

PUTTING THE BOSS BEHIND BARS: USING CRIMINAL SANCTIONS AGAINST EXECUTIVES WHO POLLUTE - WHAT CHINA COULD LEARN FROM THE UNITED STATES

Whether it was greed or stupidity, I don't know what happened.¹

I. INTRODUCTION

Industry in the United States is heavily regulated, especially in the area of pollution control.² When monetary fines imposed for violations of pollution control laws had become a mere “cost of doing business,”³ criminal sanctions for executives and managers who pollute on their watch were added to the American regulatory scheme.⁴ Pollution control is so pervasive that plant managers and corporate executives who may play little, if any, direct role in the day-to-day operations of their firms are considered constructively notified

1. Peter Pochna, *New Jersey Executive Gets 12-Years in Environmental Crime*, THE HACKENSACK RECORD, Nov. 8, 2002, available at 2002 WL 102881772. New Jersey Superior Court Judge Joseph Conte's statement, upon handing down a twelve-year prison sentence for illegal dumping authorized by a corporate executive. *See id.* James O'Brien was sentenced to twelve years in prison for authorizing the illegal dumping of vats of sludge containing cyanide and arsenic generated from his New Jersey electro-plating plant. *See id.* O'Brien was sentenced under New Jersey's illegal dumping laws. *See id.* Clean-up costs at O'Brien's abandoned plant were estimated to be \$500,000, with O'Brien ordered to pay \$200,000 for remediation costs in addition to his prison term. *See id.* However, due to his financial circumstance, O'Brien's actual fine was \$4,000. *See id.* Furthermore, O'Brien admitted to fraudulently obtaining a \$75,000 small business loan for the purchase of pollution control devices for his plant that were never installed. *See Pochna.*

2. *See* Robin Weiner et al., *Environmental Crimes*, 28 AM. CRIM. L. REV. 427 (1991). Federal enforcement of environmental laws through criminal sanctions occurs under eight principal statutes. *See id.* The Clean Air Act imposes penalties on those who knowingly violate federal or state air quality regulations. *See id.* The Federal Water Pollution Control Act, the Rivers and Harbors Act, and the Safe Drinking Water Act protect the nation's surface and groundwater. *See id.* The Resource Conservation and Recovery Act criminalizes improper transport, storage, and disposal of hazardous wastes. *See id.* The Comprehensive Environmental Response, Compensation, and Liability Act mandates the remediation of contaminated sites. *See id.* The Toxic Substances Control Act regulates the processing, manufacture, and distribution or disposal of chemicals that pose a risk to public or environmental health. *See* Weiner at 427-28. Finally, the manufacture, registration, transportation, sale, and use of toxic pesticides is regulated by the Federal Insecticide, Fungicide, and Rodenticide Act. *See id.* at 428.

3. *See U.S. Eco Rules Effective Under Criminal Law*, WORLD REPORTER – ASIA INTELLIGENCE WIRE, Mar. 24, 2001, available at 2001 WL 14489023 [hereinafter *U.S. Eco Rules*].

4. *See id.*

by the mere existence of regulation, thereby negating any ignorance defense.⁵ What is the ultimate goal of criminalizing this behavior? Deterrence.⁶

Conversely, China's environmental control policy has few criminal sanctions for executives and managers who pollute and very little enforcement of the laws that do have sanctions.⁷ With its new leadership, China is poised to become an economic superpower.⁸ However, as China continues to move toward a market-based economy,⁹ it must balance the incredible tension between its economic potential and the stress that economic growth places on its natural environment.¹⁰

There is no quick cure to problems caused by the competition between a nation's interest in economic growth and its fundamental need for a sustaining natural environment. Furthermore, this Note does not propose that the United States' method is ideal. It is far from it. Rather, this Note is an exploration of one possible addition that Chinese law may make as it continues the transition from a state-run economy to a market-based economy.

With this in mind, this Note will examine the United States' treatment of corporate pollution through the "responsible corporate officer" doctrine.¹¹ Section two focuses on the United States use of criminal sanctions as a policy enforcement mechanism, with particular emphasis placed on regulation of hazardous waste. Section three looks at China's environmental situation with particular focus on China's "crimes against the environment" doctrine.¹² Section four looks toward the potential for China to include vicarious corporate liability for environmental crime similar to the responsible corporate officer doctrine. Finally, section five provides observations on general corporate governance and impacts on the environment.

5. See 42 U.S.C. § 6928(d) (2000).

6. See *U.S. Eco Rules*, *supra* note 3.

7. See Chun-Xi Yang, *China's Treatment of Crimes Against the Environment: Using Criminal Sanctions to Fight Environmental Degradation in the PRC*, 8 J. CHINESE L. 145, 146 (Fall 1994).

8. Erik Eckhold, *China Carries Out an Orderly Shift of Its Leadership*, N.Y. TIMES, Nov. 15, 2002, at 1. Hu Jintao replaced Jiang Zemin as General Secretary of the Communist Party. See *id.* Jintao's ascendance to the head of the Communist Party was accompanied by many other changes within the Party structure and Politburo, generally symbolizing a generational shift in Chinese politics. See *id.*

9. See Geoff Winestock, *China Wants to Upgrade to Market Economy*, ASIAN WALL ST. J., Sept. 26, 2002, available at 2002 WL-WSJA 23018052. See also, *China and the WTO*, THE ECONOMIST 25, Nov. 20, 1999; Mao Baigen, *Wholly Individually-Owned Enterprises Leap Forward*, 13 CHINA L. & PRAC. 19 (Asia L. & Prac. Pub., Ltd.)(June/July 1999).

10. See *infra* notes 149-54.

11. See Barbara DiTata, *Proof of Knowledge Under RCRA and Use of The Responsible Corporate Officer Doctrine*, 7 FORDHAM ENVTL. L.J. 795, 806-07 (1996). Under the responsible corporate officer doctrine, a corporate officer may be held criminally liable if by virtue of his or her position and authority within the company, the officer had the power to prevent or correct the conduct that gave rise to the violation. See *id.* This liability may attach even though the officer did not personally participate in the commission of the offense. See *id.*

12. See Yang, *supra* note 7, at 146.

II. THE AMERICAN SYSTEM

Enforcement of criminal liability for environmental crimes in the United States is on the rise.¹³ “Clean up your act or go to jail” is a message increasingly sent to corporate executives and managers.¹⁴ Increased political pressure and public awareness has resulted in more vigorous prosecution.¹⁵ In a single year, seventy-eight percent of the environmental prosecutions handled by the United States Department of Justice involved corporations and their managers.¹⁶ More significantly, the Department of Justice has been achieving a ninety-five percent conviction rate for all environmental prosecutions.¹⁷ The total number of years assessed for criminal sentences rose from 146 in 2001, to 256 in 2002.¹⁸ At the close of the year 2000, the total of all criminal fines assessed under all environmental criminal enforcement programs totaled nearly 720 million dollars.

The application of criminal liability for environmental crime to corporate executives is known as the responsible corporate officer doctrine.¹⁹ Under this theory of liability a corporate officer is liable for the acts of his or her employees.²⁰ Juries are allowed to infer culpability based on the officer's position, responsibility, and authority in a company.²¹ The responsible

13. See Kevin A. Gaynor, *Environmental Enforcement: Industry Should Not Be Complacent*, 32 ENVTL. L. REP. 10488 (2002).

14. Janet L. Woodka, *Sentencing the CEO: Personal Liability of Corporate Executives for Environmental Crimes*, 5 TUL. ENVTL. L. J. 635 (1992).

15. Steven M. Morgan, *Perils of the Profession: Responsible Corporate Officer Doctrine May Facilitate a Dramatic Increase in Criminal Prosecutions of Environmental Offenders*, 45 SW. L.J. 1199, 1210-11 (1991).

16. See Gaynor, *supra* note 13.

17. See David Aufhauser et al., *Environmental Crimes, 1990 Annual Report*, 1990 A.B.A. SEC. NAT'L RESOURCES, ENERGY, & ENVTL. L. 211 (1990). Statistics reported are from 1990. See *id.*

18. See Gaynor, *supra* note 13. Years cited were fiscal rather than calendar years. See *id.*

19. See DiTata, *supra* note 11, at 806-07.

20. See Morgan, *supra* note 15, at 1200.

21. See *id.* By way of comparison, the responsible corporate officer doctrine is not universally applied. For instance, the nation of Japan imposes no such fiction of culpability through a “should have known” standard. See Kensuke Itoh, *Criminal Protection of the Environment and the General Part of the Criminal Law in Japan*, INT'L REV. OF CRIM. L. 1013, 1045 (1994). Vicarious criminal liability for corporate oversight of environmental violations conflicts with the cultural principles of responsibility and substantive due process as found in the Japanese Constitution. See *id.* It is not just a foreign concept to Japanese environmental law; it is foreign to all Japanese law. See *id.* However, the general principles of Japanese criminal law still apply and crimes against the environment are treated no differently than any other health or property violations. See *id.* Therefore, imputability to a corporate executive or plant manager must be direct and found in the factual evidence rather than implied through the legal construct of vicarious liability. See *id.* Therefore, an executive or manager who directly orders a subordinate to violate Japanese environmental law would be criminally liable for aiding and abetting the act. See *id.* However, there is a possibility that an executive actions or general

corporate officer doctrine imposes what has been colloquially called a "should have known" standard of responsibility on corporate officers for activities or violations that they supervise.²² Not only are corporate officers expected to monitor and exercise control, they are also expected to do so in an effective manner.²³

Courts' acceptance of the "should have known" *mens rea*²⁴ makes obtaining convictions against corporate officers less difficult than crimes requiring specific knowledge.²⁵ Early sentences for environmental convictions commonly involved suspended sentences, probation, and community service.²⁶ However, prosecutorial zeal, combined with strict adherence to the federal sentencing guidelines, has led to higher fines and incarceration.²⁷

Hazardous waste protection in the United States is covered primarily under two statutes: the Resource Conservation and Recovery Act (RCRA)²⁸

pattern of leadership, or lack thereof, could be constituted as inciting criminal behavior. *See* Itoh, at 1045. For a general review of Japan's environmental policy, including a specific discussion on the Japanese preference for proactive regulatory solutions and general reluctance to use criminal law, though it is in force, as a post hoc regulation, see JULIAN GRESSLER ET AL., ENVIRONMENTAL LAW IN JAPAN (1981).

22. *See* Woodka, *supra* note 14, at 650.

23. *See id.* at 651. By way of comparison, Australia stands in the gap of the United States' responsible corporate officer doctrine and Japan's repudiation of such a doctrine. *See* Itoh, *supra* note 21, at 1045. In Australia, the concept of vicarious liability for environmental crimes being imposed on corporate officers exists, but it requires a greater causal link. *See* Karen Bubna-Litic, *Criminal Liability of Company Directors for Pollution Damage*, 1995 AUST. J. CORP. L., Vol. 4, available at 1995 AJCL LEXIS 15. Australian law requires that the actions of the responsible individual must be traced directly to a corporate executive. *See id.* Therefore, if someone in the organization committed an offense to which the directors had not delegated authority, then the actions of the individual were not also the actions of the organization. *See id.* Without directly telling subordinates to flout the environmental regulations, executives may set profit or productivity goals at such a level that managers are unable to meet them and comply with the law. *See id.* The functional result of this scheme results in vicarious liability ending somewhere in the middle-management level of the corporate chain. *See id.*

24. "Mens rea" is defined as "an element of criminal responsibility: a guilty mind; a guilty or wrongful purpose; a criminal intent. Guilty knowledge and willfulness." BLACK'S LAW DICTIONARY 985 (6th ed. 1990).

25. *See* DiTata, *supra* note 11, at 798-99.

26. *See* Morgan, *supra* note 15, at 1210.

27. *See id.* at 1211. Factors that can result in an increased sentence under the federal sentencing guidelines include:

If the offense resulted in an ongoing, continuous, or repetitive discharge, release, or emission of a hazardous or toxic substance into the environment; If the offense resulted in a substantial likelihood of death or serious bodily injury; If the offense resulted in disruption of public utilities or evacuation of a community, or if cleanup required substantial expenditure; If the offense involved transportation, treatment, storage or disposal without a permit or in violation of a permit; and, If a record-keeping offense reflected an effort to conceal a substantive environmental offense.

Id.

28. *See* 42 U.S.C. §§ 6901-92 (2000). The Public Health and Welfare Acts, The Resource Conservation and Recovery Act.

and the Comprehensive Environmental Responsibility, Compensation, Liability, and Recovery Act (CERCLA).²⁹ RCRA controls hazardous chemicals in use, storage, and disposal.³⁰ CERCLA primarily deals with spills and abandoned contaminated sites.³¹

A. *The Resource Conservation And Recovery Act*

RCRA, enacted in 1976, authorizes the federal government to regulate the generation, storage, treatment, and disposal of hazardous wastes.³² The primary purpose of RCRA is to reduce creation of hazardous waste, manage its safe transport, and eliminate its dangerous disposal.³³ RCRA establishes standards governing generators and transporters of hazardous waste, as well as, owners of treatment and disposal facilities that may require a permit from the United States Environmental Protection Agency (EPA).³⁴

RCRA requires development of state or regional solid waste plans.³⁵ RCRA also addresses the obligations of hazardous waste generators and transporters through detailed permitting and notification requirements,³⁶ violations of which may result in criminal sanctions.³⁷

RCRA is divided into nine subtitles with the hazardous waste provisions being located in Subtitle C.³⁸ "Hazardous waste" must first be categorized as a "solid waste."³⁹ "Solid waste" is any "garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material."⁴⁰ The EPA and regulated industries have

29. See 42 U.S.C. §§ 9601-75 (2000). The Public Health and Welfare Acts, The Comprehensive Environmental Responsibility, Compensation, Liability, and Recovery Act.

30. See 42 U.S.C. §§ 6902(a)(3)-(5) (2000).

31. See 42 U.S.C. § 9604 (2000).

32. 42 U.S.C. §§ 6901-92(k) (2000).

33. See, e.g., *Meghrig v. K.F.C. W. Inc.*, 516 U.S. 479, 484 (1996) (RCRA authorizes regulation to minimize current and future dangers to human and environmental health).

34. See *Am. Mining Cong. v. United States Environmental Protection Agency (EPA)*, 824 F.2d 1177, 1189 (D.C. Cir. 1987) (approving petition by industry trade group to limit EPA authority under RCRA to regulate non-discarded materials that would be re-processed and recycled). The D.C. Circuit has sole review authority of pre-enforcement petitions. See 42 U.S.C. § 6976(a)(1) (2000).

35. See 42 U.S.C. §§ 6901-92(k) (2000).

36. See STEVEN FERREY, *ENVIRONMENTAL LAW* 294-95 (2d ed. 2001).

37. See 42 U.S.C. § 6928 (2000).

38. See 42 U.S.C. §§ 6921-39 (2000). These sections are grouped under the heading "Hazardous Waste Management." *Id.*

39. See *United States v. ILCO, Inc.*, 996 F.2d 1126, 1130 (11th Cir. 1993) (material cannot be designated and regulated as "hazardous waste" unless it is first determined to be "solid waste").

40. 42 U.S.C. § 6903(27) (2000); 40 C.F.R. § 261.2(a)(2) (2001).

litigated the difference between abandoned waste and materials set for reuse within the production process.⁴¹

RCRA categorizes hazardous wastes as two types: "listed" and "characteristic."⁴² "Listed" wastes are those wastes enumerated by the EPA as known hazardous wastes.⁴³ "Characteristic" wastes are those solid wastes that contain enough hazardous substances to exhibit characteristics of a hazardous waste.⁴⁴ The most common criteria for establishing a "characteristic" waste are ignitability, reactivity, corrosiveness, and toxicity.⁴⁵

RCRA is unique in that it establishes the use of manifests.⁴⁶ A manifest is a traveling document prepared by the generator⁴⁷ for waste leaving their site.⁴⁸ The purpose of the manifest is to track waste through generation, transportation, storage, and eventual disposal.⁴⁹ The manifest travels with the substance from generation, at the cradle, through its useful life, until its eventual disposal, at the grave. This is why the RCRA scheme of waste tracking is commonly referred to as "cradle-to-grave tracking" of the waste.⁵⁰

1. Criminal Liability Under RCRA

The criminal prohibitions under RCRA apply to the entire "cradle-to-grave" process. It is illegal to transport waste to an unregulated facility.⁵¹ Treatment, storage, or disposal of wastes without a permit is also illegal.⁵² RCRA prohibits omissions or making false statements on any report, manifest,

41. See *Ass'n of Battery Recyclers v. EPA*, 208 F.3d 1047, 1050-56 (D.C. Cir. 2000) (setting aside EPA's new reclamation regulations that expanded "discarded" and "recycled" materials to include any secondary material not continuously used as an input in the production process); see also *Am. Mining Cong.*, 824 F.2d at 1189.

42. See 40 C.F.R. § 261.3(a) (2001).

43. Currently listed wastes can be found at 40 C.F.R. § 304.4 (2001).

44. See 40 C.F.R. §§ 261.3(a)(2)(i), 261.20(a) (2001).

45. See 40 C.F.R. § 261 (2001). For examples of statutes that discuss the criteria for characteristic wastes, see 40 C.F.R. § 261.21 (2001) (ignition); 40 C.F.R. § 261.22 (2001) (corrosion); 40 C.F.R. § 261.23(2001) (reaction); 40 C.F.R. § 261.24 (toxicity) (2001). For a criticism of the RCRA hazardous waste designation process as being over-inclusive, see Christopher J. Urban, *EPA's Hazardous Waste Identification Rule for Process Waste Gone Haywire Again*, 9 VILL. ENVTL L.J. 99 (1998).

46. See FERREY, *supra* note 36, at 495.

47. See 42 U.S.C. § 6903(6). The term "hazardous waste generation" means the act or process of producing hazardous waste. *Id.*

48. See FERREY, *supra* note 36, at 495.

49. See *id.*

50. See *id.* at 295-96.

51. See 42 U.S.C. § 6928(d)(1), (d)(5) (1988).

52. See *id.* at § 6928(d)(2), (d)(4). The smallest amount of illegally dumped hazardous waste that was criminally prosecuted was one fifty-gallon drum in New Jersey. See *New Jersey v. Parmar*, 17 ENV'T REP. CAS. 307 (BNA) (N.J. Sup. Ct. 1986). In *Parmar*, under New Jersey's version of RCRA, the defendants faced a maximum sentence of fourteen years in prison. See *id.*

or other required document.⁵³ RCRA authorizes the EPA to inspect facilities upon the *ex parte* issuance of an administrative search warrant.⁵⁴

RCRA contains two separate criminal provisions. The first imposes liability on individuals who knowingly violate RCRA.⁵⁵ The second provides for penalties for knowing endangerment.⁵⁶ The “knowingly” requirement is a major point of contention in applying RCRA’s criminal standard. In *United States v. Hayes Int’l Corp.*,⁵⁷ the defendants were convicted of transporting hazardous waste to a facility without a permit.⁵⁸ The prosecution was required to prove that the defendants knew the landfill to which the waste was being transported did not have a permit.⁵⁹ However, the Alabama district court found that the prosecution could demonstrate scienter⁶⁰ with circumstantial evidence from which the jury could draw inferences.⁶¹ In its opinion, the court stated “knowledge does not require certainty, and the jurors may draw inferences from all of the circumstances, including the existence of the regulatory scheme.”⁶²

53. See 42 U.S.C. § 6928 (d); see also 40 C.F.R. §§ 122, 262, 264 (containing reporting requirements for hazardous waste permits for generators, storage facilities, or disposal firms); see, e.g., *United States v. W.R. Grace & Co.*, 19 ENV’T REP. 204 (BNA) (D. Mass. 1988) (Grace was convicted for filing false statement on amount of hazardous chemical used in company’s process).

54. See 42 U.S.C. § 6928(d)(1); see *National-Standard Co. v. Adamkus*, 685 F. Supp. 1040, 1050 (N.D. Ill. 1988) *aff’d*, 881 F.2d 352 (7th Cir. 1989) (expanding EPA’s inspection and sampling authority to any area where hazardous wastes have been kept).

55. See 42 U.S.C. § 6928(d) (2000). Congress expanded the “knowingly” requirement to include “willful blindness.” See *id.* Criminal responsibility cannot be avoided by deliberately remaining ignorant about the conditions or requirements of a permit. See House Judiciary Comm., *Hazardous and Solid Waste Amendments of 1984*, H.R. Rep. No. 198 (Part III), 98th Cong., 2d Sess. 9.

56. See 42 U.S.C. § 6928(e) (2000).

57. *United States v. Hayes Int’l Corp.*, 786 F.2d 1499, 1503 (M.D. Ala. 1986).

58. See *id.*

59. See *id.*

60. Scienter is used:

to signify an allegation . . . setting out the defendant’s previous knowledge of the cause which led to the injury complained of, or rather his previous knowledge of a state of facts which it was his duty to guard against, and his omission to do which has led to the injury complained of. The term is frequently used to signify the defendant’s guilty knowledge.

BLACK’S, *supra* note 24, at 1345.

61. See *Hayes*, 786 F.2d at 1504. The government may establish “knowledge” by (1) showing that the defendant was aware that a result was practically certain to follow from particular conduct; (2) showing that the defendant willfully failed to determine the permit status of the landfill it selected; (3) raising inferences from the context of the transportation of the defendant’s waste; or (4) presenting evidence of failure to follow regular waste disposal procedure. See *id.*

62. *Id.* at 1505. See generally Karen M. Hansen, *Knowing Environmental Crimes*, 16 WM. MITCHELL L. REV. 987 (1990) (“knowing” requirement for prosecution under RCRA and other environmental protection laws is too difficult to prove, and therefore, the responsible corporate officer doctrine and the willful blindness doctrine are being used by prosecutors to circumvent the knowledge requirement).

Hayes' defense was ignorance of the waste disposal requirements imposed under RCRA.⁶³ The court rejected that defense, noting the heavily regulated nature of the waste disposal business and the inherent dangers it posed to the public.⁶⁴ The court established that "the jurors must find that the defendant knew what the waste was" and knew of the absence of a permit.⁶⁵

Other courts have not required the *Hayes* level of proof when establishing knowledge. In *United States v. Hoflin*, the Ninth Circuit Court of Appeals found that the government need not prove that the defendant violated RCRA by not having a permit, but only that the defendant knew that the waste was hazardous.⁶⁶

In *United States v. Johnson & Towers, Inc.*,⁶⁷ the Third Circuit required a higher level of knowledge than in *Hayes*. The prosecution was required to show specific intent to violate RCRA.⁶⁸ Thus, the government was required to demonstrate that the defendant's actions were done with knowledge that there was no permit.⁶⁹ The *Johnson Towers* requirement of showing knowledge of every RCRA provision has been criticized for failing to further the Congressional intent of deterring pollution through criminal sanctions.⁷⁰

2. Disposal And Storage Under RCRA

For cases involving storage and disposal of hazardous waste without a permit, the government must prove that the material was "waste"⁷¹ and that the defendant knew that the waste was at least generally harmful or dangerous.⁷² The prosecution was not required to prove that the defendant knew that the

63. See *Hayes*, 786 F.2d at 1504.

64. See *id.* at 1503. See also *United States v. Goldsmith*, 978 F.2d 643, 645-46 (11th Cir. 1992) (prosecutors must only show defendant had general knowledge of hazardous character waste); *United States v. Hines*, 210 F.3d 390, 392 (10th Cir. 2000) (prosecutors must only show that defendant knew that waste had the potential to harm people or the environment and not necessarily the chemical composition of the waste).

65. See *Hayes*, 786 F.2d at 1505.

66. See *United States v. Hoflin*, 880 F.2d 1033 (9th Cir. 1989).

67. See *United States v. Johnson & Towers, Inc.*, 741 F.2d 662 (3d Cir. 1984).

68. See *id.*

69. See *id.* at 668-69.

70. See *Morgan*, *supra* note 15, at 1206.

71. See *United States v. Kelley Technical Coatings, Inc.*, 157 F.3d 432, 435 (6th Cir. 1998) (requiring government to prove that defendant knew the material was waste); see also *United States v. Sellers*, 926 F.2d 410, 416 (5th Cir. 1991) (requiring proof of knowledge that material was waste through a showing of what waste was).

72. See *Kelley*, 157 F.3d at 436 (prosecutors need only prove knowledge of materials harmful potential to others and the environment). See also *United States v. Baytank*, 934 F.2d 599, 613 (5th Cir. 1991) (requiring the government to prove only the defendant's knowledge of the harmful potential of the waste). See also, *United States v. Dee*, 912 F.2d 741, 745 (4th Cir. 1990) (requiring the government to prove defendant's knowledge of "general hazardous character" of the waste).

waste was hazardous under RCRA, that there was no disposal permit, or that a permit was required.⁷³

In *United States v. Harwell*,⁷⁴ the district court for the northern district of Georgia at the time imposed the longest prison sentence ever for an environmental crime on two corporate officials of a waste disposal facility in Georgia.⁷⁵ The officials were convicted of storing, transporting, and disposing hazardous wastes without a permit and for making false statements.⁷⁶ The president of the company received a twenty thousand dollar fine and a three year prison term, while a vice-president was fined ten thousand dollars and sentenced to eighteen months in prison.⁷⁷ Similarly, in *United States v. Vanderbilt Chemical Corp.*,⁷⁸ the vice-president/plant manager was given a three-year suspended sentence, three-years probation, a ten thousand dollar fine, and three hundred hours of community service for illegally disposing hazardous waste under RCRA.⁷⁹ Also, the company paid one million dollars in fines and restitution.⁸⁰

In *United States v. Cuyahoga Wrecking Corp.*,⁸¹ the owner of a hazardous waste disposal company was convicted and sentenced on two counts of conspiracy to transport hazardous waste in violation of RCRA and one count of storing and disposing of hazardous waste without a permit.⁸² The defendant was sentenced to four years in prison, four years of probation, and fined one thousand dollars.⁸³

Public officials are also liable in their capacity in executive level positions.⁸⁴ In *United States v. Dee*,⁸⁵ the defendants were civilian engineers employed to develop chemical warfare systems for the United States Army.⁸⁶ As heads of their departments, the defendants were responsible for ensuring compliance with RCRA.⁸⁷ The defendants claimed ignorance of RCRA.⁸⁸ The

73. See *Kelley*, 157 F.3d at 436-37 (rejecting defendant's argument that knowledge of permit requirement necessary element for conviction).

74. *United States v. Harwell*, 17 ENV'T REP. (BNA) 1573 (N.D. Ga. 1987).

75. See *id.*

76. See *id.*

77. See *id.* at 1573-74.

78. *United States v. Vanderbilt Chem. Corp.*, 20 ENV'T REP. (BNA) 334 (D. Conn. 1989).

79. See *id.*

80. See *id.*

81. *United States v. Cuyahoga Wrecking Corp.*, 19 ENV'T REP. (BNA) 75, 76 (D. Md. 1988).

82. See *id.*

83. See *id.*

84. See *United States v. Bogas*, 920 F.2d 363 (6th Cir. 1990) (applying criminal liability to airport commissioner for burial of solvent drums on the airport grounds).

85. See *United States v. Dee*, 912 F.2d 741, 748-49 (4th Cir. 1990).

86. See *id.*

87. See *id.*

88. See *id.* The defendants offered an immunity defense because they were federal employees working at a federal facility. See *id.* The Fourth Circuit rejected this argument, though admitting that federal employees do enjoy a degree of immunity for specific actions.

Fourth Circuit Court of Appeals did not agree, citing the generally hazardous nature of the substances the defendants were working with as sufficient notice to overcome an ignorance defense.⁸⁹

In assessing criminal liability for corporate executives, prosecutors often combine other charges with the RCRA violations. In *United States v. MacDonald & Watson Waste Oil Co.*,⁹⁰ a federal grand jury indicted a Rhode Island company and its president under RCRA violations, racketeering charges, and mail fraud.⁹¹ The indictment, with fifty-three total counts, charged the company president and three employees with illegally transporting hazardous waste to an unpermitted facility and falsifying the waste manifest documentation.⁹²

3. Transportation Of Waste Under RCRA

In finding liability of a corporate officer for transporting hazardous waste under RCRA, the government must show similar "knowing" elements as in storage and disposal. In *MacDonald*,⁹³ the owners of a transportation company were found to have knowingly transported toluene-contaminated soil to a facility that was not permitted to accept that type of waste.⁹⁴ The First Circuit Court of Appeals rejected the trial court instruction that the officer knew the violation occurred.⁹⁵ The court held that the trial court's taking judicial notice of the defendant's knowledge was incorrect and the prosecution could prove knowledge by actual knowledge and circumstantial evidence suggesting knowledge.⁹⁶

See id. However, there is no general immunity from criminal liability for actions taken while in public service. *See Dee*, 912 F.2d at 748-49.

89. *See id.* The Fourth Circuit pointed to the public welfare nature of RCRA by stating "where . . . obnoxious waste materials are involved, the probability of regulation is so great that anyone who is aware that he is in possession of them or dealing with them must be presumed to be aware of that regulation." *Id.* at 745. The court also rejected the defendant's argument that they were being prosecuted for "sloppy storage procedures." *Id.* at 747. The court did not agree and retorted by saying that is just such a behavior that is an "evil RCRA was designed to prevent." *Id.*

90. *United States v. MacDonald & Watson Waste Oil Co.*, 18 ENV'T REP. (BNA) 2554, 2555 (D.R.I. 1988).

91. *See id.*

92. *See id.* *See also United States v. Paccione*, 751 F. Supp. 368 (S.D.N.Y. 1990). The defendant fraudulently obtained a permit for acceptance of medical waste worth approximately \$35,000,000. *See id.* The transporter was sentenced to two years of supervised release and fined. *See id.* The owners of the landfill were sentenced to 151 months in prison. *See id.* The severity of sentence against the operators was justified by the financial magnitude of the fraud and by the fact that they continued operation after an injunction was issued. *See id.*

93. *See MacDonald*, 933 F.2d at 35.

94. *See id.*

95. *See id.*

96. *See id.* at 53.

4. *Knowing Endangerment*

Violators face stricter penalties for RCRA offenses if it can be proven that the violator knowingly placed others in imminent danger of death or serious bodily injury.⁹⁷ For such “knowing endangerment” offenses, violators may be fined up to two hundred fifty thousand dollars,⁹⁸ imprisoned for up to five years, or both.⁹⁹ Corporations may face additional fines up to one million dollars.¹⁰⁰

Knowing endangerment has two elements: (1) the defendant must have committed an offense under RCRA, such as false reporting on a manifest or disposal at an unpermitted site, and (2) at the time of the offense, the defendant must have known that he was placing another person in imminent danger of death or serious injury.¹⁰¹ To prove the first element, the government need only show that the defendant was “aware of the nature of his conduct.”¹⁰² In other words, “the government need only prove that the defendant was aware of the conduct, and that the conduct was illegal.”¹⁰³ To prove the second element, however, the prosecution must prove that at the time of the offense the defendant was “aware or believes that this offensive conduct is substantially certain to cause danger of death or serious bodily injury.”¹⁰⁴ The prosecution must show that the offense was committed by a preponderance of the evidence.¹⁰⁵ A corporate officer who did not physically spill or bury hazardous waste may still be culpable for the violations caused by a subordinate.¹⁰⁶

97. See 42 U.S.C. § 6928(f)(6) (2000). “Serious Bodily Injury” is defined as: “(a) bodily injury which involves a substantial risk of death; (b) unconsciousness; (c) extreme physical pain; (d) protracted and obvious disfigurement; or (e) protracted loss or impairment of a bodily member, organ, or mental faculty.” *Id.*

98. *Id.* § 6928(f)(4).

99. *Id.*

100. *Id.*

101. Volz & Gray, *Knowing Endangerment: The New Darling of Environmental Prosecutors*, 16 CHEM. WASTE. LITIG. REP. 39, 41 (1988).

102. 42 U.S.C. § 6928(f)(1)(A) (2000).

103. See Volz & Gray, *supra* note 101, at 42.

104. 42 U.S.C. § 6928(f)(1)(C) (2000).

105. *Id.* § 6928(f)(2). Circumstantial evidence may be used in proving the defendant’s possession of actual awareness. See *id.*; see also *United States v. Hansen*, 262 F.3d 1217, 1243 (11th Cir. 2001). Based on documentary and oral testimony showing culpable mental states, the court upheld three convictions of corporate officers for knowing endangerment because they knew the violations caused by their plant were inevitable, the plant could not comply with existing environmental requirements, and that the plant employees were endangered while working within this environment without being informed or protected from the health risks. See *id.*

106. See *Hansen*, 262 F.3d at 1243. Though management did not physically dump the waste, they were knowingly responsible for permitting and directing plant employees to process and handle waste in such as way that was previously subject to violations. See *id.*

The first conviction of an individual under the knowing endangerment provisions was in 1988 in *United States v. Turmin*.¹⁰⁷ The defendant purchased three fifty-five gallon drums of ethyl ether, a highly explosive material listed as a hazardous waste by the EPA.¹⁰⁸ The defendant later disposed of the drums in a vacant residential lot.¹⁰⁹

The first conviction of a corporation for knowing endangerment came in *United States v. Protex Industries Inc.*¹¹⁰ The Tenth Circuit upheld the constitutionality of the knowing endangerment criminal penalties.¹¹¹ Protex had exposed its employees to hazardous chemicals at a drum recycling facility resulting in psycho-organic syndrome.¹¹² The court found that a corporation is criminally liable under RCRA's knowing endangerment provision, if "in violating other provisions of RCRA, it places others in danger of great harm and it has knowledge of that danger."¹¹³

B. Comprehensive Environmental Response, Compensation, And Liability Act

Enacted in 1980, Congress intended CERCLA to "establish a comprehensive response and financing mechanism to abate and control the vast problems associated with abandoned and inactive hazardous waste disposal sites."¹¹⁴ CERCLA's purpose was to address orphaned sites where liability and ownership was in doubt "by creating a comprehensive and uniform system of notification, emergency governmental response,

107. *United States v. Turmin*, No. 87-CR-448, slip op. (E.D. N.Y.), reviewed in NAT'L ENVTL. ENFORCEMENT J., June 1988, at 27.

108. *See id.*

109. *Id.*

110. *United States v. Protex Indus. Inc.*, 874 F.2d 740, (10th Cir. 1989).

111. *See id.* at 745-46.

112. *See id.* Government experts testified that without these proper safety precautions, the employees were at an increased risk of suffering solvent poisoning. *See id.* at 742. Solvent poisoning may cause psycho-organic syndrome, of which there are three types. *See id.* Symptoms of Type 1 psycho-organic syndrome are disturbances in thinking, behavior and personality, and sleeping disorders. *See Protex*, 874 F.2d at 742. Type 1 is quickly reversible and goes away when exposure ends. Type 2 psycho-organic syndrome is divided into two categories, A and B. *See id.* An individual suffering from Type 2-A suffers changes in personality and has difficulty controlling impulses; the individual engages in unplanned and unexpected behavior, lacks motivation, and usually experiences severe mood swings. *See id.* If exposure to the toxic chemicals ends, an individual suffering from Type 2-A will eventually recover. *See id.* An individual suffering from Type 2-B psycho-organic syndrome, however, will have additional, nonreversible symptoms, such as concentration problems, short and remote memory problems, decreased learning ability, and cognitive impairment. *See id.* Finally, an individual suffering from Type 3 psycho-organic syndrome suffers a severe loss of learning capabilities, severe memory loss, severe psychiatric abnormalities, and gross tremor. *See id.*

113. *Protex*, 874 F.2d at 744.

114. *Crofton Ventures Ltd. P'ship v. G & H P'ship*, 258 F. 3d 292, 296 (4th Cir. 2001) (summarizing CERCLA's purpose to cleanup contaminated sites and seek costs from responsible parties).

enforcement, and liability.”¹¹⁵ In 1986, the more notable Superfund Amendments and Reauthorization Act (SARA), or Superfund, supplemented CERCLA.¹¹⁶ CERCLA is primarily a backward-looking, or remedial statute.¹¹⁷ However, CERCLA provides for criminal sanctions in certain instances.

Civil enforcement of CERCLA is much more common than criminal enforcement.¹¹⁸ However, CERCLA’s criminal sanctions reach: (1) failure to report the release of a hazardous substance, or false reporting of such a release,¹¹⁹ (2) failure to inform EPA of an unpermitted site where hazardous waste is illegally accepted and stored or dumped,¹²⁰ (3) knowingly destroying or falsifying records,¹²¹ and (4) submitting false claims for reimbursement for clean-up under Superfund.¹²² CERCLA violators are grouped into two

115. *United States v. Carr*, 880 F.2d 1550, 1552 (2d Cir. 1989) (convicting maintenance foreman for failure to report illegal dumping even though defendant did not exercise complete control over the site).

116. *See* 42 U.S.C. § 9603 (2000).

117. Liability for discharges has been imposed to previous owners after they have relinquished control of the facilities. *See* *Satellite Sys. Inc. v. J.F.D. Elec. Corp.*, 19 ENVTL. L. REP. (Envtl. L. Inst.) 20,839 (E.D.N.C. 1988) (noting that previous owner can be liable even if sales agreement contains “as is” clause); *New York v. Gen. Elec. Co.*, 592 F. Supp. 291, 297 (N.D.N.Y. 1984) (holding seller of PCB contaminated transmission liable for contamination subsequently caused by buyer); *but see* *United States v. Aceto Agrichemicals Corp.*, 872 F.2d 1373, 1379 (8th Cir. 1989) (holding hazardous substance manufacturer liable for third-party disposal though manufacturer lacked control over third-party because manufacturer retained ownership of hazardous substance and benefited from the disposal); *United States v. Carolina Transformer Co.*, 650 F. Supp. 157, 158 (E.D.N.C. 1987) (subjecting chairman of the board to liability for disposal response costs); *New York v. Shore Realty Corp.* 759 F.2d 1044, 1049 (E.D.N.Y. 1985) (holding current owners liable for disposal at site even if it occurred prior to their ownership).

118. Since the civil and criminal provisions of CERCLA are roughly similar, criminal provisions could be interpreted similarly to previously interpreted civil provisions. *See* Elizabeth M. Jalley et al., *Environmental Crimes*, AM. CRIM. L. REV. 403, 470 (2002). For example, under civil law, a parent corporation can be liable for the CERCLA offenses of its subsidiary if the corporate veil is pierced, or if the parent “operated” the subsidiary. *See* *United States v. Bestfoods*, 524 U.S. 51, 63-64 (1998) (attributing responsibility for subsidiary’s actions to the parent corporation, especially when corporate structure furthers the criminal activity).

119. *See* 42 U.S.C. § 9601(22) (2000). A “release” is any spilling, leaking, pumping, pouring, leaching, dumping, or disposing into the environment. *Id.* *See generally* *United States v. Dico, Inc.* 136 F.3d 572 (S.D. Iowa 1998). Unlike RCRA’s definition of hazardous waste and the cases challenging that definition, discussed *supra* notes 40 and 41, CERCLA defines “hazardous substances” very broadly, save the complete exclusion of petroleum and natural gas products. *See* *A&W Smelter and Refiners, Inc. v. Clinton*, 146 F.3d 1107, 1110 (9th Cir. 1998). “CERCLA gives the [EPA] carte blanche to find anyone liable who disposes of just about anything. Drop an old nickel that actually contains nickel? A CERCLA violation. Throw out an old lemon? It’s full of citric acid, another hazardous substance.” *Id.* *accord* *United States v. Cantrell*, 92 F.Supp.2d 704, 713 (S.D. Ohio 2000) (finding “miniscule” amount of evidence of a hazardous substance sufficient to constitute a CERCLA violation). To avoid confusion, “hazardous substances” under CERCLA include “hazardous wastes” as defined by RCRA. *See* Woodka, *supra* note 14, at 637-38.

120. *See* 42 U.S.C. § 9603(c) (2000).

121. *See* 42 U.S.C. § 9603(d)(2) (2000).

122. *See* 42 U.S.C. § 9612(b)(1) (2000).

categories: (1) owners and operators of a facility involved in a CERCLA offense¹²³ and; (2) prior owners or operators of a facility where hazardous waste is stored or disposed if he or she owned or operated the facility at the time the waste was received.¹²⁴

1. Criminal Liability Under CERCLA

To establish criminal liability for failure to report a release of a hazardous substance, prosecutors must show: (1) that the substance was "hazardous,"¹²⁵ (2) that it was a reportable quantity,¹²⁶ (3) that it was released into the environment,¹²⁷ (4) that the release was not a federally permitted release,¹²⁸ (5) that the defendant was a person "in charge" of the facility,¹²⁹ and

123. See *Hansen*, 262 F.3d at 1253-54 (finding adequate district court's jury instruction regarding "in charge" element of CERCLA offense of "[I]t is only necessary that the individual have or share such control of the facility where the release occurred").

124. See *Foster v. United States*, 130 F. Supp. 2d 68, 75-76 (D.C. 2001). The District of Columbia Circuit Court found defendant was a prior operator under CERCLA, because at the time of contamination it (a) conducted day-to-day management of the site and (b) made all primary decision regarding waste disposal at the site. See *id.*

125. See 42 U.S.C. § 9601(14) (2000). CERCLA defines "hazardous substance" very broadly; explicitly excluding only petroleum and natural gas products. See *id.*

126. See 42 U.S.C. § 9602(b) (2000). A "reportable quantity" is one pound of hazardous substance unless superseded by any regulation promulgated pursuant to 42 U.S.C. § 9602(a). See *id.*; see *Hansen*, F.3d at 1253 (requiring government to show at least one pound of mercury released and at least ten pounds of chlorine were released into the environment during a twenty-four hour period to meet elements of separate CERCLA charges associated with both substances).

127. See *Tosco Corp. v. Koch Industries*, 216 F.3d 886, 891-94 (10th Cir. 2000) (finding adequate evidence of "actual release was provided by the fact that defendant 'could not account for seven percent of its daily throughput, thus evidencing a large volume of material, including liquid phase petroleum hydrocarbons containing hazardous constituents, leaking from the process units into the environment'"). A "release" is to be distinguished from "disposal" according to CERCLA 42 U.S.C. § 9601(29) (2000). See *Bob's Beverage v. Acme, Inc.*, 264 F.3d 692, 697 (6th Cir. 2001) (finding disposal did not occur because contamination was caused by passive migration of hazardous materials present in environment before defendant took any action). But see *Crofton Ventures*, 258 F.3d at 297 (applying narrow interpretation of "disposal" to require proof that defendant actively dumped hazardous waste on their property fails to recognize CERCLA's strict liability scheme).

128. See *United States v. Freter*, 31 F.3d 783, 788 (9th Cir. 1994) (allowing an exception for federally permitted release as affirmative defense so government need not prove release was not federally permitted).

129. See *Hansen*, 262 F.3d at 1253-54 (determining "in charge" as an individual that has or shares control of a facility where a release occurs); *United States v. Carr*, 880 F.2d 1550, 1554 (2d Cir. 1989) (finding maintenance foreman criminally liable for acquiescence in illegal dumping); but see *United States v. Township of Brighton*, 153 F.3d 307, 314-15 (6th Cir. 1998) (holding operator or owner must have actual control and must have performed affirmative actions, although the owner-operator is also responsible for similarly negligent acts or omissions).

(6) the defendant did not notify the EPA immediately upon learning of the release.¹³⁰

Though the “failure to notify” provision for the existence of an unpermitted facility has only received limited judicial interpretation, the statute¹³¹ suggests the government must also prove that the defendant owned or operated the facility at which the hazardous waste was stored, and that they knowingly failed to notify the EPA of the existence of the facility.¹³² Failure to notify an appropriate agency of a release of hazardous waste can result in a fine or imprisonment up to one year, or both.¹³³ Failure to notify the EPA of an unpermitted disposal site can result in a fine up to \$10,000, a year in prison, or both.¹³⁴

The “knowing destruction” provision or falsification of records criminal provisions under CERCLA has undergone limited judicial interpretation.¹³⁵ The statute implies that prosecutors must show that the defendant was a person required under Section 9603 of the Act to provide notification,¹³⁶ that the defendant knowingly destroyed files,¹³⁷ and that the EPA identified the destroyed files that were subject to the reporting requirements.¹³⁸ A person convicted of knowing destruction or falsification of documents can be fined, imprisoned for three years, or both.¹³⁹

130. See *United States v. Laughlin*, 10 F.3d 961, 966 (2d Cir. 1993) (requiring that defendant need only be aware that his acts are harmful for criminal conviction under CERCLA. He does not have to know the specific requirements of CERCLA that have been broken). In *Laughlin*, the Eleventh Circuit only lists four elements for a criminal conviction: (1) the defendant was, in fact, in charge of the facility; (2) that a reportable quantity was released; (3) the defendant knew of such a release; (4) after learning of the release, the defendant failed to immediately notify the EPA. See *Jalley*, *supra* note 118, at 489.

131. 42 U.S.C. § 9603(c) (2000).

132. See 42 U.S.C. § 9603(d)(2000). See *United States v. Wade*, 577 F. Supp. 1326, 1341 (E.D. Pa. 1983) (finding individual personally liable as transporter for actions taken in capacity as officer of company involved in transportation of wastes because he participated in the wrongful acts); *United States v. Collins*, 18 ENVTL. L. REP. (Envtl. L. Inst.) 2555 (N.D. Ala. 1988) (convicting company owner of illegally disposing liquid electroplating wastes from 1978 to 1987; sentenced to serve eighteen months and five years probation and to pay \$200,000 fine).

133. See 42 U.S.C. § 9603(b) (2000) (Holding liable any person “in charge” for failure to report). See *United States v. Goodner Bros. Aircraft Inc.*, 966 F.2d 380, 382-83, 385-87 (8th Cir. 1992) (imposing \$7,500 fine and fifteen-month sentence on aircraft company owner for illegally disposing and failing to notify authorities of release of hazardous substances).

134. See 42 U.S.C. § 9603(c) (2000).

135. See *id.*

136. See 42 U.S.C. § 9603(d) (2000) (authorizing EPA to promulgate rules specifying the records that any person required to provide notice of existence of a facility under § 9603 shall keep). The reporting requirements include “the location, title, or condition of a facility; and the identity, characteristics, quantity, origin, or condition (including containerization and previous treatment) of any hazardous substances contained or deposited in a facility.” *Id.*

137. See *id.*

138. See *id.*

139. See 42 U.S.C. § 9603(c) (2000).

Similarly, there has been limited judicial interpretation of CERCLA's criminal penalties for filing false claims for reimbursement.¹⁴⁰ The language of the statute again suggests that the government must prove that the defendant knowingly gave erroneous information in a claim for a Superfund reimbursement.¹⁴¹

There are criminal penalties for filing a false claim under Superfund.¹⁴² However, these criminal penalties can be mitigated through voluntary cooperation with the EPA,¹⁴³ so much so, that the EPA would decline to refer violations to the Department of Justice for prosecution.¹⁴⁴ Voluntary measures such as general cooperation, preventative measures, self-policing and compliance programs, and voluntary disclosure of information can forestall prosecution by the EPA and Department of Justice.¹⁴⁵

CERCLA, through Superfund, authorizes the EPA to pay a \$10,000 reward to any citizen who provides information leading to the arrest and conviction of a CERCLA violator.¹⁴⁶ Violations subject to this reward include failure to report a release of a hazardous substance and the destruction of records.¹⁴⁷ Rewards are evaluated by the severity of the reported violation and the overall value of the report leading to arrest and conviction.¹⁴⁸

III. THE CHINESE SYSTEM

China faces serious environmental problems. They include: increases in smoke and dust emissions by seven percent per year;¹⁴⁹ dependence on coal as a fossil fuel which increases the prevalence of acid rain deposition to the point of causing harm to agriculture and fishing;¹⁵⁰ production of 100 million tons of wastewater per day;¹⁵¹ industrial solid waste expected to reach a mark of 250 million tons¹⁵² annually with two million tons categorized as hazardous waste;¹⁵³ and host to seven of the ten most polluted cities in the world.¹⁵⁴

140. See 42 U.S.C. § 9612(b)(1) (2000).

141. See *id.* "Any person who knowingly gives or causes to be given any false information as a part of" a Superfund reimbursement may be held criminally liable. *Id.*

142. See *Baranowski v. EPA*, 699 F.Supp. 1119, 1120 (E.D. Pa. 1988) (grand jury indictment for seven counts of false claims under Superfund).

143. See *Morgan*, *supra* note 15, at 1214.

144. See *id.*

145. See *id.*

146. See 40 C.F.R. § 303.10 (2001).

147. See 40 C.F.R. § 303.12(a),(b) (2001). Failure to report provisions are located at 42 U.S.C. § 9603(a). Destruction of records provisions are located at 42 U.S.C. § 9603(d).

148. See 40 C.F.R. § 303.30(c),(f) (2001).

149. See *Yang*, *supra* note 7, at 146.

150. See *id.*

151. See *id.*

152. See *id.*

153. See *China OnLine*, Feb. 15, 2002, at <http://www.chinaonline.com>, available at 2002 WL 10273166. Hazardous waste amount listed in the text is for the year 2000. See *id.* A combination of China's poverty and failure to adequately dispose of its hazardous medical

An overly simple, but possibly accurate, answer for the cause of these problems is that the combination of China's incredible population size, poverty level, per capita income, and the incredible growth of China's economy has led to a voracious need for resources.¹⁵⁵ The problem is only exacerbated by the actions of more developed nations; particularly those that use China's lack of well developed environmental safeguards as an advantage.¹⁵⁶

From the founding of the People's Republic of China until the mid-1970's, the government has focused the majority of its resources on modernization and economic growth.¹⁵⁷ Environmental protection was afforded only marginal consideration in national economic planning.¹⁵⁸ As a result, resources were only dedicated to environmental issues during emergency health situations.¹⁵⁹

waste has led to a disturbing problem. *See id.* Medical waste, such as gauze, has been used as batting to make quilts or as liners in cotton-padded jackets for sale to unsuspecting buyers. *See id.*

154. *See Cleaning Up Can Pay*, S. CHINA MORNING POST, Sept. 27, 2001, available at 2001 WL 27816886.

155. *See Chun-Xi Yang*, *supra* note 7, at 147-48. China's population accounts for about one-fifth of the entire world population. *See id.* Average per capita income in 1994 was the equivalent of \$360.00 (U.S.). *See id.* China's economy doubled between the years 1979 and 1994. *See id.*

156. *See U.S. Waste 'Dumped' on Mainland*, S. CHINA MORNING POST, Feb. 27, 2002, available at 2002 WL 15003568 [hereinafter *Dumped*]. United States technology waste, particularly obsolete computers and toxic wiring, is being "exported" to mainland China. *See id.* An estimated 100 million obsolete computer parts have been shipped by the United States to China, India, and Pakistan. *See id.* Scavengers burn the plastic parts in order to recover valuable metals. *See id.* The scavenged waste is then dumped in irrigation canals, near rivers, or in open fields, resulting in the fouling many drinking water sources. *See id.* The United States is the biggest offender in this practice as it has failed to ratify the Basel convention, which bans the export of hazardous waste from developed countries to developing countries and the United States own hazardous waste laws specifically exempt "electronic waste." *See id.* Estimates suggest that by 2004, the United States will generate approximately 315 million obsolete computer parts. *See Dumped*. For further discussion of the impacts of U.S. failure to ratify the Basel Convention see, Mark Bradford, *The United States, China, & The Basel Convention On The Transboundary Movements of Hazardous Wastes and Their Disposal*, 8 FORDHAM ENVTL. L.J. 305 (1997).

157. *See Bryan Bachner, Regulating Pollution in the People's Republic of China: An Analysis of the Enforcement of Environmental Law*, 7 COLO. J. INT'L ENVTL. L. & POL'Y 373, 377 (1996).

158. *See id.* A direct result of the government's failure or inability to adequately enforce environmental protections has led to infrequent, though unpunished, use of self-help. *See Vincent Cheng Yang, Punishing For Environmental Protection? Enforcement Issues in China*, 44 INT'L & COMP. L.Q. 671, 681 (1995). In cases where a polluter is causing ongoing damage to either health or property and all peaceful means of negotiation have been exhausted, groups of individuals that exercised self-help measures, such as destruction of equipment, have avoided prosecution. *See id.* Prosecution was avoided not from a judicial finding, but rather from an order of the Vice-Premier. *See id.*

159. *See id.* at 681.

Though China has recognized the need for a more comprehensive environmental policy, the programs implemented are in the formative stages.¹⁶⁰ The first step in this reformulation was the public admission that environmental degradation was a direct outcome of market-driven planning.¹⁶¹ Within that admission, the Communist party proposed adopting an environmental policy that would establish liability for environmental damage through causation.¹⁶²

With such awakenings comes change. China's goals for changes in environmental policy are:

- (1) the clarification of institutional responsibilit[y] toward the environment;
- (2) the incorporation of internationally recognized principles [of environmental policy], including the polluter pays principle;¹⁶³
- (3) establishment of administrative controls, such as permitting, registration, and reporting requirements; and
- (4) the use of economic measures, such as fines and taxes, to induce acceptable behavior.¹⁶⁴

With the rapid establishment of a market economy in China, a principle concern for policymakers is to encourage state-run companies to make independent decisions, rather than relying on their previous custom of receiving orders and instructions under a centralized government.¹⁶⁵ However, in making such market reforms, the government has been less concerned with the extent of new government regulation and more concerned about whether the government should be involved at all.¹⁶⁶ It has been speculated that the Chinese government will not only take a reduced role in directly managing economic affairs, but will also remain aloof in environmental affairs as well.¹⁶⁷

The new fiduciary duties of managers toward their respective enterprises, combined with the diminished relationship between government and those enterprises, may have a negative effect on the impact of corporations on

160. *See id.*

161. *See id.*

162. *See* Bachner, *supra* note 157, at 377. Though the focus of these remarks was directed toward establishing a "polluter pays" system of assessing the costs for environmental harm, it is fairly implied that the Communist party directive includes expansion of individual liability that could impose expanded criminal liability as well. *See id.* For a general explanation of the "polluter pays" principle, see P. BIRNIE & A. BOYLE, *INTERNATIONAL LAW AND THE ENVIRONMENT* 109 (1992).

163. *See* Bachner, *supra* note 157, at 377.

164. *See id.* at 379-80.

165. *See id.* at 382. For further discussion on China's conversion of state-owned enterprises to corporate ownership and China's Company Law, see Robert C. Art & Minkang Gu, *China Incorporated*, 20 *YALE J. INT'L L.* 273 (1995).

166. *See* Bachner, *supra* note 157, at 380.

167. *See id.*

China's environment.¹⁶⁸ The current environmental regulatory framework includes few criminal enforcement mechanisms for environmental crimes.¹⁶⁹ Those regulations that do contain criminal provisions do not specify with great detail either the elements of the crime or the punishment to be imposed.¹⁷⁰ Rather, those regulations make a general reference to the Criminal Code.¹⁷¹ However, China does recognize health and property violations under the concept of "crimes against the environment."¹⁷² As of yet, corporate liability has not explicitly emerged in China's environmental regulatory scheme.¹⁷³

A. *Crimes Against The Environment*

Unlike the United States, China provides for environmental protection directly through its constitution. China's constitution provides for environmental protection in two ways. First, the constitution provides for rational use of natural resources,¹⁷⁴ and that the state will control pollution and the human environment.¹⁷⁵ Second, the constitution provides for indirect protection of the environment through such broad language as "socialist public property is sacred and inviolable."¹⁷⁶ Since most property in China is state-owned public property, the constitution provides a large base for regulation of activities that could damage the environment.¹⁷⁷ The constitution also provides

168. *See id.* at 382.

169. *See* John Head, *Using Criminal Sanctions to Fight Environmental Damage in the PRC*, 9 E. ASIAN EXEC. REP. 9, 17 (1995).

170. *See id.*

171. *See id.*

172. Bachner, *supra* note 157, at 382.

173. *See* John Head, *Environmental Legislation: Report on Recent Developments*, 1 E. ASIAN EXECUTIVE REP. 13 (1996). This is ironic from the standpoint that China's criminal code does criminalize corporate behavior for such crimes as falsifying trademarks, producing shoddy products, copyright breach, smuggling, taking bribes, or creation of pornography. *See* Vincent Cheng Yang, *supra* note 158, at 677-78.

174. *See* CONSTITUTION OF THE PEOPLE'S REPUBLIC OF CHINA, Xianfa, art. 9, ¶ 2. (adopted Dec. 4 1982), translated in *Constitution of the People's Republic of China and Amendments to the Constitution of the People's Republic of China* (Foreign Languages Press, 2 ed. 1990) [hereinafter PRC CONSTITUTION].

175. *See id.* art. 26.

176. *Id.* art. 12, ¶ 1.

177. *See id.* arts. 6, 10. Article 6 reads: "The basis of the socialist economic system of the [PRC] is socialist public ownership of the means of production, namely, ownership by the whole people and collective ownership by the working people." *Id.* art. 6, ¶ 1. Article 10, amended in 1988, reads:

Land in the cities is owned by the state. Land in the rural areas . . . is owned by the collectives except for those portions which belong to the state in accordance with the law; house sites and private plots of cropland. . . are also owned by the collectives No organization or individual may appropriate, buy, sell, or lease land, or unlawfully transfer land in other ways. The right to use the land may be transferred in accordance with the law.

PRC CONSTITUTION, *supra* note 174, art. 10.

for state responsibility for the health of citizens.¹⁷⁸

China's criminal code, adopted in 1979, has no special provision or category for "crimes against the environment," but it does contain some provisions that would apply to prevention of harming the environment.¹⁷⁹ The crimes that could have environmental implications are divided into "Crimes of Endangering Public Security"¹⁸⁰ and "Crimes of Undermining the Socialist Economic Order."¹⁸¹

Upon amending the Chinese constitution to include state responsibility for protecting the people's living environment and natural resources, many separate pieces of environmental legislation were promulgated,¹⁸² of which, many carry criminal penalties for environmental harm.¹⁸³

In specifying crimes and punishments, the Criminal Code refers almost exclusively to natural persons.¹⁸⁴ However, the Code recognizes the possibility of corporate criminal behavior for acts taken by representative, or juridical, persons. A step in this direction is taken by including punishments for "state personnel."¹⁸⁵ This would include those administrators responsible for the actions of a governmental unit.¹⁸⁶

178. *See id.* art. 21. Under Article 21, "The state . . . promotes . . . sanitation activities of a mass character, all to protect the people's health." *Id.*

179. THE CRIMINAL LAW OF THE PEOPLE'S REPUBLIC OF CHINA, adopted July 1, 1979, *translated* in *The Criminal Law and the Criminal Procedure Law of the People's Republic of China* (1990) [hereinafter PRC CODE].

180. *Id.*

181. *Id.* Of particular interest is Article 115 of "Crimes Endangering Public Security." This article requires that whoever violates the regulations on the control of articles of an explosive, combustible, radioactive, poisonous or corrosive nature, giving rise to a major accident in the course of production, storage, transportation or use and causing serious consequences, is to be sentenced to not more than three years fixed term imprisonment or criminal detention; when the consequences are especially serious, the sentence is to be not less than three years and not more than seven years of fixed-term imprisonment. *See id.* art. 115. The first portion of the Chinese criminal provisions basic guidelines are nearly identical to those set in the "characteristic hazardous waste" definition of RCRA. *See* 40 C.F.R. § 261, *supra* note 45 for RCRA "characteristic hazardous waste" definition.

182. *See Yang, supra* note 7, at 157.

183. *See id.* at 157-58. The Environmental Protection Law of 1989 provides that if a violation causes a serious pollution accident, leading to grave consequences of heavy losses of public or private property or human injuries or death, the persons directly responsible for such an accident shall be investigated for criminal responsibility according to the law. *See ENVIRONMENTAL PROTECTION LAW OF THE PEOPLE'S REPUBLIC OF CHINA*, art. 43 (1992). Though the "directly responsible" causation language of the law would make imputing vicarious liability, such as the American "responsible corporate officer" doctrine, unlikely, finding direct responsibility of an executive or manager who acted negligently could be possible, as in the Australian method. *See generally* Bubna-Litic, *supra* note 23.

184. *See Yang, supra* note 7, at 162.

185. *See id.* at 163. State personnel includes "all personnel of state organs, enterprises and institutions and other personnel engaged in public service according to the law." *Id.*

186. *See id.*

Regarding corporate officers, the Criminal Code chapter entitled "Crimes of Dereliction of Duty" imposes criminal responsibility on "state personnel."¹⁸⁷ That chapter refers to major loss of public property or the interests of the state and people.¹⁸⁸ This could support a charge for a crime against the environment committed by a responsible state agent. Furthermore, some specific statutes impose criminal liability on individuals and liability for persons directly responsible for the violating organization.¹⁸⁹ In these instances, this creates a mechanism whereby criminal liability may be imposed on managers and supervisors in their official capacity for crimes against the environment by the corporation.¹⁹⁰

Implying liability to corporate officers through a theory of vicarious liability for crimes against the environment is difficult because China's criminal law does not extend to many indirect or unintended consequences.¹⁹¹ Some crimes against the environment prescribe criminal detention,¹⁹² but with most major violations likely to be committed by large factories or organizations, criminal sanctions are harder to apply due to China's reticence to extend criminal liability to corporate entities.¹⁹³

B. Courts And Crimes Against The Environment

The case against Zhang Changlin serves as a model of the Chinese system to better understand China's method of imposing criminal liability for Crimes Against the Environment.¹⁹⁴ Changlin was a worker at the Suzhou People's Chemical Plant of Suzhou.¹⁹⁵ Before Changlin left work at 3:50 p.m. on September 12, 1979, he failed to close a valve through which liquid sodium cyanide passed from a one hundred fifty ton storage tank to an eight ton measurement tank.¹⁹⁶ Upon returning to work later that day, Changlin again failed to turn off the valve.¹⁹⁷ The liquid sodium cyanide overflowed from the

187. See PRC CODE, *supra* note 179, art. 187. State personnel who, because of neglect of duty, cause public property or the interests of the state and the people to suffer major losses are to be sentenced to not more than five years of fixed-term imprisonment or criminal detention. *See id.*

188. *See id.*

189. See FISHERIES LAW OF THE PEOPLE'S REPUBLIC OF CHINA, translated in THE LAWS OF THE PEOPLE'S REPUBLIC OF CHINA 1983-1986 207 (1987).

190. See Yang, *supra* note 7, at 155-56.

191. *See id.*

192. See, e.g., PRC CODE, *supra* note 179, art. 187.

193. See Yang, *supra* note 7, at 165-66, 170-71.

194. LESTER ROSS & MITCHELL A. SILK, ENVIRONMENTAL LAW AND POLICY IN THE PEOPLE'S REPUBLIC OF CHINA 250 (1987).

195. *See id.* This may have been the first case to interpret and enforce the Environmental Protection Law of 1979. *See id.* at 257. Changlin and two of his superiors were prosecuted under Article 115 of the Criminal Code and Article 32 of the Environmental Protection Law. *See PRC CODE, supra* note 179, art. 115.

196. See ROSS & SILK, *supra* note 194, at 250.

197. *See id.*

measurement tank and passed through a hole in a retaining wall and flowed into an adjacent river until the next morning when factory workers discovered the leak and closed the valve.¹⁹⁸ Approximately twenty-eight tons of liquid cyanide had been discharged into the river.¹⁹⁹ Though emergency remediation measures were taken to counter the cyanide spill, there was a massive fish kill, including damage to a nearby fish hatchery.²⁰⁰ Changlin was found guilty and sentenced to two years imprisonment.²⁰¹

The Suzhou Chemical case is a prime example of China's application of "crimes against the environment doctrine" to an individual. The court found Changlin to be negligent in performing his duties at the plant.²⁰² The case was highly publicized and was meant to be a "warning shot" to encourage compliance with the Environmental Protection Law.²⁰³

There was more than enough background information to suggest Changlin, though negligent, may not have been alone in his negligence. Changlin was found to be the direct cause of the spill.²⁰⁴ Further, Changlin was found to be responsible for failing to repair the hole in the retaining wall.²⁰⁵ However, when addressing the issue of whether Changlin's superiors also acted negligently in this matter, the court found that two of the five factory leaders committed criminal acts, while the remaining three were adjudged not to have been at the factory long enough to contribute to the unsafe work atmosphere.²⁰⁶

Though judged to be the direct cause of the accident, Changlin was as much a victim of poor luck and bad timing as he was a careless worker. The

198. *See id.* The valve was left open for approximately thirteen hours. *See id.* at 251.

199. *See id.*

200. *See id.*

201. *See* ROSS & SILK, *supra* note 195, at 252. Changlin's good attitude, guilty plea, remorse, and cooperation were found to be mitigating factors in his sentencing. *See id.*

202. *See id.* at 250-51.

203. *See id.*

204. *See id.* at 252-53.

205. *See id.* at 254.

206. *See* ROSS & SILK, *supra* note 194, at 255-56. The opinion does not indicate what the charges or penalties were against the two senior factory leaders. *See id.* The three junior factory leaders were sentenced to "serious education through self-criticism . . . based on their individual actions and . . . attitudes." *Id.* at 256. The opinion states that "factory management was in turmoil, rules and systems of operation were incomplete, and safety and production were . . . ignored by the factory leaders." *Id.* at 255. There was no uniform protocol for handling liquid cyanide and this was the fifth spill at the plant since 1973. *See id.* Four of the spills, including Changlin's, involved workers leaving their post without authorization. *See id.* The originally constructed retaining wall never passed inspection when constructed in 1978. *See* ROSS & SILK, *supra* note 194, at 255-56. Inspections of the plant by factory leaders were only cursory. *See id.* Factory workers received little or no training on emergency spill measures. *See id.* Lenient treatment of managers and leaders is not uncommon. *See* Vincent Cheng Yang, *supra* note 158, at 677. The 1982 Jianjiang Pesticide disaster, where nitrogen polluted water was released into a river killing approximately 330,000 fish and fouling the drinking water for three counties, resulted in only as administrative warning for the party secretary that directly ordered the release. *See id.*

opinion admits that operating and safety procedures were non-existent at the plant.²⁰⁷ However, when faced with assessing liability for the factory leaders, their actions are minimized on the grounds that their errors were only of poor judgment and not criminally negligent.²⁰⁸ The case was a vehicle for mass education to publicize the government's desire to encourage self-policing under the Environmental Protection Law.²⁰⁹ There was also speculation that the trial was even rigged for this purpose.²¹⁰

Though Changlin's case implies the possibility of corporate responsibility, China courts have recently found that direct action of corporate executives is culpable behavior.²¹¹ William Ping Chen, an American citizen, was sentenced to ten years criminal imprisonment for attempting to smuggle two hundred thirty eight tons of household and medical waste into Shanghai from the United States.²¹² Chen's conviction was the first of its kind in China.²¹³ Prosecutors alleged that Chen smuggled solid waste in violation of China's Law on Solid Waste Pollution Prevention and Control despite previous warnings of the violations.²¹⁴ Chen's punishment is a departure from the results in the Changlin case. Had the reasoning used in Changlin been applied, those individuals who off-loaded the waste would have been found directly responsible, while Chen would have only been found indirectly involved.²¹⁵ However, direct liability applied because Chen's act, smuggling, was explicitly criminal.²¹⁶ Nevertheless, Chen's prosecution and the implications of the Changlin decision suggests that executive liability is a possibility for crimes against the environment.²¹⁷

207. See ROSS & SILK, *supra* note 194, at 255.

208. See *id.* at 255-57. Changlin received no such mercy because of his error in judgment. See *id.* Changlin left his post to return home to care for his children. See *id.* at 250-51.

209. See *id.* at 258.

210. See *id.* Changlin was not represented by effective counsel. See ROSS & SILK, *supra* note 194, at 258. The trial bench actually consulted with the Party Committee, public security department, and propaganda department before the trial. See *id.* The effect of Changlin trial as a mass education tool cannot be measured, however, it is fairly implied that his case helped to emphasize the general environmental degradation that had been prevalent in major cities such as Suzhou. See *id.*

211. See U.S. *Businessman Sentenced to 10 Years for Illegal Waste Imports*, BNA DAILY ENV'T'L REP., Jan. 15, 1997, at 10 DEN A-4 [hereinafter *Businessman*].

212. See *id.*

213. See *id.*

214. See *id.* Reporters were denied access to the Port of Shanghai and therefore could not verify China's reports of illegal waste importing. See *id.*

215. See ROSS & SILK, *supra* note 194, at 258.

216. See *Businessman*, *supra* note 211. Chen's Chinese joint-venture partner was not charged with any waste smuggling violations. See Tom Korski, *10 Year Term Backed for Jailed U.S. Businessman*, SOUTH CHINA MORNING POST, Nov. 26, 1997, available at 1997 WL 13277354. There was no justification given for not charging Chen's Chinese partner. See *id.*

217. See *Businessman*, *supra* note 211.

IV. ANALYSIS

The responsible corporate officer doctrine is a concept of legal liability based on the construct of *respondeat superior*.²¹⁸ The greatest fault of the doctrine is that it imposes criminal liability on an individual who may not have taken a physical role in committing an environmental crime.²¹⁹ However, the liability is justified because had the corporate officer correctly done his job, the crime would not, or possibly could not, have been committed. The doctrine implies that the environmental harm would not have occurred but for management's complicity or ineptitude. Furthermore, knowledge of the crime is imputed based upon the greater public welfare purposes of environmental protection laws.²²⁰ Specific knowledge need not be proven.²²¹ Rather, under the doctrine, prosecutors need only show the dangerous nature of the acts.²²²

The broad framework for establishing a form of the responsible corporate officer doctrine in China is in place. China's constitutional provisions regarding environmental quality and health are beyond any such provisions in the United States' Constitution.²²³ China's Criminal Code provides for environmental crimes caused by "dereliction of duty."²²⁴ Further, there is some evidence that in China's jurisprudence, criminal sanctions for factory leaders have been considered and imposed, if only rarely.²²⁵ Yet with the legal framework in place to prosecute those leaders who allow environmental harm, prosecution and enforcement remains sparse.²²⁶ This can be explained somewhat by the command economy system previously in place.²²⁷ However, with China's transition to a market system, an enforcement mechanism geared toward corporate, rather than state, entities is justified.

Beyond more rigid adherence to the provisions currently in place, a practical improvement for the Chinese system is to include specific criminal sanctions in each environmental statute, as in RCRA²²⁸ and CERCLA.²²⁹ An explicit and clear statement in each statute, stating the duties of both workers

218. See BLACK'S, *supra* note 24, at 1311-12. "Let the master answer. This doctrine . . . means that a master is liable in certain cases for the wrongful acts of his servant, and a principal for those of his agent." *Id.*

219. For a general discussion and criticism of using vicarious liability in enforcement against corporations, see Deborah DeMott, *Organizational Incentives To Care About The Law*, 60 AUT LAW & CONTEMP. PROBS. 39 (1997).

220. See DiTata, *supra* note 11, at 814.

221. See *id.*

222. See *id.*

223. See PRC CONSTITUTION, *supra* note 174, art. 9.

224. See PRC CODE, *supra* note 179, art. 187.

225. See ROSS & SILK, *supra* note 194, at 251.

226. See Vincent Chen Yang, *supra* note 158, at 677.

227. See *id.* at 678.

228. See 42 U.S.C. §§ 6901-92 (2000). The Public Health and Welfare Acts, The Resource Conservation and Recovery Act.

229. See 42 U.S.C. §§ 9601-75 (2000). The Public Health and Welfare Acts, The Comprehensive Environmental Responsibility, Compensation, Liability, and Recovery Act.

and managers in preventing and reporting pollution, would avoid the confusion inherent in the current loose confederacy of constitutional provisions, statutes, and enforcement mores.

Inherent in the enforcement of any crime is the ability to discover it, or catch someone in the act of committing it. America's success in regard to environmental enforcement is the ability to monitor the generation or movement of waste, or to have real time outputs on smokestacks and outflow pipes.²³⁰ For China to effectively enforce its "crimes against the environment," it must first know they are happening. This will not happen until China forces its new corporations to monitor and report the pollution generated at their plants and factories.

For China to improve its protection of the natural environment, it must take aggressive and direct action while the conversion of state-owned industry to independent corporations is still in its formative stages. China's existing laws, particularly dereliction of duty, are sufficient to apply a form of the responsible corporate officer doctrine. Environmental statutes can be improved with clear and explicit statements of corporate culpability based on a should have known standard. Finally, greater effort should be made in the monitoring and enforcement of the environmental protection laws.

V. CONCLUSION

What is most shocking about using criminal sanctions against corporate leaders is that the sanctions are even needed at all. Judge Conte's quote opening this Note reflects his shock and frustration at having to sentence an executive for illegal dumping.²³¹ In that proceeding, he stated that "the crimes are particularly vexing because [the defendant] had the education and financial means to create a good life for himself and his family."²³² It can be implied that Judge Conte believes in a "should have known better" standard of liability rather than a "should have known" standard.

Executives and managers are not only leaders within their organizations, but also, they are often leaders in their communities. The best explanation for their actions is the desire to compete and succeed, with measurement based in terms of profit, speed, or productivity. However, in doing so, they were compelled to cheat by ignoring environmental protection law.²³³ For a white

230. See PETER S. MENELL & RICHARD B. STEWART, ENVIRONMENTAL LAW AND POLICY 235-40 (1994).

231. See Pochna, *supra* note 1.

232. *Id.*

233. Unfortunately, environmental crimes are only a component of the corporate duplicity being exposed at the beginning of the new millennium. The financial collapse of Enron, Worldcom, Waste Management, Tyco, Qwest, and Arthur Andersen have all been linked to illegal and / or unethical management and accounting practices. See *Corporate Scandals and Politics: The Backlash Against Business*, THE ECONOMIST, July 6, 2002. See also *WorldCom: Accounting for Change*, THE ECONOMIST, June 29, 2002. Of these corporations, some will face

collar executive, one would think that the possibility of incarceration with violent felons would focus the attention like few other sanctions. The cases in the American section of this Note are not only explanations of the law, but also reminders of the pervasive and continuing problem of corporate duplicity in complying with public welfare statutes such as RCRA and CERCLA. The result of such actions is remediation costs born by the public and a more dangerous environment.

If anything, this Note should be viewed as a cautionary tale as much as an analysis of the environmental control laws in the United States and China. Though imperfect, the implied liability of America's "should have known" standard applied to executives for acts committed in their facilities are justified in order to deter future pollution through careless or conniving management. China must find a way to balance its economic power with its environmental fragility. Imposition of a form of the "responsible corporate officer" doctrine may deter corporate leaders from the allure of greater production at the expense of environmental quality on China's journey to a full market economy.

*Jeffrey M. Bellamy**

criminal sanctions. *See id.* Taken as a whole, the corporate scandals of 2001 and 2002 have led to recession, damaged consumer confidence, and a general perception that corporations operate above the law. *See id.* For further discussion on corporate perception and the law, see Faith Kahn, *Bombing Markets, Subverting the Rule of Law: Enron, Financial Fraud, and September 11, 2001*, 76 TUL. L. REV. 1579 (June, 2002).

* J.D., Indiana University School of Law - Indianapolis, 2003 (*expected*); M.P.I., Indiana University, 1998; B.S.P.A, Indiana University, 1996. The author would like to thank his mother, Carrie Bellamy, for her support and vigilant copy editing.