMMARY, *supra* note 76, at 136 (charging, inter alia, waste disposal companies with making false statements and representations on manifests identifying hazardous wastes); *United States v. Control Sewer and Pipe Cleaning*, No. CR3-89-362(R) (N.D. Tex. Dec. 13, 1989), EPA SUMMARY, *supra* note 76, at 130 (charging, inter alia, treasurer/director of company that removed liquid wastes from industrial and commercial grease and sand traps with making false statements in manifests; defendant misdescribed lead-contaminated caustic solutions and spent solvent containing methylene chloride as nonhazardous waste oil water and sludge); *United States v. Great W. Inorganics, Inc.*, No. 90-CR-61 (D. Colo. Feb. 21, 1990), EPA SUMMARY, *supra* note 76, at 136 (charging, inter alia, president/owner of corporation engaged in manufacturing and processing chemicals—including mercury oxide and arsenic trichloride—with making false statements concerning company's generating and storing hazardous waste without a permit); *United States v. Greer*, No. 85-00105 (M.D. Fla. Dec. 17, 1985), EPA SUMMARY, *supra* note 76, at 35 (charging, inter alia, proprietor/operator of hazardous waste handling companies with mislabeling hazardous waste).

¹²³ Sixteen cases involved false statements under RCRA's false statements provision. RCRA false statements charges overlapped with Title 18 false statements charges in only four of those cases. Violations of the RCRA false statements provision were charged in five pure environmental cases. *See, e.g.*, *United States v. Taggart*, No. 85-60016 (D. Ore. Apr. 24, 1985), EPA SUMMARY, *supra* note 76, at 25 (charging plant manager and plant superintendent of transportation company with making false statements to state inspector concerning accumulation of hazardous wastes); *United States v. Melle*, No. G89-142CR (W.D. Mich. Oct. 5, 1989), EPA SUMMARY, *supra* note 76, at 123 (charging, inter alia, employee of company that reclaimed industrial solvents with omitting material information by removing required labels from barrels containing hazardous waste).

false statements and misrepresentations in a like number of cases.¹²⁴ Defendants in these cases were charged with government contract fraud,¹²⁵ insurance fraud,¹²⁶ contract fraud¹²⁷ and bankruptcy fraud.¹²⁸ Indictments in hybrid prosecutions also occasionally charged Racketeer Influenced and Corrupt Organizations Act (RICO) violations,¹²⁹ obstruction of justice,¹³⁰ and other miscellaneous crimes.¹³¹

C. RCRA Violations

RCRA's criminal provisions create environmental felonies¹³² based on the following general categories of illegal conduct: (1) transportation of hazardous waste without a manifest¹³³ or transportation to a facility that lacks a permit ("transportation" violations),¹³⁴ (2) treatment, storage, or disposal of hazardous waste without a permit ("no permit" violations) or in violation of permit ("permit"

¹²⁴ Defendants in these cases were charged variously with making false claims against the government, 18 U.S.C. § 287 (1994), perjury, 18 U.S.C. §§ 1621, 1623 (1994), bank fraud, 18 U.S.C. § 1344 (1994), and other miscellaneous theft/fraud offenses.

¹²⁵ *United States v. Kruse*, No. A-87-CR-115 (W.D. Tex. Dec. 1, 1987), EPA SUMMARY, *supra* note 76, at 72 (charging that defendant used fictitious waste disposal company to fraudulently charge federal government \$12,000 for removal of sixty barrels of hazardous waste); *United States v. Md. Assemblies, Inc.*, No. CR-91-04046 (N.D. Fla. Dec. 12, 1991), EPA SUMMARY, *supra* note 76, at 173 (charging that explosives manufacturer and its executives submitted false invoices and supporting documents to obtain \$11.2 million in progress payments under Defense Department contracts).

¹²⁶ *United States v. Ahmad*, No. CR-92-201 (C.D. Cal. Mar. 19, 1992), EPA SUMMARY, *supra* note 76, at 182 (charging defendants with arson/insurance fraud); *United States v. Yaron*, No. 83-00170 (E.D. Pa. May 2, 1983), EPA SUMMARY, *supra* note 76, at 7-8 (charging defendant with submitting false storm damage insurance claims).

¹²⁷ *United States v. Enviro-Analysts, Inc.*, No. 90-CR-165 and 191 (E.D. Wis. July 9, 1990), EPA SUMMARY, *supra* note 76, at 147 (charging corporation that performed environmental compliance lab analyses, its CEO, and its vice-president with filing false reports on its analysis of client's effluent stream).

¹²⁸ *United States v. Blanchard*, No. 2-90-CR-16 (W.D. Mich. Oct. 25, 1990), EPA SUMMARY, *supra* note 76, at 155 (charging corporate founder/president with bankruptcy fraud and contract fraud).

¹²⁹ 18 U.S.C. §§ 1961-1968 (1994). Three RICO prosecutions are found in the hybrid cases.

¹³⁰ 18 U.S.C. §§ 1503, 1510, 1512 (1994). Obstruction of justice violations were charged in two cases.

¹³¹ They include arson, money laundering, immigration violations, and accessory after-the-fact liability.

¹³² The evolution of the felony provisions is discussed *supra* notes 48-51 and accompanying text.

¹³³ See 42 U.S.C. § 6928(d)(5) (1994) (prohibiting knowingly transporting hazardous waste without a proper manifest).

¹³⁴ See 42 U.S.C. § 6928(d)(1) (1994) (prohibiting knowingly transporting hazardous waste to a non-permitted facility).

violations);¹³⁵ (3) illegal exportation of hazardous waste to another country;¹³⁶ (4) reporting¹³⁷ and record-keeping violations (principally falsification and concealment);¹³⁸ and (5) knowing endangerment of another person.¹³⁹

1. *Specific RCRA Charges*

As shown in Figure 5, more than half of all RCRA prosecutions involved charges of illegal treatment, storage, and disposal of hazardous waste.¹⁴⁰ In virtually all of them, the charged violation was handling hazardous waste without obtaining the required permit.¹⁴¹ Prosecutions charging RCRA permit holders with violating the terms of their permits were rare.

Illegal transportation of hazardous waste comprised the second largest category of RCRA charges. Transportation violations were charged in about 40 percent of the RCRA prosecutions. Transportation violations fall into two discrete categories—transporting hazardous waste to an unpermitted facility and transporting hazardous waste without a proper manifest. As shown in Figure 5, about 60 percent of illegal transportation charges involved transporting waste to unpermitted facilities.

¹³⁵ See 42 U.S.C. § 6928(d)(2) (1994) (prohibiting knowingly treating, storing, or disposing of hazardous waste without a permit or in violation of a material condition of a permit, or doing same in violation of an interim status standard (defined in 42 U.S.C. § 6925(e) (1994))); 42 U.S.C. § 6928(d)(7) (1994) (knowingly storing, treating, or transporting any used oil in violation of a permit or without a permit).

¹³⁶ See 42 U.S.C. § 6928(d)(6) (1994) (prohibiting knowingly exporting hazardous waste without the consent of the receiving country or in violation of an existing international agreement).

¹³⁷ See 42 U.S.C. § 6928(d)(3) (1994) (prohibiting knowingly omitting material information or making a false material statement or representation in a label, manifest, report, permit, or other compliance document).

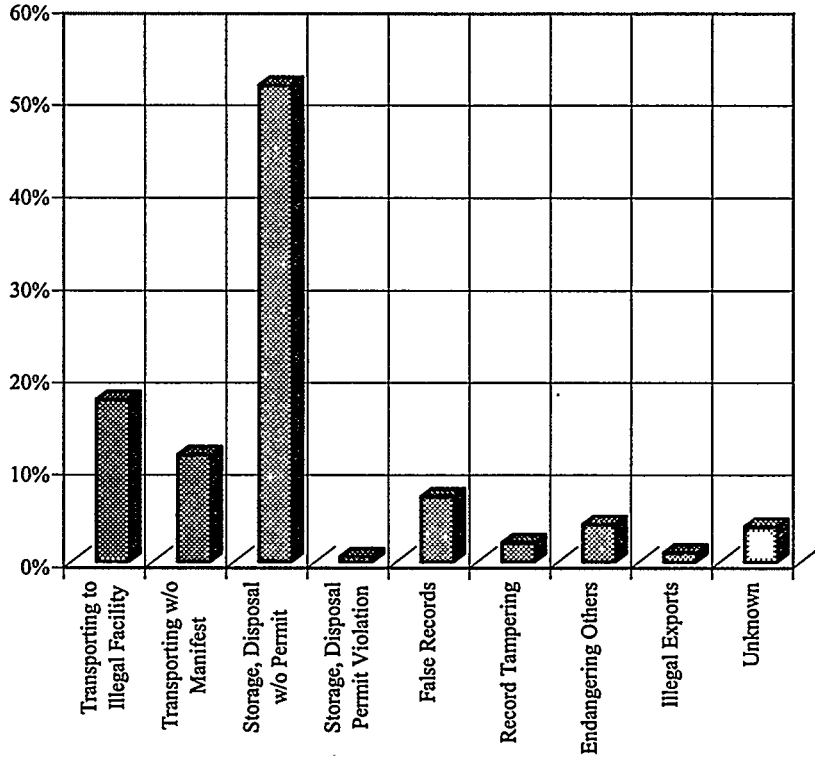
¹³⁸ See 42 U.S.C. § 6928(d)(4) (1994) (prohibiting knowingly destroying, altering, concealing, or failing to file any record, manifest, or other compliance document).

¹³⁹ See 42 U.S.C. § 6928(e) (1994) (prohibiting knowingly placing another in imminent danger of death or serious bodily injury by illegally transporting, treating, storing, disposing of, or exporting hazardous waste). See *supra* note 51.

¹⁴⁰ The summaries provided charging information through the narrative description, the citation to statutory authority, or a combination of both. Four of the cases (about 3 percent) lacked specific RCRA charging data.

¹⁴¹ In five cases, it is clear that the charge was illegal treatment, storage, or disposal, but it is not clear whether the charge was a “no permit” or a “permit violation” offense. The charges in these cases are classified as “unknown” in Figure 5.

Figure 5
RCRA Charges by Offense Type
Fiscal Years 1983-1992



Rather than being combined with other types of RCRA violations, illegal transportation charges tend to stand alone. More than two-thirds of the cases involving transportation violations charged no additional RCRA violation. In contrast, almost all of the charges that false statements were made in manifests, records, reports, permits, or other required compliance documents were combined with other substantive RCRA violations. While only a few prosecutions charged that the defendant destroyed or altered required records or violated the knowing endangerment statute,¹⁴² all of the endangerment prosecutions charged collateral

¹⁴² See *United States v. Greer*, No. 85-00105 (M.D. Fla. Dec. 17, 1985), EPA SUMMARY, *supra* note 76, at 35 (charging proprietor and operator of four hazardous waste handling companies with knowingly endangering employees by directing them to test chemicals such as cyanide and toluene by sniffing them or lighting them in soft drink cans; also charging disposal of hazardous waste without a permit (RCRA), failure to notify of release of hazardous substance (CERCLA), mislabeling hazardous waste (RCRA), mail fraud, 18 U.S.C. § 1341 (1994), and making false claim, 18 U.S.C. § 287 (1994)); *United States v. Performance Advantage, Inc.*, No. 84-00122 (M.D. Ala. June 28, 1984), EPA SUMMARY, *supra* note 76, at 19 (charging corporation and its president with knowing endangerment, illegal storage or disposal of hazardous waste (RCRA), and failure to report release of hazardous substance (CERCLA)); also charging second corporation and various individuals with RCRA and CERCLA violations and conspiracy, 18 U.S.C. § 371 (1994)); *United States v. Turner*, No. 86-332-1 (E.D. Wash. Nov. 17, 1987), EPA SUMMARY, *supra* note 76, at 52 (charging certified pesticide applicator with dumping restricted-use pesticides in and along river, thereby placing others in imminent danger of death or serious injury, and also charging illegal disposal of hazardous waste without a permit (RCRA) and failure to notify of the release of a hazardous substance (CERCLA)); *United States v. Protex Indus., Inc.*, No. 87-CR-115 (D. Colo. Apr. 24, 1987), EPA SUMMARY, *supra* note 76, at 60 (charging chemical manufacturer with knowing endangerment of its employees by directing them to handle hazardous wastes in improper manner in violation of RCRA, illegal storage and disposal of hazardous wastes (RCRA), making false statements, 18 U.S.C. § 1001 (1994), and transportation of hazardous waste in violation of the Hazardous Materials Transportation Act; further charging manufacturer, its general manager, and its comptroller with conspiracy, 18 U.S.C. § 371 (1994), illegal storage and disposal of hazardous wastes (RCRA), and discharging pollutants into navigable waters (Clean Water Act)); *United States v. Tumin*, No. 87-488 (E.D.N.Y. July 8, 1987), EPA SUMMARY, *supra* note 76, at 62 (charging defendant with endangerment by abandoning three 55-gallon drums of ethyl ether in a residential neighborhood and also charging illegal transportation of hazardous waste to an unpermitted facility (RCRA) and failure to notify of a release (CERCLA)); *United States v. Commercial Metals Co.*, No. CR-88-03318-01 (W.D. Mo. July 27, 1988), EPA SUMMARY, *supra* note 76, at 92 (charging scrap metal company, its plant manager, and its office manager with knowing endangerment, disposal of hazardous waste without a permit (RCRA), and conspiracy, 18 U.S.C. § 371 (1994); further charging corporation and plant manager with unlawful discharge of pollutants into a navigable waterway (Clean Water Act)); *United States v. Gershon*, No. 89-20074-01 (D. Kan. Sept. 14, 1989), EPA SUMMARY, *supra* note 76, at 119 (charging operator of chemical brokering business with knowing endangerment of employees by unlawful disposal of hazardous waste, treating and disposing of hazardous waste without a permit (RCRA), and transporting hazardous waste without a manifest (RCRA)); fire in waste-laden truck caused evacuation of residential neighborhood); *United States v. Metro Container Corp.*, No. 90-359 (E.D. Pa. Aug. 15, 1990), EPA SUMMARY, *supra* note 76, at 146 (charging corporations in business of reconditioning steel drums, co-owner and president, and maintenance supervisor with knowing

RCRA violations as well as violations of CERCLA or the Clean Water Act. A majority of endangerment prosecutions also included Title 18 charges, most often conspiracy.

2. Discussion

These findings are significant. Most RCRA prosecutions include charges that the defendants treated, stored, or disposed of hazardous waste without a permit. RCRA permit requirements apply to inherently dangerous business operations that are highly regulated. The defendants in the "no permit" prosecutions engaged in heavily regulated activity without subjecting themselves to the rules of the game. That such a large percentage of RCRA prosecutions included "no permit" charges strongly suggests that prosecutors give high priority to pursuing what appear to be rogue operators.¹⁴³ Those who dispose of hazardous wastes without obtaining a permit frustrate the principal purpose of RCRA's regulatory scheme, which is to ensure EPA oversight of hazardous waste management practices.

The permit application and review process serves several important functions: (1) the filing of an application informs the EPA that the applicant is, or intends to be, engaged in regulated activity; (2) the application describes in detail the operation and maintenance of the facility and provides relevant technical information, such as chemical analyses of the hazardous waste to be handled at the facility; (3) the comprehensive information provided in the application enables the EPA to conduct an in-depth evaluation to determine whether the facility is (or will be) in compliance with RCRA's requirements; (4) if the EPA decides to grant the application, it issues a permit that spells out the precise terms and conditions under which the applicant may engage in what is otherwise prohibited activity; and (5) the ensuing record-keeping and reporting requirements enable the EPA to continuously monitor the permit holder's compliance.

Businesses that circumvent the application process to avoid regulatory scrutiny clearly thwart RCRA's core objectives in addition to saving considerable compliance costs. Since criminal prosecution of these violations may serve as a counterweight to strong economic incentives to circumvent the rules, it is not surprising that the

endangerment, illegal storage, and disposal of hazardous waste (RCRA), conspiracy to violate Clean Water Act, 18 U.S.C. § 371 (1994), and illegal discharges into waterway (Clean Water Act); *United States v. Baytank, Inc.*, No. CR-H-87-220 (S.D. Tex. Sept. 3, 1987), EPA SUMMARY, *supra* note 76, at 68 (charging two corporations and twenty-one individuals with knowing endangerment and numerous other environmental violations).

¹⁴³ F. Henry Habicht II, *The Federal Perspective on Environmental Criminal Enforcement: How to Remain on the Civil Side*, 17 ENVTL. L. REP. 10478, 10480 (Dec. 1987) (stating that criminal investigators try to identify businesses and individuals who clearly deal with hazardous substances but dispose of them without obtaining a permit).

government makes prosecuting those who operate outside the regulatory system a high enforcement priority.¹⁴⁴

Prosecution of RCRA permit holders for violating the terms or conditions of a permit is exceedingly rare. Only two RCRA prosecutions alleged a RCRA permit violation, and the defendants in both were knowledgeable economic actors. In one, the defendants were in the business of hazardous waste management and recycling.¹⁴⁵ In the other, the defendants were in the business of transporting and disposing of hazardous waste.¹⁴⁶ Notably, in addition to violating their RCRA permits, the defendants in both cases were charged with CWA or CERCLA violations and with committing Title 18 crimes.¹⁴⁷ Above and beyond these augmented charges, the hazardous waste transporter was also charged with treating, storing, and disposing of hazardous waste without a permit and with transporting hazardous waste to an unpermitted facility. Thus, the RCRA permit violations at issue were not isolated errors but were part of a more pervasive pattern of

¹⁴⁴ The EPA's criminal enforcement priorities have remained relatively constant since 1982. See Joseph G. Block, *The Government's Decision to Initiate an Investigation*, in ENVIRONMENTAL CRIMINAL LIABILITY: AVOIDING AND DEFENDING ENFORCEMENT ACTIONS 21, 26 (Donald A. Carr, ed., 1995). In formulating its priorities, the EPA relied on U.S. DEPT. OF JUSTICE, PRINCIPLES OF FEDERAL PROSECUTION (1980), which guide the exercise of prosecutorial discretion. Block, *supra*, at 24.

¹⁴⁵ *United States v. Ekotek, Inc.*, No. 90-CR-125-G (D. Utah Mar. 5, 1990), EPA SUMMARY, *supra* note 76, at 145. It is not entirely clear, moreover, that the charge in *Ekotek* was actually a permit violation. Although the narrative in the prosecution summary states that the defendant was charged with storage and treatment "in violation of a permit," the citation provided for the charge is 42 U.S.C. § 6928(d)(2)(A), which defines the "no permit" offense. The provision that defines the permit violation offense is § 6928(d)(2)(B).

¹⁴⁶ *United States v. MacDonald & Watson Waste Oil Co.*, No. CR-88-D32-(01-07)-T (D. R.I. Apr. 26, 1988), EPA SUMMARY, *supra* note 76, at 73.

¹⁴⁷ See *Ekotek, Inc.*, No. 90-CR-125-G, EPA SUMMARY, *supra* note 76, at 145 (charging a corporation, its owner/president and its vice-president with conspiracy, discharging pollutants into a publicly owned sewer system in violation of the CWA, and storage of hazardous waste in violation of a RCRA permit; also charging the owner/president with mail fraud); *MacDonald & Watson Waste Oil Co.*, No. CR-88-D32-(01-07)-T, EPA SUMMARY, *supra* note 76, at 73 (charging two companies, a company president, and four employees (variously) with mail fraud; making false statements to the government; RICO violations; transporting hazardous waste to an unpermitted facility in violation of RCRA; treating, storing, and disposing of hazardous waste without a permit in violation of RCRA; treating, storing, and disposing of hazardous waste in violation of a RCRA permit; making false statements in required compliance documents in violation of RCRA; and failing to report a release of a hazardous substance in violation of CERCLA).

The individual defendants in *Ekotek* were convicted as charged. The disposition of charges against the corporation is unknown. The prosecution in *MacDonald & Watson Oil* resulted in convictions of both companies and three of the five individual defendants for various RCRA and CERCLA violations, making false statements, and mail fraud. In a related prosecution, another employee of MacDonald & Watson Oil was convicted of committing perjury before the grand jury. *United States v. Pandozzi*, No. CR-88-004-P (D. R.I. Jan. 12, 1988), EPA SUMMARY, *supra* note 76, at 73.

criminality. The data thus suggest that prosecutors have exercised considerable restraint in deciding which RCRA permit violations merit criminal prosecution. Prosecutions that charge violations of the statutory permit requirements focus almost exclusively on those who operate outside the regulatory loop. This finding is consistent with the government's stated enforcement priorities.

Similarly, the finding that nearly 70 percent of RCRA prosecutions include charges of making false statements is also significant. RCRA's regulatory scheme depends on honest self-reporting. Falsifying compliance documents, tampering with monitoring equipment, removing or defacing required labels, or actively concealing violations undermines the integrity of the data on which EPA relies in making regulatory decisions and threatens the validity of agency decisions that may affect human health and the environment.¹⁴⁸

By definition, these crimes involve a high level of culpability. Deliberate lies to environmental regulators and concealment of illegal conduct are evidence of deceit, and deceit is evidence of intent.¹⁴⁹ Thus, when criminal investigators find that misrepresentation and concealment compound a substantive violation (i.e., no permit or violation of a permit), it is not surprising that criminal prosecution is likely to follow.¹⁵⁰

D. RCRA Defendants

It is common for federal prosecutors to charge multiple defendants in the same criminal case. That practice is also prevalent in environmental prosecutions, which, on average, tend to have a higher number of defendants per case than in other federal prosecution contexts. Thus, while a typical federal prosecution during the reporting period had an average of 1.4 defendants,¹⁵¹ a typical environmental prosecution had an average of 2.2.¹⁵² RCRA prosecutions had a slightly higher average number of defendants (2.5) than environmental prosecutions in general.

¹⁴⁸ Memorandum from Earl E. Devaney, Director, Office of Criminal Enforcement, United States Environmental Protection Agency, to All EPA Employees Working in or in Support of the Criminal Enforcement Program (June 1994) [hereinafter Devaney Memorandum].

¹⁴⁹ Christine L. Wettach, *Mens Rea and the "Heightened Criminal Liability" Imposed on Violators of the Clean Water Act*, 15 STAN. ENVTL. L.J. 377, 398 (1996); *Prosecutors Look for "Deceit" as Proof of Criminal Intent, Federal Attorney Says*, 26 ENV'T REP. 527 (July 7, 1995).

¹⁵⁰ Habicht, *supra* note 143, at 10481 (stating that prosecution is virtually assured when there is evidence of misrepresentation and concealment); Devaney Memorandum, *supra* note 148 (stating that prosecution of those who supply false or misleading information to the government is a high priority).

¹⁵¹ ADMINISTRATIVE OFFICE OF THE U.S. COURTS, FEDERAL OFFENDERS IN THE U.S. COURTS 1986 THROUGH 1990, at 6 [hereinafter FEDERAL OFFENDERS STATISTICS].

¹⁵² GAO Statistics, *supra* note 82, at 93, app. III, tbl. III.2. The GAO statistics focused on environmental prosecutions occurring between 1988 and 1993. While the years on which the general federal prosecution and environmental prosecution statistics are based substantially overlap, they are not identical. See FEDERAL OFFENDERS STATISTICS, *supra* note 151, at 6.

Prosecutors charged 380 individuals and organizations in RCRA prosecutions over the ten-year period. Although most of the defendants in these cases were individuals, nearly 30 percent were organizations.

1. *Corporate Defendants*

Prosecutors named corporations as defendants in nearly 60 percent of the RCRA cases. Although it was typical to name only one corporate defendant, 15 percent of the corporate prosecutions charged multiple corporate entities. In a majority of cases with multiple corporate defendants, some or all of the corporations were related. The most common relationship was parent and subsidiary,¹⁵³ but in several cases the corporations were commonly owned.¹⁵⁴ In other cases, related entities included a corporation and its corporate division,¹⁵⁵ a corporation and its corporate successor,¹⁵⁶ and a holding company and a corporation that it wholly owned.¹⁵⁷ The prosecution summaries do not indicate the size of corporations that were prosecuted or whether they were publicly or privately held.¹⁵⁸

¹⁵³ See *United States v. Cuyahoga Wrecking Corp.*, No. HAR-87-0485 (D. Md. Nov. 5, 1987), EPA SUMMARY, *supra* note 76, at 71 (charging bankrupt corporation and wholly owned subsidiary); *United States v. Leigh Indus.*, No. 87-CR-116 (D. Colo. Apr. 24, 1987), EPA SUMMARY, *supra* note 76, at 59 (charging parent corporation and subsidiary); *United States v. Reidy Terminal, Inc.*, No. 87-00178 CR(4) (E.D. Mo. July 23, 1987), EPA SUMMARY, *supra* note 76, at 63 (charging parent and subsidiary corporations); *United States v. Baytank, Inc.*, No. CR-H-87-220 (S.D. Tex. Sept. 3, 1987), EPA SUMMARY, *supra* note 76, at 68 (charging parent corporation and its subsidiary).

¹⁵⁴ See *United States v. Goodner*, No. 90-20031-04 (W.D. Ark. Oct. 3, 1990), EPA SUMMARY, *supra* note 76, at 150 (charging, inter alia, commonly owned family businesses and owners); *United States v. Metro Container Corp.*, No. 90-359 (E.D. Pa. Aug. 15, 1990), EPA SUMMARY, *supra* note 76, at 146 (charging, inter alia, commonly-owned businesses and presidents/part-owners of corporations).

¹⁵⁵ See *United States v. Sanchez Enters., Inc.*, No. No. 2-90-101 (E.D. Tenn. Sept. 25, 1990), EPA SUMMARY, *supra* note 76, at 142-43 (charging corporation, its corporate division, and officers and managers of both entities).

¹⁵⁶ See *United States v. Frontier Fertilizer Co.*, No. 86-057 (E.D. Cal. Nov. 14, 1985), EPA SUMMARY, *supra* note 76, at 41 (charging, inter alia, corporation and its successor, and manager of both operations).

¹⁵⁷ See *United States v. R-M Engineered Prods. Co., Inc.*, No. CR-90-332 (D. S.C. Aug. 16, 1990), EPA SUMMARY, *supra* note 76, at 147 (charging holding company, its vice-president, and its wholly owned corporation).

¹⁵⁸ On this topic, there is more to come. For now, suffice it to say that from 1984 through 1989, a small percentage of corporate environmental defendants were Fortune 500 companies. Adler & Lord, *supra* note 8, at 796 (stating that 6 percent of corporate environmental defendants were among the Fortune 500). Contrary to the assumption that most corporate defendants were small "mom and pop" operations, however, many mid-sized companies that were off the regulatory radar screen were the targets of criminal enforcement efforts. *Interview with Earl Devaney*,

Although the typical corporate prosecution charged both corporate and individual defendants, nearly one-fourth of the corporate prosecutions in the RCRA database named *only* corporate defendants. The latter cases, while atypical, fell into their own distinctive pattern. With one exception, all were pure environmental prosecutions with a single corporate defendant, and the large majority of these were RCRA-only prosecutions.¹⁵⁹ There was only one hybrid prosecution in this group of cases, and it charged five corporate defendants with conspiracy and making false statements in addition to RCRA violations.¹⁶⁰

2. Individual Defendants

Almost three-fourths of the defendants in the RCRA database were individuals. Although about 40 percent of the RCRA cases charged *only* individual defendants, a majority of the prosecutions named both individual and corporate defendants. And while a substantial minority of the prosecutions charged only one individual, the typical RCRA prosecution named multiple individual defendants.¹⁶¹ Although cases in the latter category typically charged two or three individuals, 30 percent named four or more individual defendants.¹⁶²

Director, Office of Criminal Enforcement, Forensics and Training, Environmental Protection Agency, Washington, D.C., CORP. CRIME REP., July 21, 1997, at 13–14.

¹⁵⁹ The remaining cases in this group charged violations of only one other environmental statute—either CERCLA, CWA, or the Refuse Act.

¹⁶⁰ See *United States v. Enviroisure Mgmt. Corp.*, No. CR-90-00025C (W.D.N.Y. Feb. 13, 1990), EPA SUMMARY, *supra* note 76, at 136.

¹⁶¹ Sixty percent of the RCRA cases naming both individuals and corporations as defendants charged two or more individual defendants.

¹⁶² Three cases charged an unusually large number of individuals. See, e.g., *United States v. Maryland Assemblies, Inc.*, No. CR-91-04046 (N.D. Fla. Dec. 12, 1991), EPA SUMMARY, *supra* note 78, at 173 (charging government contractor that manufactured explosives and nine of its executives and associates with submitting false statements and claims to the federal government, conspiracy to defraud, mail fraud, bank fraud, racketeering, dealing in explosive materials without a license, and illegal disposal of hazardous materials (RCRA)); *United States v. Arcangelo*, No. N-88-43TFGD (D. Conn. June 23, 1988), EPA SUMMARY, *supra* note 76, at 87 (charging two junkyard owners and nine confederates with, inter alia, transporting and harboring illegal aliens, mail fraud, racketeering, and stolen property violations; charging only the owners with committing environmental crimes—disposal of hazardous waste without a permit (RCRA), failure to notify authorities of release mercury, a hazardous substance (CERCLA), and releasing a hazardous substance without a permit (CERCLA)); *United States v. Baytank, Inc.*, No. CR-H-87-220 (S.D. Tex. Sept. 3, 1987), EPA SUMMARY, *supra* note 76, at 68 (charging a corporation, its subsidiary (a chemical storage and transfer marine terminal), and nineteen crew members of a chemical tanker ship with disposing of hazardous wastewater at sea (RCRA)).

3. Discussion

Why is the practice of charging multiple defendants in RCRA prosecutions significant? An indictment that charges multiple defendants signifies that the government's case is based on the probability that multiple criminal actors agreed to or participated in the commission of one or more related crimes. These prosecutions are not about isolated events or inadvertent occurrences. They are about people who engaged in a common course of conduct that ran afoul of the law. As the prevalence of charges against their corporate counterparts suggests, many (and perhaps most) of these crimes occur during the ordinary course of business. The occupational status of individual defendants charged in RCRA prosecutions serves to confirm this hypothesis.

E. Occupational Status

Much of the current concern about environmental crime prosecutions relates to who is likely to be charged.¹⁶³ While this issue has been the subject of considerable speculation, the factual record is bare.¹⁶⁴ The EPA prosecution summaries help to

¹⁶³ Early studies attributed much of the hazardous waste crime problem to organized crime. Most notably, Block and Scarpitti's *Poisoning for Profit* rejected the idea that hazardous waste crime is an off-shoot of white collar crime. See generally BLOCK & SCARPITTI, *supra* note 38. The authors contended that hazardous waste crime was controlled by organized crime syndicates connected with the solid waste industry. Basing their conclusions on a series of investigative interviews, Block and Scarpitti argued that the extent of organized crime involvement in the hazardous waste industry had been vastly understated and that public officials and law enforcement personnel were responsible for allowing organized crime influence to flourish. A legal controversy over accusations against particular public officials and a waste treatment company led to a settlement in which the publisher agreed to destroy the entire inventory of books. Donald Rebovich, *Environmental Crime Research: Where We Have Been, Where We Should Go*, in ENVIRONMENTAL CRIME: ENFORCEMENT, POLICY, AND SOCIAL RESPONSIBILITY, *supra* note 53, at 341, 343 [hereinafter Rebovich, *Environmental Crime Research*].

Although there is some empirical evidence of organized crime links with hazardous waste crime, the evidence does not support the conclusion that organized crime is the dominant force in illegal waste disposal. See REBOVICH, DANGEROUS GROUND, *supra* note 21, at 59–76, 102–105 (describing empirical findings on the role of organized and syndicate crime in local hazardous waste crime); Knight, *supra* note 2 (reporting that the New York State Senate's Select Committee on Crime was studying possible mob involvement in illegal waste dumping); Salzano, *supra* note 61, at 23 (describing the arrests in New Jersey, New York, and Pennsylvania of members of three crime families in connection with a fraudulent scheme involving the mixing of hazardous waste with home heating oil).

¹⁶⁴ Several articles did, however, draw selectively on an earlier version of the database. See generally Adler & Lord, *supra* note 8; Mark A. Cohen, *Environmental Crime and Punishment: Legal/Economic Theory and Empirical Evidence on Enforcement of Federal Environmental Statutes*, 82 J. CRIM. L. & CRIMINOLOGY 1054 (1992); Mark A. Cohen, *Corporate Crime and Punishment: An Update on Sentencing Practice in the Federal Courts, 1988–1990*, 71 B.U. L.

fill this void because they shed light on the occupational status of 90 percent of the individuals named as defendants in RCRA prosecutions during the reporting period. The discussion that follows organizes the data into four discrete occupational groupings: (1) company owners and officers; (2) managers; (3) supervisors; and (4) employees and other miscellaneous defendants. For purposes of this discussion, stated percentages refer to the percentage of individual defendants whose occupational status is known. As will be seen, most defendants whose occupational status could be discerned were corporate officers and managers who appear to have had significant operational responsibility.

1. *Corporate Owners and Officers*

Nearly 40 percent of the individuals prosecuted for RCRA violations during the reporting period were owners and officers of businesses connected with the crime. As Figure 6 shows, business owners constituted about 15 percent of all RCRA defendants,¹⁶⁵ and a majority of owner/defendants were involved in the management of the business. Half of the owner/defendants were officers,¹⁶⁶ and numerous others were identified as operator or chief operator of the business¹⁶⁷ or as having other active management roles.

About 25 percent of the non-owner defendants were also corporate officers.¹⁶⁸ As was typical of owners who were prosecuted, a substantial number of the non-

REV. 247 (1991); Mark A. Cohen, *Corporate Crime and Punishment: A Study of Social Harm and Sentencing Practice in the Federal Courts, 1984-1987*, 28 AM. CRIM. L. REV. 605 (1989).

¹⁶⁵ I classified as owners anyone who was described as owner, co-owner, or part-owner, principal, investor, stockholder, partner, founder, or prior owner. Those described as the proprietor of a business were also classified as owners if the summary contained additional details such as the defendants having "acquired" the company.

The status of nine defendants cannot be confirmed because they were described as "owner or associated with" a designated business. See *United States v. Arcangelo*, No. N-88-43TFGD (D. Conn. June 23, 1988), EPA SUMMARY, *supra* note 76, at 87 (designating Antonia DeLucia (aka "Uncle Tony"), Frank DeFelice (aka "Frankie Boy"), Marco DeLucia (aka "Nutsie"), Dennis Champagne (aka "Red"), and five other defendants described as owners or persons associated with one or more of five junkyards owned and operated by defendant Arcangelo brothers).

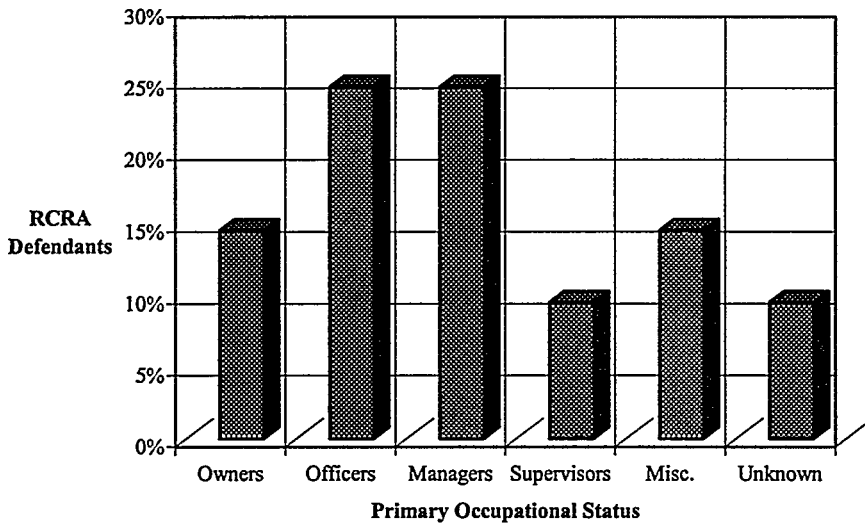
¹⁶⁶ See, e.g., *United States v. Cohen*, No. JFM-89-0468 (D. Md. Dec. 1, 1989), EPA SUMMARY, *supra* note 76, at 127 (charging owner/president of precious metals reclaiming business and former owner/chief chemist with illegal storage and disposal of hazardous waste, including mercury, lead, cadmium, and drums of hydrochloric acid mixed with cyanide).

¹⁶⁷ For the sake of clarity, it should be noted that while the title of "operator" is also a statutory term of art in some contexts (e.g., CERCLA—which imposes liability on "owners" and "operators" of covered facilities), the EPA summaries do not appear to use the term in a technical sense or to limit its use to specific statutory contexts.

¹⁶⁸ I did not include an additional thirteen "officers" in this category because they were anomalous defendants. They were shipmasters or chief officers of ships rather than corporate executives. See *United States v. Baytank, Inc.*, No. CR-H-87-220 (S.D. Tex. Mar. 23, 1992), EPA SUMMARY, *supra* note 76, at 68. Thus, instead of speculating about the extent to which the

owner officers had one or more additional titles that clearly reflected operational responsibility. Some were identified as company operators,¹⁶⁹ while others served in various managerial capacities including general manager, plant manager, director of operations, vice-president for operations, and environmental safety officer.

Figure 6
RCRA Defendants by Primary Occupational Status
Fiscal Years 1983-1992



authority and responsibility they exercised might be analogous to that held by corporate officers, I included the shipmasters and chief officers as a miscellaneous subgroup of managers and supervisors.

I also excluded three defendants described as a "vice-president or employee" from this category and classified them as "miscellaneous."

¹⁶⁹ See *supra* note 167.

2. *Managers*

About 25 percent of the individual defendants who were neither owners nor officers were corporate managers.¹⁷⁰ This category of defendants includes those who were described generically as managers and those whose title incorporated the term “manager,” including company or division manager; plant, project, or operations manager; general, business or sales manager; and office manager or managerial employee. It also includes the few defendants who were designated as “superintendents,” including industries, utilities, and plant superintendent; “directors,”¹⁷¹ including division, laboratory, or research and development director; or “coordinators,” including coordination of environmental matters, hazardous waste programs, and day-to-day operations.¹⁷²

The titles and/or job descriptions provided for defendants classified as managers indicated that at least 10 to 15 percent of those holding managerial positions had direct responsibility for environmental compliance or were technical professionals with chemical or other engineering credentials.¹⁷³ Thus, while the term “manager” necessarily encompasses a broad range of responsibilities, the job titles and descriptions in the prosecution summaries suggest that most of those who held managerial positions had substantial operational or “hands-on” authority.

3. *Supervisors*

Nearly 10 percent of the remaining individual defendants in RCRA prosecutions were designated as supervisors.¹⁷⁴ As is true of the managerial classification, individuals with supervisory authority had responsibilities that covered a broad spectrum of activities. Although most were at the higher end of the spectrum (including company, plant, production, waste water treatment, and environmental program supervisors), some defendants in this category were described generically

¹⁷⁰ To avoid double counting, I excluded from this category defendants who, in addition to being identified as managers, were also officers or owners.

¹⁷¹ This term refers to individuals other than members of boards of directors.

¹⁷² Other jobs specifically described in this category included an airport commissioner, who was described as coordinator and supervisor, and a construction coordinator.

¹⁷³ See, e.g., *United States v. Dee*, No. HAR-88-0211 (D. Md. June 28, 1988), EPA SUMMARY, *supra* note 76, at 90 (charging three chemical engineers who held top management positions at a chemical research development and engineering center with treating, storing, and disposing of hazardous waste without a permit); *United States v. Md. Assemblies, Inc.*, No. CR-91-04046 (N.D. Fla. Dec. 12, 1991), EPA SUMMARY, *supra* note 76, at 173 (charging engineering manager of explosives manufacturer with making false statements relating to RCRA violations).

¹⁷⁴ This category includes all defendants whose title included the term “supervisor,” as well as foremen and those who were described as having supervisory responsibilities, unless a more specific title was provided. It also includes a miscellaneous subgroup of defendants who clearly held a high level of supervisory responsibility but whose titles did not directly fit within this grouping. See *supra* note 168.

as supervisors and a few had supervisory titles that suggested relatively low status in the organizational hierarchy.¹⁷⁵

4. *Employees and Other Miscellaneous Defendants*

The remaining individual defendants could not be readily categorized. About 6 percent were generically labeled “employees” for whom no additional occupational identification was provided.¹⁷⁶ In addition to these generic employees, a miscellaneous group of defendants whose occupational status did not fit neatly within the other classifications included individuals described as “executives or associates,” “employees and responsible corporate officials,” contractor, executive administrative assistant, certified pesticide applicator, and self-employed. At least four technical professionals—a waste treatment consultant, an environmental engineer, a plant maintenance engineer, and a company’s chief engineer—were also included in this group.¹⁷⁷ The occupational status of about 10 percent of the defendants is unknown.¹⁷⁸

5. *Discussion*

While the occupational status of a few defendants remains unaccounted for, it is clear that most RCRA defendants are business people who have substantial authority and responsibility. Their duties often include responsibility for overall company operations, environmental compliance, or waste management practices. Significantly, these findings are consistent with the government’s articulated white-collar crime prosecution policy. Prosecution of a corporation is not a proxy for holding culpable individuals responsible,¹⁷⁹ and the government gives priority to

¹⁷⁵ These included the title of foreman.

¹⁷⁶ A total of 24 defendants were described as “employees.” Of the 8 who were further identified, 2 were owner/stockholders, 5 were identified as responsible corporate officials, and 1 was an executive administrative assistant to the company.

¹⁷⁷ See, e.g., *United States v. Eagle Picher Indus., Inc.*, No. 85-343 (D. Colo. Dec. 11, 1985), EPA SUMMARY, *supra* note 76, at 38 (charging environmental engineer for nickel-cadmium battery manufacturer with illegal burial of five drums of toxic waste).

¹⁷⁸ I classified defendants as having unknown occupational status when it was clear that they were engaged in some kind of business activity but the summary did not provide enough information to categorize their relationship to the business. Defendants were also placed in this category when there were insufficient facts to know whether or not they were engaged in business activity (e.g., Goldsmith hired individuals to remove and store hazardous waste without a permit at three sites.).

¹⁷⁹ U.S. DEPT. OF JUSTICE, FEDERAL PROSECUTION OF CORPORATIONS, at I, Comment, and at XII, General Principles (June 16, 1999).

prosecuting the highest ranking corporate officials with personal involvement in the offense.¹⁸⁰

F. *Industrial Activities Leading to RCRA Prosecutions*

As might be expected, manufacturing and related industrial activities accounted for the largest number of RCRA prosecutions. About 40 percent of all RCRA defendants were engaged in manufacturing operations. Nearly half of those in manufacturing were (or worked for) companies that produced chemicals and allied products¹⁸¹ or metals or metal products.¹⁸² About 10 percent of the manufacturers in the database were engaged in operations that produced military equipment or parts, and a similar number produced lumber or wood products.¹⁸³

Notably, the waste management business was the second largest identifiable category of industrial activities that RCRA defendants engaged in. About 15 percent of the defendants were in the business of (in descending order of importance) transportation, treatment, or disposal of hazardous waste; operating junkyards or landfills; and recycling.¹⁸⁴

About 10 percent of the RCRA defendants were employed in the service sector. Most of the service sector businesses were in the repair/maintenance business, and

¹⁸⁰ Burns, *supra* note 75, at 5; Habicht, *supra* note 143, at 10480. Mr. Burns was then the Deputy Attorney General of the United States, and Mr. Habicht was Assistant Attorney General in charge of the Land and Natural Resources Division of the Department of Justice. *See generally* U.S. DEPT. OF JUSTICE, FACTORS IN DECISIONS ON CRIMINAL PROSECUTIONS FOR ENVIRONMENTAL VIOLATIONS IN THE CONTEXT OF SIGNIFICANT VOLUNTARY COMPLIANCE OR DISCLOSURE EFFORTS BY THE VIOLATOR (1991) (explaining the factors to be considered in criminal prosecutions for environmental violations, including voluntary disclosure, cooperation, preventive measures, compliance programs, and other similar factors); PRINCIPLES OF FEDERAL PROSECUTION, *supra* note 144 (outlining and explaining general principles to be applied in federal prosecutions).

¹⁸¹ As used in this study, chemicals and allied products include three general classes of products: (1) basic chemicals; (2) chemical products designed for use in another a manufacturing process (e.g., synthetic fibers, pigments, plastics materials); and (3) finished chemical products to be used for ultimate consumption (e.g., explosives, pharmaceuticals, pesticides, and solvents).

¹⁸² Plating and electroplating constitute the largest category of metals manufacturing activities in the database. Nine of the defendants who were engaged in chemical or metals manufacturing were also in the chemicals or metals trade.

¹⁸³ Defendants in nearly three-fourths of the waste management industry cases for which specific data was available were charged, *inter alia*, with storing, disposing or transporting hazardous waste without a permit or without a manifest.

¹⁸⁴ The industrial classification for sixty-four defendants could not be verified from the database. Supplemental research using Internet-based resources (including corporate web pages), the judicial database created earlier for this project, *see supra* note 100, and miscellaneous other resources helped to round out the picture.

Five defendants, including four who were prosecuted for narcotics violations, *see supra* note 104, had no apparent business connections relevant to this empirical study.

most regularly used hazardous and toxic chemicals.¹⁸⁵ The remaining service sector defendants included three chemical engineers engaged in research and development, four defendants in the business of providing laboratory analysis for environmental compliance matters, and a waste treatment consultant.¹⁸⁶

Contrary to concerns about prosecutors targeting neighborhood businesses like auto repair shops and dry cleaning establishments,¹⁸⁷ only two RCRA prosecutions fit this profile. But like the two permit violation prosecutions discussed above,¹⁸⁸ these two cases are also worth noting because of their factual underpinnings. The first involved the owner/operator of a dry cleaning establishment who stored hazardous waste on the premises without a permit.¹⁸⁹ A confederate resolved the owner's storage dilemma by hauling away twenty-three 55-gallon drums of waste and abandoning them on a rural dirt road.¹⁹⁰ Similarly, in the only case identified as

¹⁸⁵ Nearly half of those in the repair/maintenance business were engaged in aircraft refinishing or barge cleaning. The others repaired/maintained motor engines or parking lots, restored furniture, and cleaned sand and grease traps.

¹⁸⁶ Agriculture, construction, mining, public administration, and transportation were business sectors represented to a much smaller extent. A prosecution in which fourteen shipmasters and officers were among twenty-one named defendants inflated the number of defendants in the transportation industry. *See supra* note 162. Charges against all of the shipmaster/officer defendants were dismissed.

¹⁸⁷ *Cf.* Kevin A. Gaynor et al., *Environmental Criminal Prosecutions: Simple Fixes for a Flawed System*, 3 VILL. ENVTL. L.J. 1, 25 (1992) (noting—in context of discussing hazards of “reduced” culpability levels—that criminal penalties are not reserved for “midnight dumpers” or even “corporate America,” but extend instead to “all businesses, including the neighborhood auto repair shop and the local dry cleaner”).

The dry cleaner example seems a bit incongruous in its own right. Eighty-seven percent of dry cleaning establishments use perc (perchloroethylene) as a dry cleaning solvent, notwithstanding that it is a probable carcinogen and is believed to contribute to other health problems for cleaning workers, and perhaps inhabitants of nearby buildings as well. Perc vapors contaminate the air, and discharges of the long-lived chemical contaminate groundwater and soil. By the 1990s, dry cleaners were the biggest source of perc pollution. The 1990 Clean Air Act made virtually everything the chemical touched a hazardous waste, required extensive record-keeping, and imposed special disposal rules. *See* Barnaby J. Feder, *Cleaning Up the Dry Cleaners*, N.Y. TIMES, Feb. 15, 2000, at C1. It seems highly unlikely that anyone operating a dry cleaning business would be unaware of the special handling requirements.

¹⁸⁸ *See supra* notes 145–147 and accompanying text.

¹⁸⁹ *United States v. Mueller*, No. 91-0204-CR(4) (E.D. Mo. Sept. 20, 1991), EPA SUMMARY, *supra* note 76, at 170. *See also Man Pleads Guilty in Dumping Case*, ST. LOUIS POST-DISPATCH, Mar. 26, 1992, at 9A; *Police/Courts Column*, ST. LOUIS POST-DISPATCH, Jan. 10, 1992, at 8A; *Police/Courts Column*, ST. LOUIS POST-DISPATCH, July 2, 1992, at 10A. No stranger to chemicals, Mueller also owned a company that supplied chemicals used in dry cleaning and industrial cleaning. 1992 ENFORCEMENT ACCOMPLISHMENTS REPORT, *supra* note 78, at 3-103.

¹⁹⁰ Mueller and his confederate were charged with violating RCRA by illegally storing and disposing of hazardous waste. The confederate was also charged with conspiracy and with failure to notify authorities of the release of a hazardous substance, in violation of CERCLA. Mueller pled

involving an auto repair facility, the facility's operator and an independent scrap metal dealer were prosecuted for dumping eight barrels of paint waste and lacquer thinner in a vacant lot.¹⁹¹ Innocents at risk?

G. *Specific Offense Characteristics*

The prosecution summaries provide additional information that sheds light on the nature of the violations that led to criminal prosecution. The next two sections report what is known about where illegal storage and disposal of hazardous waste occurred and what kinds of waste were involved.

1. *Storage and Disposal Sites*

About 40 percent of the RCRA prosecution summaries contained sufficient information to provide a meaningful glimpse at where illegal disposal of hazardous waste occurs. In some prosecutions the violations occurred at multiple sites, often because the defendants employed more than one illegal disposal method.¹⁹² More than 25 percent of the site-specific cases involved disposing of hazardous waste in and along waterways—including an ocean, rivers, creeks, lakes, streams, and the surrounding land.¹⁹³ The wastes dumped in and around these waterways included raw sewage, pesticides, paints and solvents, acids, and other caustic chemicals.

Similarly, in another 25 percent of the site-specific cases, defendants disposed of hazardous waste in remote or unattended locales including nature areas, dirt roads, strip mines, vacant lots, pits, fields, and woods.¹⁹⁴ Waste was abandoned in self-

guilty to two counts of illegal storage and disposal of hazardous waste, and the confederate pled guilty to failure to notify of a release of a hazardous substance in violation of CERCLA.

¹⁹¹ *United States v. Blackstone*, No. 86-00012 (W.D. Wash. Feb. 12, 1986), EPA SUMMARY, *supra* note 76, at 40. The defendants were charged with conspiracy, illegal transportation of hazardous waste without a manifest, and illegal disposal of hazardous waste without a permit. Both men pled guilty to the illegal disposal charge.

¹⁹² *See, e.g., United States v. Hoflin*, No. 85-82 (W.D. Wash. Oct. 10, 1985), EPA SUMMARY, *supra* note 76, at 31; *United States v. Pac. Enters. Oil Co.*, No. 92-CR-003 (D. Wyo. Jan. 21, 1992), EPA SUMMARY, *supra* note 76, at 178; *United States v. Metro Container Corp.*, No. 90-359 (E.D. Pa. Aug. 15, 1990), EPA SUMMARY, *supra* note 76, at 146.

¹⁹³ *See, e.g., United States v. Croda Inks Corp.*, No. 91-20109-01-H (W.D. Tenn. Apr. 22, 1991), EPA SUMMARY, *supra* note 76, at 162; *United States v. Goodner*, No. 90-20031-04 (W.D. Ark. Oct. 3, 1990), EPA SUMMARY, *supra* note 76, at 150; *United States v. Turner*, No. 86-332-1 (E.D. Wash. Nov. 17, 1986), EPA SUMMARY, *supra* note 76, at 52; *United States v. Will & Baumer, Inc.*, No. 86-91 (N.D.N.Y. May 2, 1986), EPA SUMMARY, *supra* note 76, at 42; *Hoflin*, No. 85-82, EPA SUMMARY, *supra* note 76, at 31.

¹⁹⁴ In one case, the waste was disposed of in a rural pasture four hundred miles away from the generator. *United States v. Long*, No. CR-92-16Z (W.D. Wash. Jan. 16, 1992), EPA SUMMARY, *supra* note 76, 177 (charging company and its president and two vice presidents and three illegal

storage units¹⁹⁵ and in a semi-trailer on a vacant lot,¹⁹⁶ and was buried beneath a concrete loading dock.¹⁹⁷ In several cases, hazardous waste was dumped into trash dumpsters, and in at least nine others the defendants disposed of hazardous waste in municipal sewage systems or sanitary landfills.¹⁹⁸

Almost all of the site-specific violations that occurred on company property involved burial of waste, dumping on the ground, or storage and disposal in pits or surface impoundments.¹⁹⁹ These violations also included systematic dumping of waste into drains and toilets²⁰⁰ and pumping the contents of a 750-gallon tank into a "ground hog hole" on company property.²⁰¹

transporters with RCRA violations and conspiracy for illegally disposing of nearly three hundred 55-gallon drums of highly ignitable hazardous waste).

In addition to the enumerated types of locales, several cases described disposal sites as "in the county" or at "various sites in and around the county," *see, e.g.*, *United States v. Taylor Labs., Inc.*, No. CR 1-89-57 and No. CR 89-18R (E.D. Tenn. May 10, 1989), EPA SUMMARY, *supra* note 76, at 83, and one case summary indicated that the waste was disposed of on a farm owned by the defendant company. *See United States v. Robert Dekeror of R.I., Inc.*, No. 86-022 (D.R.I. May 20, 1986), EPA SUMMARY, *supra* note 76, at 48.

A few cases involved disposal on government or publicly-owned property without further describing the nature or location of the property, *see, e.g.*, *United States v. Shiflar*, No. 92 CR 094B (D. Wyo. Sept. 24, 1992), EPA SUMMARY, *supra* note 76, at 195, with the exception of a military base. *See United States v. Carr*, No. 88-CR-36 (W.D.N.Y. Mar. 2, 1988), EPA SUMMARY, *supra* note 76, at 79.

¹⁹⁵ *United States v. Nzau*, No. 88-478M (W.D. Wash. Aug. 26, 1988), EPA SUMMARY, *supra* note 76, at 96; *United States v. Nelson*, No. 86-122 (D. Colo. Apr. 25, 1986), EPA SUMMARY, *supra* note 76, at 44.

¹⁹⁶ *United States v. Tietelbaum*, No. 87-75 (D.N.J. Oct. 18, 1987), EPA SUMMARY, *supra* note 76, at 57.

¹⁹⁷ *United States v. Sentco Paint Mfg. Co., Inc.*, No. 4-90-CR-0281 (N.D. Ohio Oct. 18, 1990), EPA SUMMARY, *supra* note 76, at 153, *supplemented in* 1992 ENFORCEMENT ACCOMPLISHMENTS REPORT, *supra* note 78, at 3-105.

¹⁹⁸ *See, e.g.*, *United States v. United States Sugar Corp.*, No. 91-8125-CR-Paine (S.D. Fla. Dec. 3, 1991), EPA SUMMARY, *supra* note 76, at 172; *United States v. Denver Sanitary Co.*, No. 87-CR-117 (D. Colo. Apr. 24, 1987), EPA SUMMARY, *supra* note 76, at 58-59; *United States v. Harwell*, No. 85-28 (N.D. Ga. Dec. 10, 1985), EPA SUMMARY, *supra* note 76, at 37.

¹⁹⁹ Nearly all of the cases in which the violation was site-specific to company property shared these offense characteristics. *See, e.g.*, *United States v. Nedmarc, Inc.*, No. 2-91CR-102EBB (D. Conn. Dec. 17, 1991), EPA SUMMARY, *supra* note 76, at 173 (charging company and its president/part-owner with disposing twenty drums of solvents and cyanides into the ground on company property).

²⁰⁰ *United States v. Yaron*, No. 83-00170 (E.D. Pa. May 2, 1983), EPA SUMMARY, *supra* note 76, at 7 (charging company president/owner/chief operator and the plant foreman with systematically dumping hazardous wastes, including toluene, corrosive acid, and benzene, onto ground and into drains and toilets at company facility).

²⁰¹ *United States v. Electrochemical Co., Inc.*, No. CR-92-231-01 (M.D. Pa. Sept. 12, 1992), EPA SUMMARY, *supra* note 76, at 193 (charging company and its president/owner/operator, its

2. Types of Waste

About half of the prosecution summaries provided enough data to allow a description of either the character of the hazardous wastes or the activities that generated the wastes. Chemicals were by far the largest generic category of hazardous wastes in RCRA prosecutions.²⁰² Hazardous chemical wastes were present in about 75 percent of these cases. More than 40 percent of the cases involved wastes containing industrial degreasers, cleaners, and solvents, including toluene. The wastes in another 40 percent of the prosecutions contained metals including lead, copper, cadmium, chromium, and mercury. The wastes also contained other chemical compounds such as acids (including hydrochloric and hydro sulfuric acid), cyanide and arsenic, pesticides, fertilizers, creosotes, ink, and lacquer.²⁰³ And hazardous substances were often mixed together like toxic cocktails before the illegal storage or disposal occurred.²⁰⁴

3. Miscellaneous Characteristics

There are additional offense characteristics—such as waste quantities involved,²⁰⁵ how the offense was committed,²⁰⁶ the defendant's motive,²⁰⁷ or the

maintenance supervisor, its production manager, and its shift supervisor with environmental crimes and various fraud offenses).

²⁰² In some instances, the description of the hazardous wastes did not go beyond "chemicals," "chemical waste," or some other generic designation. *See, e.g.,* United States v. Aspen Aviation Co., No. CR-92-20014 (W.D. Ark. June 18, 1992), EPA SUMMARY, *supra* note 76, at 191.

²⁰³ Other identified wastes that appeared relatively infrequently included industrial wastewater, biomedical and laboratory wastes, asbestos, PCBs, raw sewage, and oils.

²⁰⁴ *See, e.g.,* United States v. Cohen, No. JFM-89-0468 (D. Md. Dec. 1, 1989), EPA SUMMARY, *supra* note 76, at 127 (charging defendants with illegal storage of hazardous waste, including, *inter alia*, drums of hydrochloric acid mixed with cyanide).

²⁰⁵ About one-fifth of the prosecution summaries provide insight into the magnitude of the violations. The descriptions range from a few drums or barrels to thousands of gallons of waste. *See, e.g.,* United States v. Eagle Picher Indus., Inc., No. 85-343 (D. Colo. Dec. 11, 1985), EPA SUMMARY, *supra* note 76, at 38 (charging that defendant ordered burial of five drums of toxic wastes); United States v. Metro Container Corp., No. 90-359 (E.D. Pa. Aug. 15, 1990), EPA SUMMARY, *supra* note 76, at 146, *supplemented in* 1992 ENFORCEMENT ACCOMPLISHMENTS REPORT, *supra* note 78, at 3-102 (reporting that defendants were convicted of burying hundreds of drums of hazardous waste on company property and of discharging thousands of gallons of pollutants into a tributary of the Delaware river).

²⁰⁶ *See, e.g.,* United States v. A. C. Lawrence Leather Co., Inc., No. 82-00037 (D. N.H. Dec. 15, 1982), EPA SUMMARY, *supra* note 76, at 2 (charging defendant with disconnecting pipe leading to treatment plant in order to bypass treatment system, thereby causing discharge of untreated waste directly into river); United States v. Melle, No. G89-142CR (W.D. Mich. Oct. 5, 1989), EPA SUMMARY, *supra* note 76, at 123 (charging defendant with removing or painting over labels from barrels of hazardous waste); United States v. Greer, No. 85-00105 (M.D. Fla. Dec. 17, 1985), EPA SUMMARY, *supra* note 76, at 35 (charging defendant, *inter alia*, with mislabeling drums

presence of fraud²⁰⁸—that could contribute to a more complete picture of the dynamics of hazardous waste crimes that prosecutors pursue. Although the prosecution summaries occasionally provide such quantitative and qualitative data, the data are not reported systematically. Thus, they are not included in my empirical analysis. For the convenience of the reader, though, I compiled a table of Composite Offense Profiles using thirty-one cases that consistently yielded, on balance, the most complete data. The table appears as Appendix C.

V. CONCLUSION

Critics of environmental criminal enforcement claim that RCRA violations are novel or significantly different from other white-collar crimes. But in reality, environmental crime and white-collar crime share an important common denominator—economic motivation.²⁰⁹ Business owners and operators have strong financial incentives to disregard costly environmental regulatory requirements. In the context of RCRA violations, the savings can be enormous. Thus, in addition to harming human health and the environment, those who defy RCRA's regulatory requirements gain an unfair competitive edge. In consequence, it seems wholly appropriate for prosecutors to bring hazardous waste crime cases into the mainstream of the government's criminal enforcement priorities.

The question, then, is *how* have prosecutors integrated hazardous waste crime prosecutions into the larger white-collar crime enforcement program? Because we are all potential generators of hazardous waste, we are all—at least in theory—potentially subject to criminal prosecution for improper storage and disposal. Does it therefore follow that prosecutors will allocate scarce resources to prosecuting de minimis violations?

The empirical evidence is to the contrary. While RCRA prosecutions play an integral role in the government's criminal compliance program, prosecutorial charging practices are consistent with the Justice Department's white-collar crime and corporate prosecution policies. Hazardous waste prosecutions focus almost

of hazardous waste as dirt); *United States v. Marine Shale Processors, Inc.*, No. CR89-60041-01 (W.D. La. July 24, 1989), EPA SUMMARY, *supra* note 76, at 117 (charging that marine contractor sank barge filled with waste in Gulf Intercoastal Waterway); *United States v. Denison*, No. CR-92-2167 (S.D. Tex. Sept. 11, 1992), EPA SUMMARY, *supra* note 76, at 194 (charging defendant with moving several trailers stacked three drums high from facility to facility in order to keep the drum count down during inspections).

²⁰⁷ See, e.g., *United States v. Int'l Paper Co.*, No. 91-00051-B (D. Me. July 3, 1991), EPA SUMMARY, *supra* note 76, at 166 (charging defendant with storing and treating burned hazardous waste without a permit and making false material statement to avoid cost of proper waste management).

²⁰⁸ See, e.g., *United States v. Enviro-Analysts, Inc.*, No. 90-CR-165 and No. 90-CR-191 (E.D. Wis. July 9, 1990), EPA SUMMARY, *supra* note 76, at 147 (charging defendants with falsifying discharge monitoring report clients paid them to prepare).

²⁰⁹ Burns, *supra* note 75, at 6.

exclusively on business people who have significant operational authority and responsibility. RCRA prosecutions target obviously illegal conduct that occurs in the context of highly regulated business activity. The violations are often pervasive and almost always potentially harmful to human health and the environment.

Charging practices in RCRA prosecutions are also consistent with the EPA's criminal enforcement priorities—to prosecute those who operate outside the regulatory system and those who operate in the system but undermine it by committing crimes of misrepresentation and concealment.²¹⁰ Contrary to unsubstantiated claims about the probability that environmental managers will be prosecuted for “inadvertent, unintentional, and unknown technical permit violations,”²¹¹ few RCRA prosecutions actually charge permit violations. Instead, most hazardous waste prosecutions are about engaging in highly regulated conduct without a permit to do so. In practice, prosecutors are highly selective in deciding what cases to pursue. They assign priority to prosecuting rogue operators who make no pretense of complying with regulatory requirements and to prosecuting permit holders who lie to conceal their noncompliance. That should hardly be cause for alarm.

²¹⁰ Habicht, *supra* note 143, at 10480. See Devaney Memorandum, *supra* note 148 (articulating specific offense characteristics that distinguish cases warranting criminal investigation from those that should be handled civilly or administratively). See also Block, *supra* note 144, at 22 n.5, 23–24 (stating that EPA priorities have remained relatively constant in reliance on the DOJ's *Principles of Federal Prosecution*); Robert I. McMurry & Stephen D. Ramsey, *Environmental Crime: The Use of Criminal Sanctions in Enforcing Environmental Laws*, 19 LOY. L.A. L. REV. 1133, 1161–62 (1986) (discussing factors that guide prosecutorial discretion); Penders, *supra* note 20, at 838 (noting that before EPA refers a case for criminal prosecution, the case goes through a five-step screening process to determine whether it meets formal criteria for criminal referral); Thomas L. Weisenbeck & Rita Elena M. Casavechia, *Guidelines for Prosecution of Environmental Violations: The Tension between Self-Reporting and Self-Auditing*, 22 ENV'T REP. (BNA) 2481, 2481–82 (Mar. 6, 1992) (discussing factors that guide prosecutorial discretion).

²¹¹ Kepten D. Carmichael, Note, *Strict Criminal Liability for Environmental Violations: A Need for Judicial Restraint*, 71 IND. L.J. 729, 749 (1996). See also John F. Cooney, DEFENSES TO THE SECOND GENERATION OF ENVIRONMENTAL CRIMINAL PROSECUTIONS, IN CRIMINAL ENFORCEMENT OF ENVIRONMENTAL LAWS 39, 41–42 (ALI-ABA Course of Study) (Oct. 20–21 1994) (predicting that as more businesses obtain permits, prosecutions will increasingly charge permit violations based on morally ambiguous conduct).

APPENDIX A

Sample Prosecution Summary
United States v. Electrochemical Company, Inc. (ECI),
CR-92-231-01 (M.D. Pa. 1992)²¹²

Electrochemical Company, Inc.
(ECI)
Frank H. Leaman
Russel L. Walker
Glenn L. Stover, Jr.
John Gibble
CR-92-231-01
(M.D. Pennsylvania)

Facts: Electrochemical Company, Inc. (ECI) located in York, Pennsylvania, was an electroplating and metal finishing business which electroplated parts for the Department of Defense. Leaman was president and principal owner/operator of ECI, Walker was ECI maintenance supervisor, Stover was ECI production manager, and Gibble was ECI shift supervisor. The charges stemmed from illegal disposal of a hazardous waste, failing to report a release of hazardous substances, making false statements about the release to the Pennsylvania Department of Environmental Resources, and falsifying documents required to be submitted to the Department of Defense.

09/12/92: The corporation and four individuals were charged with five informations charging felony violations of environmental statutes and various Title 18 Defense Fraud offenses. Electrochemical Company, Inc. (ECI) was charged with a one count pretreatment violation of the Clean Water Act—33 U.S.C. § 1319(c)(2)(A). Leaman was charged with violation of the CERCLA—42 U.S.C. § 9603; RCRA—42 U.S.C. 6928(d)(2)(A); and false statements—18 U.S.C. § 1001. Walker was charged with violations of the CERCLA—42 USC 9603. Stover was charged with one count of destruction of evidence—18 U.S.C. § 2232. Gibble was charged with false statements—18 U.S.C. § 371.

²¹² U.S. ENVIRONMENTAL PROTECTION AGENCY OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE, CRIMINAL PROSECUTIONS RESULTING FROM ENVIRONMENTAL INVESTIGATIONS, FISCAL YEARS 1983 THROUGH 1992 at 193.

APPENDIX B

Sample Prosecution Summary Update
United States v. Electrochemical Co., Inc. (et al.)
(M.D. Pa. 1992)²¹³

U.S. v. Electrochemical Co., Inc., et al., (M.D. Pa.): Frank Leaman, an electroplater was sentenced to 15 months in prison for illegally disposing of hazardous waste, failing to report a release of a hazardous substance, making false statements, and falsifying documents. This minimum sentence was imposed only because of other disastrous losses his actions brought upon himself, his family, and his company. These include the loss of his company that is in bankruptcy, the loss of more than \$100,000 invested by family members in the company, and the loss of his personal residence pledged as collateral for bank loans.

On January 15, 1993, Leaman, of York, Pa. and his company, Electrochemical Co., Inc., were sentenced. The company was engaged extensively in cadmium plating as a DOD subcontractor. The sentences were imposed for (1) failing to notify authorities about an accidental 2,000-gallon spill of spent acids in 1989 and for lying to the Pa. Department of Environmental Resources (DER) about the amount of the spill, (2) pumping the contents of a 750-gallon tank of caustic (pH of 13) parts cleaner into a "groundhog hole" on company property after the City refused to renew the company's pretreatment discharge permit, and (3) submitting false manufacturing and performance certifications to DOD regarding plated parts used in military vehicles.

The company was sentenced to pay a \$250,000 fine for violating CWA pretreatment discharge standards in 1989 and 1990. The court suspended \$225,000 of the fine if the company or its successor would enter into a written agreement with the DER for cleanup of contaminated areas of company property.

Two company employees were sentenced each to one year of probation, a fine of \$1,500, and 100 hours of community service. Russell S. Walker, Jr., a company supervisor, was sentenced for failing to report the spill. Glenn L. Stover, Jr., was sentenced for removing copies of certifications sent to DOD and other documents to prevent them from being seized during execution of a search warrant. EPA, the FBI, DCIS and NIS conducted the investigation jointly, with the assistance of the City of York and the Pa. DER.

²¹³ EPA OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE, ENFORCEMENT ACCOMPLISHMENTS REPORT FY 1993, 3-79 (Apr. 1994).

APPENDIX C

Composite Offense Profiles

LEAD DEFENDANT	MATERIAL	CHARACTERISTIC	SITE	QUANTITY
Robert K. Blackstone	Chemicals—paint waste & solvents	Dumping	Vacant lot	8 Barrels
David Carr	Chemicals, metals & solvents—paint waste & solvents	Dumping	Ground & lagoon at military base	300 5-gallon containers
Crittenden Conversion Corp.	Waste—hazardous	Dumping	Woods	21 Drums
William Dave Denison	Waste—hazardous	Waste routinely moved to other locations pending government inspections		Several trailers with drums stacked three high

LEAD DEFENDANT	MATERIAL	CHARACTERISTIC	SITE	QUANTITY
Eagle Picher Industries, Inc.	Waste—toxic	Burial & removal		5 Drums
Electrochemical Company		Defense Department fraud		
	Chemicals—spent acids	Spill—lying about amount spilled		2,000 gallons
	Chemicals—caustic cleaner	Pumping contents of 750 gallon tank after city refused to renew defendant's pretreatment discharge permit	"Ground-hog hole" on company property	
Executive Advertising, Inc.	Chemicals—ink & lacquer	Abandonment		100 Drums
Forms, Inc.	Waste—hazardous	Generator hired co-defendant contractor to remove drums		55-gallon drums

LEAD DEFENDANT	MATERIAL	CHARACTERISTIC	SITE	QUANTITY
Gaston Copper Recycling Corp.	Chemicals—toxic fertilizer micronutrient with lead & cadmium	Exported to Bangladesh & Australia in exchange for \$50,000 kickback		3,000 tons
General Wood Preserving Co.	Chemicals—including arsenic, chromium & creosote	Burial—President/part-owner ordered & supervised	Company property	Several thousand gallons
Reginald Max Goldsmith	Waste—hazardous	Fraudulent waste removal company, false documents relating to transportation & disposal	3 locations in metropolitan Atlanta	200 55-gallon drums

LEAD DEFENDANT	MATERIAL	CHARACTERISTIC	SITE	QUANTITY
Arthur Greer	Chemicals—including cyanide & toluene	Proprietor ordered unorthodox chemical testing methods		
	Chemicals—1,1,1-trichloroethane	Dumping		1,000 gallons
	Waste—hazardous	Mislabeled hazardous waste as dirt		Drums
Douglas G. Hoflin	Chemicals—paint	Burial in sandy soil	Sewage treatment plant next to wildlife refuge & ocean	14 drums
	Waste—raw sewage	Dumping in sandy soil	Depression next to ocean	3,500 gallons
James R. Hunt	Waste—hazardous	Owner/operator paid employee to transport & dispose	Various sites in & around city	76 drums

LEAD DEFENDANT	MATERIAL	CHARACTERISTIC	SITE	QUANTITY
Robert T. Kruse	Waste—hazardous	Fictitious waste removal company & fraud		60 barrels
Larry Clay Lavender	Chemicals—including chromic acid, cyanide & heavy metals	Storage		68 drums
Leigh Industries	Waste—toxic & corrosive	Dumping	Company property	Barrels
Merlin D. Long	Waste—highly ignitable	Dumping	Rural pasture 400 miles from generator	292 55-gallon drums
Ignacio Lopez	Waste—hazardous	Exporting		25 drums

LEAD DEFENDANT	MATERIAL	CHARACTERISTIC	SITE	QUANTITY
Metro Container Corp.	Waste—hazardous	Burying	Company property & plant	Hundreds of drums
	Pollutants	Discharging	Creek—tributary of Delaware River	Thousands of gallons
	Waste water—industrial	Discharging	POTW	
Richard M. Mims	Chemicals—toluene	Dumping—President directed employees to dump	L.B. Houston Nature Area	12 55-gallon drums
Marvin Mueller	Chemicals—spent dry cleaning solvents	Dumping	Rural area	28 55-gallon drums (13 of which contained ignitable waste)
Nedmarc, Inc.	Chemicals—industrial solvents & cyanides	Dumping	On ground at company facility	20 drums

LEAD DEFENDANT	MATERIAL	CHARACTERISTIC	SITE	QUANTITY
Chorine Kasema Mackenzie Nzau	Waste—hazardous	Storage	Mini-storage units—rent past due	300 55-gallon drums
Sentco Paint Manufacturing Co.	Chemicals—glue & paint waste	Burial	Under cement loading dock	56 drums
		Dumping	Trash dumpster	
Danny Shiflar	Waste—hazardous	Abandonment	Government property	Drums
Joseph Tietelbaum	Chemicals	Abandonment	Semi-trailer on vacant lot	59 drums
Albert S. Turmin	Chemicals—ethyl ether	Abandonment	Vacant lot in residential neighborhood	33 55-gallon barrels

LEAD DEFENDANT	MATERIAL	CHARACTERISTIC	SITE	QUANTITY
United States Sugar Corp.	Chemicals—spent solvents	Pouring	Onto ground & into drainage ditches & canals	Thousands of gallons
	Waste—foxic lead	Disposal	On site and in county landfill	
John Van Hoesen	Chemicals—spent solvent	Handling		150,000 gallons
		Lying re: regulated status		