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CRIMINAL LAW—THE INCREASING APPLICATION OF
CRIMINAL LAW IN DISASTERS AND TRAGEDIES: A GLOBAL
PHENOMENON

Denis Binder *

INTRODUCTION

The onset of the Environmental Age forty-five years ago witnessed a search for remedies to preserve, protect, and restore the nation's environment.¹ Enforcement of the criminal laws was one of the remedies pursued. The criminal enforcement of environmental law became the norm; such that most environmental violations today will probably constitute a criminal violation at the local, state or federal level. Liability is no longer limited to administrative fines and sanctions, compensatory damages, and even punitive damages in personal injury cases. Criminal liability has become a global reality, especially in high profile cases.

Two additional threads of criminal liability emerged in the 1970s: food contamination and workplace safety. State and local prosecutors often established units not only for environmental crimes, but also for workplace fatalities. More recently, the lessons from these criminal prosecutions have globally emerged in society's response to disasters and tragedies, building upon the precedence of the earlier cases.

Several earlier cases set the tone for the current wave of

* Professor of Law, Dale E. Fowler School of Law, Chapman University. This paper is based on a Clason Lecture delivered at Western New England University on March 26, 2015. Lecture, *The Increasing Application of Criminal Law in Accidents and Disasters*, CLASON LECTURE SERIES (Mar. 26, 2015), <http://web7.streamhoster.com/wnevideo/law-library/2014-15/clason/2015Binder.html>. My thanks to Christine Harrah, a 3L at Chapman Law School, for her assistance in this paper. Furthermore, my deepest thanks to Dean Howard I. Kalodner and the faculty of Western New England in 1978 for extending an offer and saving my academic career.

1. See, e.g., Kathleen F. Brickley, *Environmental Crimes at the Crossroads: The Intersection of Environmental and Criminal Law Theory*, 71 TUL. L. REV. 487 (1996). For an overview of the Department of Justice criminal prosecutions in 2014, see Steven P. Solow, Anne M. Carpenter, and Katherine J. Noble, *The State of Environmental Crime Enforcement: A Survey of Developments in 2013*, 46 ENV'T REP. (BNA) 1418 (Apr. 11, 2014).

criminal prosecutions. The toxic contamination disasters in Minamata, Japan and Bhopal, India gave rise to two of these landmark cases.

In the Minamata disaster, Chisso Corporation discharged twenty-seven tons of mercury into Minamata Bay from 1932 to 1968.² The fishing community relied on the mercury-contaminated bounty of the sea. Symptoms of methyl mercury poisoning started developing in 1953 and it is now called the Minamata disease.³ Decades passed before the corporation became liable. The president and a second executive were convicted in March 1979 of pollution and sentenced to two years in prison.⁴ The Supreme Court of Osaka affirmed the verdict in 1988.⁵

The fifty-one percent owned Union Carbide subsidiary in Bhopal, India experienced a horrific leak of methyl isocyanate on December 2 and 3, 1984.⁶ As many as fifteen thousand residents of Bhopal perished, while hundreds of thousands incurred health problems from the release.⁷ Twelve Indian employees of the subsidiary were charged in 1987 with “culpable homicide not amounting to murder.”⁸ The India Supreme Court reduced the charges to “death by negligence.”⁹ Seven defendants were convicted of death by negligence twenty-six years after the tragedy.¹⁰ They were sentenced to two years’ imprisonment.¹¹ The seven include the chairman of the subsidiary, vice president, managing director, works manager, production manager, plant superintendent, and production assistant.¹²

The saga of Warren Anderson, Chief Executive Officer of the

2. *Minamata Disaster*, TED CASE STUDIES (Jan. 11, 1997), <http://www1.american.edu/ted/MINAMATA.HTM> [<http://perma.cc/2XBB-BYUZ>].

3. Yoshinaga Fusako & Gavan McCormack, *Minamata: The Irresponsibility of the Japanese State*, ASIA-PAC. J.: JAPAN FOCUS (Dec. 9, 2004), http://japanfocus.org/site/make_pdf/1559 [<http://perma.cc/YDE9-E33E>]; see also TED CASE STUDIES, *supra* note 2.

4. Fusako & McCormack, *supra* note 3.

5. Fusako & McCormack, *supra* note 3; see also TED CASE STUDIES, *supra* note 2.

6. Dr. S. Varadarajan et al., *Report on Scientific Studies on the Factors Related to Bhopal Toxic Gas leakage* (1985), <https://bhopalgasdisaster.files.wordpress.com/2014/12/csir-report-on-scientific-studies-december-1985.pdf> [<https://perma.cc/776B-P9K7>].

7. *Bhopal Trial: Eight convicted over India gas disaster*, BBC (June 7, 2010, 4:39 PM), http://news.bbc.co.uk/2/hi/south_asia/8725140.stm [<http://perma.cc/UV6Q-E4KB>].

8. *Id.*

9. *Id.*

10. *Id.*

11. *Id.*

12. *Id.*

corporate parent, is an object lesson for executives. He immediately flew to Bhopal to represent the company in the tragedy.¹³ He was arrested for manslaughter by authorities in Madhya Pradesh State, released on bail, and quickly flown out of the country.¹⁴ The charges were pressed against him with warrants issued in July 2009 for his arrest.¹⁵ An extradition request was filed with the United States in March 2011.¹⁶ He reportedly did not travel outside the United States for the remainder of his life.¹⁷

The idea of a corporation being criminally prosecuted may seem odd at first glance since a corporation cannot be imprisoned, but a corporation is a person in the eyes of the law.¹⁸ Corporations can be fined, embarrassed, placed on probation, and monitored. The probation terms could allow the government to closely monitor the defendant's compliance with environmental or safety statutes and the terms of probation. Criminal convictions can facilitate a private suit seeking monetary damages by the victims.

We need to understand that both corporations and governments can only act through individuals, to wit, officers and employees. Consequently, corporate managers, officers, and other employees are subject to both imprisonment and fines, as are government employees.

A criminal prosecution will have a different impact on an individual defendant than a civil lawsuit, for which liability may be covered by insurance or by the employer. The humiliation of being publicly arrested, handcuffed, fingerprinted, and raising bail are a jarring experience, but they are overshadowed by the threat of imprisonment and substantial fines, as well as the loss of employment. The stress, time, and emotional commitment, during the often drawn out criminal proceedings, can consume the defendant who is otherwise unfamiliar with the criminal law. Many employees will find it hard to maintain their equanimity when the criminal Sword of Damocles¹⁹ is hanging over their heads.

13. Douglas Martin, *Warren Anderson, 92, Dies; Faced India Plant Disaster*, N.Y. TIMES (Oct. 30, 2014), at B16 of the New York edition printed on Oct. 31, 2014, http://www.nytimes.com/2014/10/31/business/w-m-anderson-92-dies-led-union-carbide-in-80s-.html?_r=0.

14. *Id.*

15. *Id.*

16. *Id.*

17. *Id.*

18. See e.g., *Jones v. Martz & Meek Constr. Co.*, 107 N.W.2d 802, 803 (Mich. 1961).

19. CICERO'S TUSCULAN DISPUTATIONS, MARCUS TULLIUS CICERO 185–86

Emotional distress may be a constant.

Several reasons exist for the increasing criminal prosecutions. First, they send a message. Civil penalties, especially when tax deductible, and small administrative fines, often fail to send a message that this type of misconduct is unacceptable to society. Small fines could be viewed as a cost of doing business. Criminal prosecutions send a message even stronger than civil liability, including punitive damages, especially when officers and employees are also indicted. Criminal fines are not deductible for tax purposes.²⁰

Public sentiment for action is reinforced by viewing tragedies on the news. The internet and social media result in almost instantaneous distribution of news, good or bad. Mass tragedies are widely publicized, often internationally.

Retribution is another reason for criminal prosecutions. Some horrific tragedies, such as burning infernos and mass drownings, “cry out” for justice in the form of criminal prosecutions.

A prosecution, even if unsuccessful, will consume extensive amounts of corporate resources and time that could otherwise be put to productive uses, and may lead to the loss of corporate and individual goodwill if adverse publicity ensues.

Arrests and indictments do not always result in convictions or plea deals, as illustrated by the Triangle Shirtwaist Factory Tragedy a century ago.²¹ A fire broke out on March 25, 1911, on the eighth floor of the Asch Building in Greenwich Village.²² The exits were locked on the eighth, ninth, and tenth floors.²³ The workers were unable to escape the fires.²⁴ Some jumped out of the building to their death.²⁵ One hundred forty-six died and seventy-one were

(C.D. Younge trans. 2005) (1877) (ebook), <http://www.gutenberg.org/files/14988/14988-h/14988-h.htm> [<https://perma.cc/manage/vest/DUY2-H2GB>] (telling the story of Damocles as a reminder that happiness is fragile).

20. *Publication 529—Main Content, Nondeductible Expenses, Fines and Penalties*, IRS, <https://www.irs.gov/publications/p529/ar02.html> [<https://perma.cc/7S4V-WX9F>].

21. *The Triangle Shirtwaist Factory Fire, 1911*, AUTHENTIC HISTORY CENTER (July 12, 2012), <http://www.authentichistory.com/1898-1913/2-progressivism/3-laborreform/3-trianglefire/> [<http://perma.cc/K9QP-PSNU>].

22. *Id.* The Asch Building at 23–29 Washington Place in Greenwich Village, New York City is now the Brown Building of New York University. Joseph Berger, *Triangle Fire: The Building Survives*, N.Y. TIMES (Mar. 22, 2011, 4:37 PM), <http://cityroom.blogs.nytimes.com/2011/03/22/triangle-fire-the-building-survives/>.

23. AUTHENTIC HISTORY CENTER, *supra* note 21.

24. *Id.*

25. *Id.*

injured.²⁶ A jury acquitted the two owners of first degree and second-degree manslaughter charges.²⁷

The Ford Pinto litigation foresaw the modern prosecution of corporations for criminal misdeeds. The exploding rear gas tank on the Pinto gave rise to substantial litigation and punitive damages.²⁸ In *Grimshaw v. Ford Motor Co.*, a Pulaski County, Indiana prosecutor brought four claims of reckless endangerment against the company for the deaths of three teenagers in his county.²⁹ Although a 1980 criminal jury acquitted Ford on first and second-degree murder charges,³⁰ a civil jury levied a heavy punitive damages award of \$125 million, sending a strong message to companies.³¹

*United States v. Park*³² illustrates the perils facing corporate officials. Park was the President of Acme Supermarkets. The Food and Drug Administration warned Park of rodent infestation at the Philadelphia warehouse.³³ The same problem showed up later at the Baltimore warehouse.³⁴ Both Park and Acme were indicted for violating the Pure Food, Drug, and Cosmetic Act.³⁵ Park defended on the grounds that he delegated operating duties to subordinates.³⁶

The Supreme Court held the Pure Food, Drug, and Cosmetic Act imposes strict liability not only upon the corporation, but also on corporate officials if they have the authority to prevent or correct a violation of the act.³⁷ The need to preserve food purity is so great as to impose strict liability in order to protect the “public interest in the purity of its food”³⁸ Corporate officials have the

26. Kate Sudarsky, *The Triangle Shirtwaist Factory Fire, Payout to Victims Family*, N.Y. DAILY NEWS (Nov. 14, 2014), <http://www.mvrhs.org/prognews/?p=83> [<http://perma.cc/8SHS-QS9B>].

27. AUTHENTIC HISTORY CENTER, *supra* note 21.

28. *Grimshaw v. Ford Motor Co.*, 174 Cal. Rptr. 348, 358 (Ct. App. 1981) (reducing \$125 million punitive damages award to \$3.5 million).

29. *Id.*

30. See Paul J. Becker, Arthur J. Jipson & Alan S. Brule, *State of Indiana v. Ford Motor Company Revisited*, 26 AM. J. CRIM. JUST. 181 (2002).

31. *Grimshaw v. Ford Motor Co.*, 119 Cal.App.3d 757, 771 (Cal. Ct. App. 1981) (\$125 million punitive damages award reduced to \$3.5 million by trial judge).

32. *United States v. Park*, 421 U.S. 658, 658 (1975).

33. *Id.* at 661.

34. *Id.*

35. *Id.* at 660.

36. *Id.* at 663.

37. *Id.* at 678–79.

38. *Id.* at 671 (citing *Smith v. California*, 361 U.S. 147, 152 (1959)). Liability will

duty to seek out and remedy violations unless they are powerless to prevent or correct it.³⁹

Conduct that appears shocking can trigger criminal liability. For example, Orkin Exterminating Company was fined \$500,000 and placed on two years' probation for violating the Federal Insecticide, Fungicide, and Rodenticide Act⁴⁰ for the deaths of an elderly couple in their apartment.⁴¹ Orkin employees applied the pesticide Vikane with plastic sheeting encapsulating their apartment.⁴² The employees did not test the air before letting seventy-three-year-old Hubert Watson and sixty-five-year-old Frieda Watson return to the apartment, where the poison overcame them.⁴³ The two employees (applicators) received suspended sentences of twelve months under state law.⁴⁴

More recently, criminal law has been applied to disasters and tragedies, which again, often entail substantial environmental consequences, and which build upon the earlier case law. A major difference this time is that criminal prosecutions are global on a variety of theories in both common law and civil law jurisdictions. Most, but not all, cases involve the loss of human life.

This legal article is descriptive rather than traditional legal analysis to show the global depth and breadth of criminal liability for disasters and tragedies. It focuses on criminal liability. Therefore, little reference is made to civil liability and fines imposed by state and national governments independent of a criminal prosecution.

be found unless the officer is “powerless’ to prevent or correct the” problem. *Id.* at 673.

39. *Id.*

40. Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C.A. §§ 136–136y (2014).

41. United States v. Orkin Exterminating Co., 688 F. Supp. 223 (W.D. Va. 1988); see also *Pest Control Company Fined \$500,000 in Death of Couple*, N.Y. TIMES (Nov. 18, 1988), <http://www.nytimes.com/1988/11/18/us/pest-control-company-fined-500000-in-death-of-couple.html>.

42. United States v. Orkin Exterminating Co., 688 F. Supp. 223, 223 (W.D. Va. 1988); *\$2.5 Million Suit Against Orkin, Dow Firms is Reportedly Settled*, WASH. POST (Sept. 11, 1988), <http://www.washingtonpost.com/archive/local/1988/09/11/25-million-suit-against-orkin-dow-firms-is-reportedly-settled/af0bd2ce-a3df-46db-b2c9-f27c3a2cddd6/>.

43. *Pest Control Company Fined \$500,000 in Death of Couple*, N.Y. TIMES (Nov. 18, 1988), <http://www.nytimes.com/1988/11/18/us/pest-control-company-fined-500000-in-death-of-couple.html>.

44. ENV'T REP. (BNA) 1624 (Dec. 8, 1988).

I. OIL AND GAS

The fracking boom has resulted in a substantial increase in oil and gas production.⁴⁵ The problem for the producers is transporting the oil to refineries; either the existing pipelines to the wells have a limited capacity or no pipelines exist.⁴⁶ Therefore, the producers have turned to rail transport with long trains of flammable oil tank cars.⁴⁷ These trains have a high incident rate.⁴⁸

An oil train derailed at 1:15 a.m. in Lac-Mégantic, Canada on July 6, 2013.⁴⁹ Forty-seven died in the ensuing inferno.⁵⁰ The corporation, train engineer, operations manager, and a third employee were indicted by the provincial government on forty-seven counts of criminal negligence, as was the Canadian subsidiary of the railroad.⁵¹ The federal government filed criminal charges on June 22, 2015, against six individuals and two corporations for violations of the Railway Safety Act and the Fisheries Act.⁵² The six individuals included the train's engineer, the company's CEO, the operations manager, the assistant transportation manager, the safety director, and the general manager of operations.⁵³ The engineer had improperly tested the hand brakes so that they could be effectively set,⁵⁴ while the railroad had a history of safety problems.⁵⁵

45. *U.S. Oil & Gas Production On the Rise Thanks to Fracking*, INST. FOR ENERGY RESEARCH, (Sept. 19, 2014) <http://instituteeforenergyresearch.org/analysis/u-s-oil-gas-production-continues-increase-due-hydraulic-fracturing/>.

46. See generally, Jad Mouawad, *A Third Blast on Oil Trains Stirs Scrutiny*, N.Y. TIMES (Mar. 6, 2015), http://www.nytimes.com/2015/03/07/business/a-third-blast-on-oil-trains-stirs-scrutiny.html?mtrref=www.google.com&gwh=0B15158E0F32286BE21B246A4B52D9ED&gwt=pay&assetType=nyt_now [<http://perma.cc/4MHP-WJ5U>].

47. *Id.*

48. *Id.*

49. *Railway Investigation Report R13D0054*, TRANSP. SAFETY BD. OF CAN., (last modified Aug. 20, 2014), <http://www.tsb.gc.ca/eng/rapports-reports/rail/2013/r13d0054/r13d0054.asp#5.0>.

50. Eric Atkins & Verity Stevenson, *Six Former Railway Employees Charged in Lac-Mégantic Disaster*, GLOBE AND MAIL, (June 22, 2015, 11:22 AM) <http://www.theglobeandmail.com/news/national/ottawa-says-its-laying-new-charges-in-lac-megantic-derailment/article25055238/>.

51. *Id.*

52. *Id.*

53. *Id.*

54. TRANSP. SAFETY BD. OF CAN., RAILWAY INVESTIGATION REPORT R13D0054 129 (2014), <http://www.tsb.gc.ca/eng/rapports-reports/rail/2013/r13d0054/r13d0054.pdf>.

55. Atkins & Stevenson, *supra* note 50.

Lac-Megantic is an example of a tragic accident caused by a simple human failure to follow fundamental braking requirements. The magnitude of the tragedy cried out for the government to seek retribution through the criminal process.

A. *Oil Spills*

Three major oil spills have struck the United States. The first was Union Oil's Blowout on Platform A in Santa Barbara Channel on January 28, 1969, followed by the Exxon Valdez grounding on March 24, 1989, and the British Petroleum ("BP") Gulf Blowout on April 20, 2010.⁵⁶

No criminal prosecutions were brought in the Santa Barbara Blowout.⁵⁷ The situation changed with the Exxon Valdez, which ran aground on Bligh Reef in Prince William Sound on March 24, 1989.⁵⁸ Eleven million gallons of oil spilled into the Sound.⁵⁹ Extensive environmental damage resulted.⁶⁰

Alaska brought a second-degree criminal mischief felony charge and three misdemeanors charges against the Exxon Valdez Captain Joseph Hazelwood.⁶¹ The case illustrates the problems of legal delays.⁶² A jury acquitted him on three counts and convicted him on one misdemeanor, which was reversed on appeal by the Alaska Court of Appeals,⁶³ and was later reversed in turn by the Alaska Supreme Court,⁶⁴ which ultimately held negligence could be the basis for criminal liability.⁶⁵ The appellate litigation regarding the misdemeanor lasted six years.

Exxon and its shipping subsidiary were charged with two

56. Julie Cohn, *A History of Major Oil Spills*, N.Y. TIMES (May 10, 2010), http://www.nytimes.com/interactive/2010/05/10/us/20100510_OIL_TIMELINE.html?_r=0.

57. Although no criminal prosecutions ensued, Union Oil was involved in civil litigation arising out of the environmental disaster. See *Union Oil Co. v. Oppen*, 501 F.2d 558 (9th Cir. 1974).

58. *Questions and Answers About the Oil Spill*, Exxon Valdez Oil Spill Trustee Council, <http://www.evostc.state.ak.us/?FA=facts.QA> [<http://perma.cc/9MBR-YCAB>] (last visited Oct. 26, 2015).

59. *Id.*

60. *Id.*

61. See generally *Hazelwood v. State of Alaska*, 836 P.2d 943 (Alaska Ct. App. 1992).

62. *Id.*

63. *Id.* at 954.

64. *State v. Hazelwood*, 866 P.2d 827, 834 (Alaska 1993).

65. *State v. Hazelwood*, 946 P.2d 875, 885 (Alaska 1997). The Alaska Supreme Court held that simple negligence would suffice for liability. *Id.* at 885.

felony and three misdemeanor counts.⁶⁶ The felonies were for letting an incompetent crew leave port under the Ports and Waterways Safety Act⁶⁷ and the Dangerous Cargoes Act.⁶⁸ The misdemeanors were for the Migratory Bird Treaty Act,⁶⁹ the Clean Water Act⁷⁰ and the Refuse Act.⁷¹ Exxon pled guilty to one misdemeanor, paying \$1 billion in fines and restitution.⁷²

The Exxon Valdez litigation is believed to be the first in which a parent corporation was held criminally liable for the wrongdoing of a subsidiary.⁷³ Piercing the veil is common in civil litigation, but not criminal.

The BP Gulf Oil Blowout on April 20, 2010, left eleven workers missing and presumed dead, seventeen injured, the sunken Deepwater Horizon drilling platform, and a catastrophic oil leak into the Gulf of Mexico.⁷⁴ It unleashed a flood of criminal liability against the companies and employees involved in the disaster.

Transocean Deepwater owned the offshore drilling platform, BP Petroleum was the majority owner of the well and managed the drilling.⁷⁵ The drilling holes were temporarily plugged with “mud,” actually cement, by Halliburton Corporation, until production commenced.⁷⁶ The mud did not hold. The resulting pressure blew up, setting the platform on fire.⁷⁷

66. See Stephen Raucher, *Raising the Stakes for Environmental Polluters: The Exxon Valdez Criminal Prosecution*, 19 *ECOLOGY L.Q.* 147, 147–48 (1992).

67. Ports and Waterways Safety Act, 33 U.S.C.A. §§ 1221–1236 (2010).

68. Dangerous Cargoes Act, 46 U.S.C.A. §§ 3701–3719 (2010); Stephen Raucher, *Raising the Stakes for Environmental Polluters: The Exxon Valdez Criminal Prosecution*, 19 *ECOLOGY L.Q.* 147, 148 n.3 (1992).

69. 16 U.S.C. §§ 701–718 (1998).

70. 33 U.S.C. §§1251–1387 (2015).

71. 33 U.S.C. §§ 401–467(n) (2015); Stephen Raucher, *Raising the Stakes for Environmental Polluters: The Exxon Valdez Criminal Prosecution*, 19 *ECOLOGY L.Q.* 147, 148 n.3 (1992).

72. *Id.*

73. See generally *id.*

74. *BP Oil Spill: Disaster by Numbers*, INDEPENDENT (Sept. 14, 2010), <http://www.independent.co.uk/environment/bp-oil-spill-disaster-by-numbers-2078396.html> [<http://perma.cc/5Q27-MYEY>].

75. *Deepwater Horizon Accident and Response*, BP GLOBAL, http://www.bp.com/en_us/bp-us/commitment-to-the-gulf-of-mexico/deepwater-horizon-accident.html [<http://perma.cc/E6MV-G9FF>] (last visited Oct. 26, 2015).

76. *Containing the Leak*, BP GLOBAL, http://www.bp.com/en_us/bp-us/commitment-to-the-gulf-of-mexico/deepwater-horizon-accident/containing-the-leak.html [<https://perma.cc/RBB5-XNYF>]. The exploratory drilling would be sealed until the time came for actual production. The oil company has to decide either to proceed to production or to permanently cap the hole. *Id.*

77. See U.S. CHEM. SAFETY AND HAZARD INVESTIGATION BD.,

BP pled guilty to felony manslaughter and paid \$4 billion in criminal fines and sanctions.⁷⁸ It was charged with eleven counts of felony manslaughter, one count of Obstruction of Congress, as well as violations of the Clean Water Act and Migratory Bird Act.⁷⁹ The settlement includes almost \$1.3 billion in criminal fines, about \$2.4 billion to the National Fish and Wildlife Fund, and \$350 million to the National Academy of Sciences.⁸⁰

BP received five years of probation under the plea.⁸¹ It must appoint a process safety and risk management as well as an independent auditor to monitor safety, risk management, and drilling equipment maintenance in the Gulf of Mexico.⁸² A separate ethics monitor is to improve its code of ethics “to ensure BP’s future candor with the U.S. government.”⁸³

In addition, two BP rig supervisors were charged with eleven counts of involuntary manslaughter, eleven counts of seaman’s manslaughter, and one count of the Clean Water Act for negligence in supervising safety tests.⁸⁴ A former BP Executive Vice President for Exploration in the Gulf of Mexico, was charged with Obstruction of Congress and providing false statements to law enforcement officers.⁸⁵ A fourth employee, an engineer, was charged with destroying a text message chain.⁸⁶

The individual verdicts so far have been mixed. David Rainey

INVESTIGATION REPORT VOLUME 1 EXPLOSION AND FIRE AT THE MACONDO WELL 17 (2014).

78. Steven Mufson, *BP Settles Criminal Charges for \$4 Billion in Spill; Supervisors Indicted on Manslaughter*, WASH. POST (Nov. 15, 2012), http://www.washingtonpost.com/business/economy/bp-to-pay-billions-in-gulf-oil-spill-settlement/2012/11/15/ba0b783a-2f2e-11e2-9f50-0308e1e75445_story.html.

79. *Id.*

80. *Id.*

81. Press Release, Office of Pub. Affairs, U.S. Dep’t of Justice, BP Exploration and Production Inc. Pleads Guilty, Is Sentenced to Pay Record \$4 Billion for Crimes Surrounding Deepwater Horizon Incident (Jan. 29, 2013), <http://www.justice.gov/opa/pr/bp-exploration-and-production-inc-pleads-guilty-sentenced-to-pay-record-4-billion-crimes> [<https://perma.cc/L3NG-W73B>].

82. *Id.*

83. *Id.*

84. *Id.*

85. Michael Kunzelman, Associated Press, *Former BP Executive’s Obstruction Thrown Out by Judge*, THE TIMES-PICAYUNE (May 20, 2013, 6:11 PM updated May 20, 2013, 10:07 PM), http://www.nola.com/news/gulf-oil-spill/index.ssf/2013/05/former_bp_executives_obstructi.html [<http://perma.cc/DV9B-JDNK>].

86. Associated Press, *Ex-BP Engineer Convicted of Deleting Text Messages to Obstruct Oil Spill Probe*, FOX NEWS (Dec. 18, 2013), <http://www.foxnews.com/us/2013/12/18/ex-bp-engineer-convicted-deleting-text-messages-to-obstruct-oil-spill-probe/> [<http://perma.cc/P3PH-VHKC>].

was acquitted on June 5, 2015, of making false representations to investigators.⁸⁷ The charge was that he stated an estimated five thousand barrels daily were leaking when he knew the amount was much higher.⁸⁸ He claimed his estimates were an honest mistake.⁸⁹ Kurt Mix was found guilty on December 18, 2013, for destroying evidence by deleting hundreds of text messages; however, the conviction was subsequently overturned.⁹⁰ Before the retrial, the Justice Department offered a plea deal in which Mix pled guilty to a misdemeanor, receiving no jail time or fine.⁹¹

The seaman's manslaughter charges against the rig supervisors were dismissed⁹² and the remaining manslaughter charges dropped. Donald Vidrane pled guilty on December 2, 2015, to one pollution violation.⁹³ A jury subsequently acquitted Robert Kaluza, the oil rig supervisor.⁹⁴

Transocean Deepwater, Inc., the owner of the drilling platform, pled guilty to violating the Clean Water Act.⁹⁵ It agreed on January 3, 2013, to pay \$400 million in criminal fines and \$1

87. Eben Blake, *David Rainey Acquitted for BP Oil Spill False Statements Allegations Against Former Executive*, INT'L BUS. TIMES (June 5, 2015, 3:45 PM), <http://www.ibtimes.com/david-rainey-acquitted-bp-oil-spill-false-statements-allegations-against-former-1954915> [<http://perma.cc/5P9K-8W9M>].

88. Associated Press, *Ex-BP Executive Found Not Guilty of Lying to Investigators During 2010 Gulf Oil Spill*, N.Y. TIMES (June 5, 2015), http://www.nytimes.com/2015/06/06/business/ex-bp-executive-found-not-guilty-of-lying-to-investigators-during-2010-gulf-oil-spill.html?_r=0 [<http://perma.cc/3Q6M-24QJ>].

89. *Id.* The government claimed Rainey manipulated the calculations while the defense asserted, "Mr. Rainey's figures were made honestly and that he had no reason to lie." *Id.*

90. *United States v. Mix*, 25 F. Supp.3d 914 (E.D. La. 2014) *aff'd*, 791 F.3d 603 (5th Cir. 2015) (the trial court had dismissed the obstruction of justice charge the first day of trial); *see also* Associated Press, *Ex-BP Engineer Convicted of Deleting Text Messages to Obstruct Oil Spill Probe*, FOX NEWS (Dec. 18, 2013), <http://www.foxnews.com/us/2013/12/18/ex-bp-engineer-convicted-deleting-text-messages-to-obstruct-oil-spill-probe/> [<http://perma.cc/P3PH-VHKC>].

91. *See* Kurt Mix, *I Was an Oil Spill Scapegoat*, WALL ST. J. (Nov. 8, 2015, 4:46 PM) at A15, col.2, <http://www.wsj.com/articles/i-was-an-oil-spill-scapegoat-1447019267>.

92. *United States v. Kaluza*, 780 F.3d 647, 669 (5th Cir. 2015).

93. Janet McConnaughey & Michael Kunzelman, Associated Press, *Manslaughter Charges Dropped In BP Oil Spill Case*, HUFFINGTON POST (Dec. 2, 2015, 4:35 PM), http://www.huffingtonpost.com/entry/manslaughter-charges-dropped-in-bp-oil-spill-case_us_565f3892e4b08e945fedaf7f.

94. Associated Press, *BP Engineer Is Not Guilty in Case From 2010 Gulf Oil Spill*, N.Y. TIMES (Feb. 25, 2016), http://www.nytimes.com/2016/02/26/business/energy-environment/bp-engineer-is-not-guilty-in-case-from-2010-gulf-oil-spill.html?_r=0.

95. Margaret Cronin Fisk, *Transocean \$1 Billion Gulf-Oil Spill Settlement Approved*, BLOOMBERG BUSINESS (Feb. 19, 2013, 2:18 PM), <http://www.bloomberg.com/news/articles/2013-02-19/transocean-1-billion-gulf-oil-spill-settlement-approved> [<http://perma.cc/Y5KA-2LYE>].

billion in civil penalties for one misdemeanor count of violating the Clean Water Act.⁹⁶

Halliburton, who applied the mud, which failed to plug the drill hole, was placed on three years' probation for destroying evidence and made a \$55 million contribution to the National Fish and Wild Life Foundation.⁹⁷ The company was also placed on three years' probation.⁹⁸

Anthony Badalamenti, former cement technology director for Halliburton, pled guilty to one count of destroying evidence, and was sentenced to one year of probation.⁹⁹ He had ordered two Halliburton employees to delete data they uncovered during a post-incident review of the cementing.¹⁰⁰

Not all criminal cases involve oil spills on the magnitude as Santa Barbara, Exxon Valdez, or BP. John Joseph Cota was piloting a freighter out of San Francisco Bay when it grazed the San Francisco Oakland Bay Bridge on November 7, 2007.¹⁰¹ Approximately 53,000 gallons of fuel were discharged into the Bay, fouling twenty-six miles of coastline and killing two thousand migratory birds.¹⁰² He pled guilty to two counts of negligence under the Clean Water Act and violation of the Migratory Bird Act.¹⁰³ Fleet Management Ltd. of Hong Kong, the ship's owner, was charged with multiple felonies for falsifying documents and two other felonies.¹⁰⁴ It pled guilty to the misdemeanors and paid

96. *Id.*

97. Press Release, Office of Pub. Affairs, U.S. Dep't of Justice, Halliburton Agrees to Plead Guilty to Destruction of Evidence in Connection with Deepwater Horizon Tragedy (July 25, 2013), <http://www.justice.gov/opa/pr/halliburton-agrees-plead-guilty-destruction-evidence-connection-deepwater-horizon-tragedy> [<http://perma.cc/4Y35-N9LR>].

98. *Id.*

99. Michael Kunzelman, Associated Press *Ex-Halliburton Exec Admits Destroying Evidence*, USA TODAY (Oct. 15, 2013, 3:43 PM), <http://www.usatoday.com/story/money/business/2013/10/15/halliburton-guilt-oil-spill/2988667/> [<http://perma.cc/S24D-26JK>].

100. *Id.*

101. Maria L. La Ganga, *California Briefing / San Francisco: Cargo Ship Pilot Pleads Guilty in 2007 Oil Spill*, L.A. TIMES (Mar. 7, 2009), <http://articles.latimes.com/2009/mar/07/local/me-briefs7.S1> [<http://perma.cc/JM9X-NWPV>].

102. *Id.*

103. *Id.*

104. James Armstrong, *Fleet To Pay \$10M Over Cosco Busan Oil Spill*, LAW360 (Feb. 22, 2010, 4:30 PM), <http://www.law360.com/articles/151174/fleet-to-pay-10m-over-cosco-busan-oil-spill> [<http://perma.cc/85ER-FH5R>].

\$10 million in fines and restitution.¹⁰⁵

Similarly, a barge captain was sentenced on June 26, 2015, to six months in prison for negligent manslaughter of a seaman and negligently discharging oil pollution into a navigable waterway for the 2005 explosion on a barge in the Chicago Sanitary and Ship Canal.¹⁰⁶ The accident killed a crewmember and spilled 4,800 gallons of oil and thirty-two tons of oil solids into the canal.¹⁰⁷ Egan Marine Corp., his employer, was also convicted.¹⁰⁸ It was ordered to reimburse the government for \$5.3 million in cleanup cost to the National Pollution Funds Center and was placed on three years of supervised release.¹⁰⁹ There was a negligent release of combustible vapors from the cargo hold.¹¹⁰ Alexander Oliva, the deceased employee, was directed to use a propane-fueled open flame to heat a cargo pump.¹¹¹ The use of the torch violated Coast Guard regulations.¹¹²

B. Pipelines

Underground oil and gas pipelines can explode, often through a piece of construction equipment piercing pipelines or through deterioration of the pipes.¹¹³ On September 9, 2010, an underground Pacific Gas & Electric (“PG&E”) natural gas pipeline in San Bruno, California, exploded in a fireball, causing eight deaths, injuring dozens, and destroying thirty-eight homes.¹¹⁴ The utility was initially indicted on twelve counts on April 1, 2014,

105. *Id.*

106. Press Release, U.S. Attorney’s Office, Northern Dist. of Ill., Dep’t of Justice, Barge Captain Sentenced to Six Months For Fatal 2005 Explosion That Discharged Slurry Oil In Chicago Canal And Marine Company Ordered To Pay Over \$5.3 Million In Restitution (June 26, 2015), <http://www.justice.gov/usao-ndil/pr/barge-captain-sentenced-six-months-fatal-2005-explosion-discharged-slurry-oil-chicago> [<http://perma.cc/6ECL-G3LU>].

107. *Id.*

108. *Id.*

109. *Id.*

110. *Id.*

111. *Id.*

112. 48 ENV’T REP. (BNA) 2013–14 (July 3, 2015).

113. Lena Groeger, *Pipelines Explained: How Safe are America’s 2.5 Million Miles of Pipelines?*, PROPUBLICA (Nov. 15, 2012, 2:27 PM), <http://www.propublica.org/article/pipelines-explained-how-safe-are-americas-2.5-million-miles-of-pipelines>.

114. Sandy Smith, *PG&E Faces Criminal Charges in Fatal San Bruno Explosion*, EHS TODAY (Jul. 30, 2014), <http://ehstoday.com/safety/pge-faces-criminal-charges-fatal-san-bruno-explosion>.

including failure to maintain proper records.¹¹⁵ On July 27, 2014, a superseding indictment was brought on charges of violating the Pipeline Safety Act and one charge of obstructing the National Transportation Safety Board investigation.¹¹⁶

San Bruno is an example of a horrific tragedy in an urban area. Society cannot tolerate these *accidents* because of the risks posed to a large population. This message is sent through criminal prosecutions. However, oil and gas are transported through tanker ships, pipelines, and rail cars. Because of the nature of these modes of transportation, human error will inevitably cause an accident in all three modes of transportation, as shown by the BP Macondo Blowout, Lac-Megantic, and PG&E.

II. STRUCTURAL FAILURES

Building collapses and fires do not usually make international news, absent a horrific tragedy. Yet, they are a constant source of criminal prosecutions. Sadly, some echo the Triangle Shirtwaist Factory Tragedy.

Twenty-five workers died and fifty-four were injured in Hamlet, North Carolina on September 3, 1991, when they were trapped in their chicken processing plant by a fire.¹¹⁷ The doors were locked trapping the workers.¹¹⁸ The owner had ordered the doors locked from the outside.¹¹⁹ The owner, owner's son, and the plant manager were charged with involuntary manslaughter on March 13, 1992.¹²⁰ The owner pled guilty to twenty-eight counts of involuntary manslaughter on September 15, 1992.¹²¹ He was sentenced to nineteen years, of which he served four.¹²² The

115. *Id.*

116. *Id.*

117. JACK YATES, DEPARTMENT OF HOMELAND SECURITY, FEDERAL EMERGENCY MANAGEMENT AGENCY, U.S. FIRE ADMINISTRATION TECHNICAL REPORT SERIES: CHICKEN PROCESSING PLANT FIRES 2, 4 (USFA-TR-057 June/Sept. 1991) <https://www.usfa.fema.gov/downloads/pdf/publications/tr-057.pdf> [<https://perma.cc/U8H3-KHJT>].

118. *Id.* at 2.

119. *Chicken Plant Owner Gets Jail for Fatal Blaze*, L.A. TIMES (Sept. 15, 1992) http://articles.latimes.com/1992-09-15/news/mn-917_1_plant-operations [<http://perma.cc/7DU5-4FYB>].

120. *3 Surrender in Plant Fire*, N.Y. TIMES (Mar. 13 1992), <http://www.nytimes.com/1992/03/13/us/3-surrender-in-plant-fire.html>.

121. *Chicken Plant Owner Gets Jail for Fatal Blaze*, L.A. TIMES (Sept. 15, 1992) http://articles.latimes.com/1992-09-15/news/mn-917_1_plant-operations [<http://perma.cc/7DU5-4FYB>].

122. *Id.*

charges were dropped against the other defendants.¹²³ The owner had ordered the doors to be locked from the outside.¹²⁴

The North Carolina Department of Labor also levied \$808,150 in fines for fifty-four “willful,” twenty-three “serious,” and six “other than serious” violations of federal and state safety regulations.¹²⁵ Violations included locked or unmarked exit doors, no fire alarms or sprinkler systems, and a lack of employee training in the use of fire extinguishers.¹²⁶

A fire broke out at the Jilin Baoyuanfeng Poultry Slaughterhouse in Jilin Province, China on June 2, 2013, killing 121 and injuring 66.¹²⁷ The emergency exits were locked.¹²⁸ The owner, general manager, and eleven local officials were arrested.¹²⁹ Thirty-five government officers and company executives were transferred to judicial authorities for prosecution.¹³⁰ Seventy-four officials received disciplinary sanctions, including dismissal from office.¹³¹

The chairman of the company was sentenced to nine years’ imprisonment for not ensuring workplace safety, while the general manager received four years for installing substandard equipment.¹³² The local fire chief and deputy were sentenced to prison for failing to carry out safety inspections and falsifying information after the fire.¹³³

An interior stadium wall collapsed on May 29, 1985, at Heysel Stadium in Belgium under the weight of soccer fans resulting in

123. *Id.*

124. *Id.*

125. Ronald Smothers, *North Carolina Plant is Fined \$808,150 in Fatal Fire*, N.Y. TIMES (Dec. 31, 1991), <http://www.nytimes.com/1991/12/31/us/north-carolina-plant-is-fined-808150-in-fatal-fire.html>.

126. *Id.*

127. *Fire Chiefs and Poultry Plant Bosses Jailed for 2013 Jilin Fire that Killed 121*, SOUTH CHINA MORNING POST (Dec. 27, 2014, 7:12 PM), <http://www.scmp.com/news/china/article/1668863/fire-chiefs-and-poultry-plant-bosses-jailed-2013-jilin-fire-killed-121> [<http://perma.cc/7344-N77X>].

128. *Id.*

129. *Jilin Officials Punished Over Colliery Blasts*, CHINA.ORG.CN (July 8, 2013), http://www.china.org.cn/china/2013-07/08/content_29353645.htm [<http://perma.cc/G4RJ-D33A>].

130. *Id.*

131. *Id.*

132. *Fire Chiefs and Poultry Plant Bosses Jailed for 2013 Jilin Fire that Killed 121*, SOUTH CHINA MORNING POST (Dec. 27, 2014, 7:12 PM), <http://www.scmp.com/news/china/article/1668863/fire-chiefs-and-poultry-plant-bosses-jailed-2013-jilin-fire-killed-121> [<http://perma.cc/7344-N77X>].

133. *Id.*

thirty-nine deaths and over six hundred injured victims. Liverpool fans were convicted of manslaughter and sentenced to three years.¹³⁴

A fire swept through a sixteen-story apartment building in Baku, Azerbaijan on May 19, 2015, killing fifteen and injuring dozens.¹³⁵ The head of the construction company was arrested for using flammable cladding materials on the walls.¹³⁶

A fourteen-story building under construction imploded eight years earlier on August 28, 2007, in Baku.¹³⁷ Twenty construction workers perished in the disaster.¹³⁸ The director and three officers of the company were arrested, as was the head of the city government department for apartments and cooperative buildings on abuse-of-power charges.¹³⁹ The foundation was designed to support nine stories.¹⁴⁰ No approval was given for the final design.¹⁴¹

The eight-story Rana Plaza building collapsed on April 24, 2013, in Davar, Bangladesh, resulting in the deaths of 1,136 textile workers and over two thousand injuries.¹⁴² The world was riveted by the tragedy. Arrests immediately ensued. Forty-two indictments were issued on June 5, 2015, for “culpable homicide.”¹⁴³ Eighteen others were also indicted for building code violations by adding extra floors to a five-story building.¹⁴⁴ The building was constructed of sub-standard materials.¹⁴⁵ The building

134. Tom Mullen, *Heysel Disaster: English Football's Forgotten Tragedy?*, BBC NEWS (May 29, 2015), <http://www.bbc.com/news/uk-england-merseyside-32898612> [<http://perma.cc/Y7BJ-Y9VN>].

135. *Building Fire Kills 16, Injures at Least 50 in Azerbaijan*, MIRAGE NEWS (May 19, 2015), <http://www.miragenews.com/building-fire-kills-16-injures-at-least-50-in-azerbaijan/> [<http://perma.cc/8G5E-8RY2>].

136. *Azerbaijan Fire Deaths Prompt 'Flammable Cladding' Protest*, BBC (May 20, 2015), <http://www.bbc.com/news/world-europe-32809520>.

137. Rovshan Ismayilov, *Azerbaijan: Building Collapse Exposes "Chaos" in Baku's Urban Planning*, EURASIANET.ORG (Sept. 5, 2007, 7:00 PM), <http://www.eurasianet.org/print/56116> [<http://perma.cc/E49H-TN5Z>].

138. *Id.*

139. *Id.*

140. *Id.*

141. *Id.*

142. Syed Zain Al-Mahmood, *Bangladeshi Police Charge 42 With Homicide for 2013 Garment Factory Collapse*, WALL ST. J. (June 2, 2015, 1:54 PM), at B6, <http://www.wsj.com/articles/bangladeshi-police-charge-42-with-homicide-for-2013-garment-factory-collapse-1433181270>.

143. *Id.*

144. *Id.*

145. *Id.*

owner and five factory owners were charged with criminal homicide for ordering the workers back into the building to return to work the day before the collapse.¹⁴⁶ An engineer warned of safety problems because of visible cracks.¹⁴⁷ Those indicted include the owner of the building, five owners of textile plants in the Rana Plaza, and over a dozen national and local government officials, including the mayor, who oversaw building safety and inspections, but failed to enforce the regulations.¹⁴⁸

One of the few lessons I remember from a high school economics class was that countries often started industrialization through textiles because labor costs can be low.¹⁴⁹ Bangladesh became a large textile manufacturing country because it had the lowest wages for textile workers,¹⁵⁰ coupled with hazardous working conditions.

A roof collapsed on November 21, 2013, at the Zolitude Shopping Center in Riga, Latvia when the roof support beams failed.¹⁵¹ The collapse resulted in fifty-four deaths, including three rescue workers, and 41 injured.¹⁵² The construction engineer and the expert analyst for the architectural firm were both arrested on January 14, 2015, for building code violations.¹⁵³ The prosecutors also charged eight individuals on April 17, 2015.¹⁵⁴ Five were charged with building code violations and three public officials were charged with negligence: Manka Trejia, the Riga City Council's Construction Supervisory Board senior expert; Janis Balodis, former deputy chief building inspector; and Aija Melnokova, chief building inspector.¹⁵⁵ The country's prime minister resigned shortly after the tragedy. Zolitude was the first

146. *Id.*

147. *Id.*

148. *Id.*

149. ROBERT L. HEILBRONER & WILLIAM MILBERG, *THE MAKING OF ECONOMIC SOCIETY* (Sally Yagan et al. eds., 13th ed. 2012).

150. Julfikar Ali Manik & Nida Najar, *Bangladesh Police Charge 41 With Murder Over Rana Plaza Collapse*, N.Y. TIMES (June 2, 2015), <http://www.nytimes.com/2015/06/02/world/asia/bangladesh-rana-plaza-murder-charges.html> [<https://perma.cc/BU5U-FQMQ?type=source>].

151. Jurisohn Kaža, *Latvian Police Arrest 2 in Building Collapse Case*, WALL ST. J. (Jan. 13, 2015, 3:21 PM), <http://www.wsj.com/articles/latvian-police-arrest-2-in-building-collapse-case-1421180502>.

152. *Id.*

153. *Id.*

154. *Id.*

155. *Id.*; see also *Prosecution charges eight in Zolitude disaster*, LSM.LV (Apr. 7 2015, 5:24 PM), <http://www.lsm.lv/en/article/societ/eight-to-face-charge-over-zolitude-disaster.a124473/> [<http://perma.cc/4HRL-6LX3>].

test of Latvia's new statute imposing criminal liability on corporations.¹⁵⁶

Seven people died on March 14, 2006, when the Kaloko Dam burst on the island of Kauai when a twenty-foot high wave swept out of the dam.¹⁵⁷ James Pflueger, the owner, was indicted on seven counts of manslaughter and reckless endangerment.¹⁵⁸ He had covered the spillway.¹⁵⁹ He pled guilty to one count of reckless endangerment on July 18, 2013, and was sentenced to seven months in prison on October 15, 2014.¹⁶⁰ In addition, his company pled guilty to seven counts of manslaughter charges and was fined \$350,000 to be used to support Hawaii's dam safety program.¹⁶¹ He entered prison on October 15, 2014. The eighty-nine-year-old was released on November 28, 2014, for medical reasons.¹⁶² The judge reduced the company's fine to \$1,000 per count.¹⁶³

A ten-meter tall lighting rig collapsed on Mount Herzl on April 18, 2012, during preparation for Israeli Independence day.¹⁶⁴ An Israeli Lieutenant was killed.¹⁶⁵ Six indictments followed, including the two owners of the construction company that erected the rig, the company's operations manager, the structure's engineer, the event's safety manager, and the corporation.¹⁶⁶ The corporation had not obtained all the requisite permits.¹⁶⁷

New York City has a Crane Ordinance regulating the safety of

156. *Green Light for Post-Disaster Proceedings*, BUSINESS QUARTER (Mar. 11, 2014, 7:00 AM), <http://www.bqlive.co.uk/2014/03/11/green-light-for-post-disaster-proceedings/#comments> [<http://perma.cc/6SD5-AGJZ>].

157. Malia Zimmerman, *Pflueger Sentenced in Kauai Dam Break Tragedy That Killed 7 People*, HAWAII REPORTER (Oct. 16, 2014), <http://www.hawaiiireporter.com/pflueger-sentenced-in-kauai-dam-breach-tragedy-that-killed-7-people> [<http://perma.cc/HKJ9-9ANE>].

158. *Id.*

159. *Id.*

160. *Id.*

161. *Id.*

162. Malia Zimmerman, *Pflueger Sentenced in Kauai Dam Break Tragedy That Killed 7 People*, HAWAII REPORTER (Oct. 16, 2014), <http://www.hawaiiireporter.com/pflueger-sentenced-in-kauai-dam-breach-tragedy-that-killed-7-people> [<http://perma.cc/HKJ9-9ANE>].

163. *Id.*

164. Yonah Jeremy Bob, *Six People to be Charged for Accident that Killed IDF Officer on Jerusalem's Mount Herzl*, JERUSALEM POST, (Apr. 30, 2014, 4:26 PM), <http://www.jpost.com/National-News/Six-people-to-be-charged-for-accident-that-killed-IDF-officer-on-Jerusalems-Mount-Herzl-350910> [<http://perma.cc/89JL-XUQL>].

165. *Id.*

166. *Id.*

167. *Id.*

cranes in the city.¹⁶⁸ Several accidents have resulted with cranes collapsing, causing deaths and injuries. Some have resulted in criminal prosecutions.

A crane operator pled guilty to second-degree assault and the contractor was found guilty of third-degree criminal assault and second-degree reckless endangerment when a crane toppled over, injuring the victim in the civil suit.¹⁶⁹ The court held that the two defendants were collaterally estopped from defending the issue of their liability in the subsequent civil suit.¹⁷⁰

Another case involved the issue of whether a crane operator had the right to assert the Fifth Amendment privilege against self-incrimination in civil discovery after a statement in a “debriefing agreement” made with the District Attorney in a companion criminal case.¹⁷¹

STB Investments was demolishing a four-story building in Philadelphia on June 5, 2013.¹⁷² The building adjoined a one-story building with a Salvation Army store in it.¹⁷³ Griffin T. Campbell, the demolition contractor, submitted a substantially low bid and then pushed the demolition despite warnings of problems.¹⁷⁴ The wall of the building collapsed on the Salvation Army structure, killing six and injuring fourteen.¹⁷⁵ The deceased included the son of the city’s treasurer.

The contractor and Sean Benschop, the equipment operator, were both indicted.¹⁷⁶ Benschop had painkillers and marijuana in his system at the time of the tragedy with a long history of drug, weapons, and other offenses.¹⁷⁷ He pled guilty on June 21, 2015, to six counts involuntary manslaughter, twelve counts reckless indifference, and single counts of conspiracy and causing a

168. N.Y. City, N.Y. Admin. Code §§ 28-3316, 28-3319 (2014), http://www1.nyc.gov/assets/buildings/building_code/2014_code_changes_chapter_33.pdf.

169. *Gerney v. Tishman Constr. Corp. of N.Y.*, 518 N.Y.S.2d 564 (N.Y. Sup. Ct. 1987).

170. *Id.*

171. *In the Matter of East 51st Street Crane Collapse Litigation*, 916 N.Y.S.2d 471 (N.Y. Sup. Ct. 2010).

172. ASSOCIATED PRESS, *Equipment Operator in Philadelphia Building Collapse Probe, Surrenders*, CBS NEWS (June 8, 2013, 7:27 PM), <http://www.cbsnews.com/news/sean-benschop-equipment-operator-in-philadelphia-building-collapse-probe-surrenders/> [<http://perma.cc/49SX-TW75>].

173. *Id.*

174. *Id.*

175. *Id.*

176. *Id.*

177. *Id.*

catastrophe.¹⁷⁸

Griffin Campbell was charged on November 25, 2013, with six counts of third degree murder, six counts involuntary manslaughter, thirteen counts reckless indifference, and single counts of criminal conspiracy, risking catastrophe, and causing catastrophe.¹⁷⁹

III. MINING DISASTERS

Mining, especially underground coal mining, is a dangerous occupation. Fires, explosions, and cave-ins exact a high toll on miners, followed in life by silicosis. An explosion on April 5, 2010, at the Upper Big Branch Coal Mine in Montcoal, West Virginia killed twenty-nine miners.¹⁸⁰ Investigators found numerous safety violations after the accident.¹⁸¹ Don Blankenship, CEO of the parent company, Massey Energy, was indicted on November 12, 2014, on four counts, including conspiracy to impede mine safety officials and conspiracy to violate mine safety standards.¹⁸² A former mine superintendent pled guilty to criminal charges in the case in March 2012 for conspiring to impede the Mine Safety and Health Administration investigation.¹⁸³ He was sentenced to forty-two months in prison and three years supervised release.¹⁸⁴

The *Massey* litigation involved the liability of a parent corporation for the misdeeds of its subsidiary and its employees. Alpha Natural Resources acquired Massey in 2011 and paid \$209

178. Julie Shaw, *Excavator Operator to Plead Guilty in Building Collapse*, PHILLY.COM (July 20, 2015), http://articles.philly.com/2015-07-20/news/64599317_1_sean-benschop-griffin-campbell-involuntary-manslaughter [http://perma.cc/6QXA-CWTH].

179. Maryclaire Dale, *Griffin Campbell Charged With Murder In Deadly Philadelphia Building Demolition*, HUFFINGTON POST (Nov. 26 2013 11:41 AM), http://www.huffingtonpost.com/2013/11/26/griffin-campbell-murder-charges_n_4342987.html [http://perma.cc/GU3Q-FV79].

180. Jonathan Mattise, *CEO in Deadliest US Mine Accident in 4 Decades Facing Trial*, ASSOCIATED PRESS (Sept. 27, 2015, 10:39 AM), <http://bigstory.ap.org/article/824f61395f85453a8d4efbd3da6a3a4c/ceo-deadliest-us-mine-accident-4-decades-facing-trial> [http://perma.cc/ZBN2-NS8W].

181. *Id.*

182. Howard Berkes, *Former Massey Exec Gets 42 Months In Mine Disaster Case*, NPR (Sept. 10, 2013), <http://www.npr.org/sections/thetwo-way/2013/09/10/221161240/former-massey-exec-gets-42-months-in-mine-disaster-caseformer-massey-exec-gets-42-months-in-mine-disaster-case>.

183. *Id.*; see also David Segal, *The People v. the Coal Baron*, N.Y. TIMES (June 20, 2015), <http://www.nytimes.com/2015/06/21/business/energy-environment/the-people-v-the-coal-baron.html>.

184. Berkes, *supra* note 182.

million in criminal penalties for the Montcoal disaster.¹⁸⁵ This included \$46.5 million in restitution to the miners' families, and \$35 million in federal penalties.¹⁸⁶

Another Massey subsidiary, the Aracoma Alma Mine #1 experienced a fatal fire on January 19, 2006.¹⁸⁷ Two miners died from carbon monoxide exposure.¹⁸⁸ Four mine foremen pled guilty on July 20, 2010, for failure to conduct escapeway drills.¹⁸⁹ Massey Energy Company and its subsidiary Aracoma agreed to pay \$4.2 million in criminal fines and civil penalties.¹⁹⁰

On May 9, 1992, an explosion resulted in the death of twenty-six miners at the Westray Mine in Plymouth, Nova Scotia, Canada.¹⁹¹ The mine owner and four managers were charged on October 5, 1992, with twenty-six counts of criminal negligence and manslaughter.¹⁹² The company went bankrupt in 1993¹⁹³ and the charges were dropped against the individual employees in 1997.¹⁹⁴

Nova Scotia Supreme Court Justice K. Peter Richard was asked to prepare a study of the Westray tragedy. The title of his report says it all: "The Westray Story: A Predictable Path to

185. Sabrina Tavernise & Clifford Krauss, *Mine Owner Will Pay \$209 Million in Blast That Killed 29 Workers*, N.Y. TIMES (Dec. 6, 2011), at A16, <http://www.nytimes.com/2011/12/07/us/mine-owner-to-pay-200-million-in-west-virginia-explosion.html?pagewanted=all>; see also Michael Erman & Ann Saphir, *Alpha Agrees To Buy Massey Energy For About \$7.1 Billion*, REUTERS, Jan 30, 2011, <http://www.reuters.com/article/2011/01/30/us-alpha-massey-idUSTRE70S0PC20110130>.

186. Sabrina Tavernise & Clifford Krauss, *Mine Owner Will Pay \$209 Million in Blast That Killed 29 Workers*, N.Y. TIMES (Dec. 6, 2011), at A16, <http://www.nytimes.com/2011/12/07/us/mine-owner-to-pay-200-million-in-west-virginia-explosion.html?pagewanted=all>.

187. *Aracoma Alma Mine Accident*, PROJECT GUTENBERG, http://www.gutenberg.us/articles/Aracoma_Alma_Mine_accident [<http://perma.cc/3V4T-99J9>] (last visited Oct. 9, 2015).

188. *Id.*

189. *Id.*

190. *Id.*; see also *\$210M Settlement in Deadly W.Va. Mine Disaster*, CBSNEWS.COM, (Dec. 6, 2011) <http://www.cbsnews.com/news/210m-settlement-in-deadly-wva-mine-disaster/> [<http://perma.cc/SM3H-VK2Y>].

191. See Eric Tucker, *The Westray Mine Disaster and its Aftermath: The Politics of Causation*, 18 CJLR/RCDS1010 CAN. J.L. & SOC. 91 (1995); see also Martin O'Malley, *Westray Remembered: Explosion Killed: Explosion Killed 26 N.S. Coal Miners in 1992*, CBC NEWS (May 8, 2012) <http://www.cbc.ca/news/canada/nova-scotia/westray-remembered-explosion-killed-26-n-s-coal-miners-in-1992-1.1240122>.

192. *Id.*

193. Martin O'Malley, *Westray Remembered: Explosion Killed: Explosion Killed 26 N.S. Coal Miners in 1992*, CBC NEWS (May 8, 2012), <http://www.cbc.ca/news/canada/nova-scotia/westray-remembered-explosion-killed-26-n-s-coal-miners-in-1992-1.1240122>.

194. *R. v. Curragh Inc.*, [1997] 1 S.C.R. 537 (Can.).

Disaster.”¹⁹⁵ He found mismanagement, a lack of safety training at the mine, poor ventilation, and broken methane detectors. He wrote that the “tragic story” was one “of incompetence, of mismanagement, of bureaucratic bungling, of deceit, of ruthlessness, of cover-up, of apathy, of expediency, and of cynical indifference.”¹⁹⁶ He wrote “management ignored or encouraged a series of hazardous or illegal practices, including having the miners work 12-hour shifts, improperly storing fuel and refueling vehicles underground, and using non-flameproof equipment underground”¹⁹⁷ For example, the methane monitoring meters were outwitted or bypassed combined with an inadequate ventilation system.¹⁹⁸ The result was that dangerous levels of methane accumulation.¹⁹⁹

China has also experienced a multitude of coal mining and other disasters, with only a few criminal prosecutions. Conversely, the Chinese government brought criminal charges in the Babao Coal Mine explosions that occurred on March 29 and April 1, 2013.²⁰⁰ Fifty-three deaths and twenty injuries resulted.²⁰¹ “Sixteen people, including Zhao Xianwen, board chairman and general manager of Tonghua Mining Company, which owns the mine, as well as his deputies, have been prosecuted.”²⁰² Han Chenglu, the general manager of the mine, received a five-year sentence.²⁰³ Nine others received sentences ranging from ten months to four years, while four safety workers received suspended sentences.²⁰⁴

Beginning on November 19, 2010, twenty-nine miners and contractors died in a series of explosions that wracked the Pike River Mine in New Zealand.²⁰⁵ The mining company, contracting

195. K. PETER RICHARD, *THE WESTRAY MINE PUBLIC INQUIRY, THE WESTRAY STORY: A PREDICTABLE PATH TO DISASTER* (1997).

196. *Id.* at 3.

197. *Id.*

198. *Id.* at 29.

199. *Id.* at 29–30.

200. Xinhua, *Jilin Officials Punished Over Colliery Blasts*, CHINA.ORG.CN (July 8, 2013), http://www.china.org.cn/china/2013-07/08/content_29353645.htm [<http://perma.cc/G4RJ-D33A>].

201. *Id.*

202. *Id.*

203. Xinhua, *14 Managers, Officials Sentenced Over Mine Blasts*, GLOBAL TIMES, (Jan. 29, 2014), <http://en.dunyatimes.com/article/14-managers-officials-sentenced-over-mine-blasts-31965.html> [<http://perma.cc/5KVU-KMEC>].

204. *Id.*

205. Alex Heber, *No Individual Will Face Criminal Charges Over Deadly Pike*

company, and the CEO of the mining company were indicted.²⁰⁶ The contractor, Valley Longwall International Drilling, pled guilty to three charges of violating New Zealand's Health and Safety Act.²⁰⁷ The mining company entered receivership, and charges against the CEO—who had been charged with twelve counts of violating the Health and Safety Act—were dropped for lack of evidence.²⁰⁸

Three-hundred and one miners in Soma, Turkey, died in a coal mine explosion on May 13, 2014.²⁰⁹ Forty-five prosecutions followed for eight executives, including the chief executive, general manager, and the mine's operations manager.²¹⁰ First-degree murder charges were brought against the former board chairman and seven other senior officers.²¹¹ Involuntary manslaughter charges were brought against twenty-nine others, including mine managers, engineers, and security supervisors.²¹²

IV. ENVIRONMENTAL

A. *Asbestos*

Minamata and Bhopal were great environmental disasters, but they have seen minimal criminal enforcement against those responsible. Asbestos, lead paint, mercury, and tobacco have caused more injury, death, and disability across the spectrum,²¹³

River Disaster, AUSTRALIAN MINING (July 18, 2013), <http://www.australianmining.com.au/news/no-individual-will-face-criminal-charges-over-dead> [<http://perma.cc/TXN4-GHHB>].

206. *Id.* see also *New Zealand Pike River Mine Disaster 'Preventable'*, BBC NEWS (Nov. 5, 2012), <http://www.bbc.com/news/world-asia-20202191> [perma.cc/UZ9F-N54C].

207. Heber, *supra* note 205.

208. *Id.*

209. Suzy Hansen, *The Mine Disaster That Shook Turkey*, N.Y. TIMES (Nov. 30, 2014), Sunday Magazine at MM38, <http://www.nytimes.com/2014/11/30/magazine/the-mine-disaster-that-shook-turkey.html> [<http://perma.cc/4DBG-SJRT>].

210. *Id.*; see also *Turkey Marks First Anniversary Of Soma Mine Tragedy*, ARAB WEEKLY (May 13, 2015), <http://www.thearabweekly.com/?id=347>.

211. Hansen, *supra* note 209, at 38. See also *Turkey Marks First Anniversary*, *supra* note 210.

212. Suzy Hansen, *The Mine Disaster That Shook Turkey*, N.Y. TIMES (Nov. 30, 2014), at 38 of N.Y. Times Magazine, <http://www.nytimes.com/2014/11/30/magazine/the-mine-disaster-that-shook-turkey.html> [<http://perma.cc/4DBG-SJRT>].

213. For example, at least 18,068 deaths were from mesothelioma between 1999 and 2005. Ctr. for Disease Control and Prevention, *Malignant Mesothelioma Mortality—United States, 1999–2005*, 58 MMWR 393, 393 (Apr. 22, 2009), <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5815a3.htm>. Additionally, 9,024 deaths were caused by asbestosis from 1968 to 2005. Ctr. for Disease Control and

but criminal prosecutions are rare.²¹⁴

The operation of the vermiculite mine in Libby, Montana, from 1919 to 1990 is an exception to the absence of criminal prosecution relating environmental disasters. The mine created health risks to the miners as well as the residents who were exposed to the asbestos containing vermiculite wastes in the community.²¹⁵ The company and seven executives were indicted under the Clean Air Act for discharging asbestos in the air.²¹⁶ They were accused of knowingly endangering the residents of Libby and concealing information about the health hazards.²¹⁷ No defendant was convicted.²¹⁸

B. *Clean Water Act*

Two recent environmental spills gave rise to criminal prosecutions even though no human lives were lost. A Duke Energy (“Duke”) storm water pipe burst on February 2, 2014, spilling “39,000 tons of coal ash and 27 million gallons of ash slurry” into the Dan River in North Carolina.²¹⁹ Subsequent investigations revealed problems at five Duke facilities.²²⁰ Duke pled guilty on May 14, 2015, to nine criminal counts of unpermitted discharges and maintenance issues.²²¹ It agreed to pay \$68.2 million in fines and restoration costs, an additional \$24 million in community service fees to the National Fish and Wildlife Fund, and

Prevention, *Asbestosis-Related Years of Potential Life Lost Before Age 65 Years—United States, 1968–2005*, 57 MMWR 1321, 1322 (Dec. 10, 2008), <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5749a1.htm>.

214. *But see* United States v. Buckley, 934 F.2d 84 (8th Cir. 1991) (appealing from) (affirming a criminal conviction for improper disposal of asbestos).

215. *See* United States v. W.R. Grace, 434 F. Supp. 2d 879, 881–82 (D. Mont. 2006); *see generally* *Asbestos Exposure, Asbestos, Libby, Montana* ASBESTOS.COM, <http://www.asbestos.com/jobsites/libby.php> [perma.cc/E9AH-Q6XY] (last visited Oct. 14, 2015).

216. *See* W.R. Grace, 434 F. Supp. 2d at 879.

217. *Id.*

218. *See* W.R. Grace, 434 F. Supp. 2d at 888 (D. Mont. 2006) (finding that the claims brought by the government could not survive because the statute of limitations had expired and there was no evidence to satisfy the overt act requirement of the conspiracy charge, which would have paused the tolling period and overcome the statute of limitations dilemma).

219. David Zuchino, *After Duke Guilty Verdict, Fears And Questions Linger About Coal Ash*, L.A. TIMES (May 17, 2015), <http://www.latimes.com/nation/la-na-duke-coal-ash-20150517-story.html> [http://perma.cc/9WTY-QDG4].

220. *Id.*

221. *Id.*

\$10 million for wetlands preservation.²²² It also agreed to a five-year probationary period with an environmental compliance program and a court-appointed monitor to ensure compliance.²²³

A Freedom Industries Corporation storage tank sprang a leak on January 9, 2014, and drained into the Elk River.²²⁴ The contaminated waters entered the intake pipes of the West Virginia American Waterworks Company about one and a half miles downstream, contaminating the water supply for three hundred thousand residents in the nine counties surrounding Charleston, West Virginia.²²⁵

Charges were filed against six executives, owners, former owners, and employees.²²⁶ Gary Southern, former chief executive of the company, initially pled not guilty to violating the Clean Water Act, mail fraud, and bankruptcy fraud.²²⁷ Southern is accused of trying to hide assets in filing for bankruptcy after the spill.²²⁸ Dennis Farrell was charged with violating the Clean Water Act.²²⁹ Freedom Chemical pled guilty to a Clean Water Act felony and two misdemeanors of negligent discharge of a pollutant and unlawful discharge of refuse material.²³⁰ However, the company filed for bankruptcy eight days after the spill, so a high fine might be uncollectible.²³¹

222. *Id.*

223. Andrew M. Ballard, *Duke Pleads Guilty to Criminal Charges, To Pay \$102 Million For Coal Ash Violations*, 42 ENV'T REP. (BNA) 1565, 1565 (2015).

224. For an overview of the incident, see Evan Osnos, *Chemical Valley: The coal Industry, the Politicians, and the Spill*, NEW YORKER (Apr. 7, 2014), <http://www.newyorker.com/magazine/2014/04/07/chemical-valley> [<http://perma.cc/J96B-B3FW>].

225. *Freedom Industries Pleads Guilty to Pollution Charges in West Virginia Chemical Spill Case*, FOX NEWS (Mar. 23, 2015), <http://www.foxnews.com/us/2015/03/23/freedom-industries-pleads-guilty-to-pollution-charges-in-west-virginia-chemical/>.

226. *Id.*; see also Sonia Moghe, *Six charged in West Virginia water contamination*, CNN (Dec. 17, 2014), <http://www.cnn.com/2014/12/17/justice/west-virginia-water-contamination/>.

227. David Shortell, *Former Chemical Company Leader Pleads Guilty in 2014 West Virginia Spill*, CNN (Aug. 19, 2015), <http://www.cnn.com/2015/08/19/us/west-virginia-chemical-spill-guilty-plea/>.

228. Daniel Heyman, *Ex-Executive Pleads Guilty in Toxic Spill in West Virginia*, N.Y. TIMES (Aug. 19, 2015), http://www.nytimes.com/2015/08/20/us/ex-executive-pleads-guilty-in-toxic-spill-in-west-virginia.html?_r=0.

229. *Freedom Industries Officials Indicted in January Chemical Spill*, DEP'T OF JUSTICE (Dec. 17, 2014), <http://www.justice.gov/opa/pr/freedom-industries-officials-indicted-january-chemical-spill>.

230. *Id.*

231. Associated Press, *Freedom Industries Pleads Guilty to Pollution Charges in West Virginia Chemical Spill Case*, FOX NEWS (Mar. 23, 2015),

Two former owners pled guilty to unlawful discharges. William Tis, the former secretary, said: “I don’t believe I have committed a crime, but I am pleading guilty.”²³² Michael Burdette, the former plant manager and Robert J. Reynolds, the environmental compliance manager of the plant, also pled guilty on March 17, 2015, to a misdemeanor of negligently discharging a pollutant into the river.²³³

The main claim against the six officers and owners was that they “failed to exercise their authority to ensure that Freedom operated the . . . facility in a reasonable and environmentally sound manner.”²³⁴ They placed cost controls over safety.

C. *Food Safety*

Ensuring food safety is one of the most critical responsibilities of government, as illustrated by the enactment of the Pure Food & Drug Act of 1907, and the 1983 Food, Drug & Cosmetic Act.²³⁵ Criminal cases involving deleterious food have been rare, but are heating up. A recent example is when ConAgra Grocery Products, LLC agreed in May 2015 to pay \$11.2 million for shipping contaminated peanut butter in 2006 and 2007.²³⁶ Over seven hundred consumers were sickened with salmonella.²³⁷

V. TRANSPORTATION

A. *Maritime Disasters*

Cruise ship and ferry tragedies have become a common source of criminal prosecutions. A reading of the incidents shows, in some countries, a history of corruption and overloading passengers. The

<http://www.foxnews.com/us/2015/03/23/freedom-industries-pleads-guilty-to-pollution-charges-in-west-virginia-chemical/> [<http://perma.cc/T8EH-YGYL>].

232. John Raby, *Freedom Industries Workers Plead Guilty In Chemical Spill Case*, HUFFINGTON POST (May 18, 2015), http://www.huffingtonpost.com/2015/03/18/freedom-industries-worker-chemical-spill_n_6891914.html [<http://perma.cc/Y8TB-Q3C8>].

233. *Id.*

234. David Zucchini, *Six indicted in chemical spill that fouled West Virginia river*, L.A. TIMES (Dec. 17, 2014, 4:39 PM) <http://www.latimes.com/nation/la-na-west-virginia-chemical-spill-indictments-20141217-story.html> [<https://perma.cc/32VS-M2Q2>].

235. The Pure Food and Drug Act of 1907, 21 U.S.C. §§ 1–15 (1907), amended by Federal Food, Drug, and Cosmetic Act, 21 U.S.C §§ 301–399(f) (1938).

236. Jesse Newman, *Criminal Cases Roil Food Industry*, WALL ST. J., (May 20, 2015 7:42 PM), <http://www.wsj.com/articles/more-food-safety-lapses-prosecuted-as-crimes-1432165360>.

237. *Id.*

tragedies were waiting to happen.

The Canadian ferry, “Queen of the North,” struck Gil Island off the British Columbia coast on March 22, 2006, in inclement weather.²³⁸ Ninety-eight passengers and crew were saved while two passengers were lost.²³⁹ Four years after the sinking, the captain was indicted for death by criminal negligence and he was convicted on June 24, 2013, seven years after the accident.²⁴⁰ He was sentenced to a two-year concurrent term.²⁴¹ His appeal was denied by the Court of Appeals, and the Supreme Court of Canada dismissed his leave to appeal.²⁴² He allegedly steered straight towards the island at full cruising speed, when he should have turned.²⁴³

Thirty-two passengers and crewmembers died in the grounding of the Costa Concordia cruise ship on January 13, 2012.²⁴⁴ The captain was sentenced to sixteen years’ imprisonment while five other crewmembers pled guilty.²⁴⁵ The captain’s sentence was ten years for manslaughter, five years for shipwreck, and one year for leaving the ship before the passengers.²⁴⁶

The South Korean ferry “Sewol” capsized on April 16, 2014, resulting in 304 deaths, mostly high school students.²⁴⁷ An inexperienced third mate was at the helm when the overloaded ferry capsized in a notoriously treacherous waterway.²⁴⁸ Twenty-

238. Norm Keith & Deanah Shelly, *Trend Toward Criminal Liability in Transportation Industry: Worker Charged with Death of 2 Passengers After B.C. Ferry Sinks*, CANADIAN OCCUPATIONAL SAFETY at 12 (Oct. 23, 2013), <http://www.cos-mag.com/legal/legal-columns/3624-trend-toward-criminal-liability-in-transportation-industry.html>.

239. *Id.*

240. *Id.*

241. *Id.*

242. *R. v. Her Majesty the Queen*, 2015 CARSWELL BC 1285 (Can. B.C. S.C.C. 2015) (WL); see also Keith & Shelly, *supra* note 238.

243. Keith & Shelly, *supra* note 238.

244. Tom Kington, *Costa Concordia’s Captain Gets 16-plus Years, is Free on Appeal*, L.A. TIMES (Feb. 11, 2015), <http://www.latimes.com/world/europe/la-fig-costa-concordia-captain-20150211-story.html> [<http://perma.cc/4ZNJ-ZDZ8>].

245. *Id.*

246. *Id.*; Gaia Pianigiani, *Captain of Ship That Capsized Off Italy in ‘12 is Convicted*, N.Y. TIMES (Feb. 11, 2015), http://www.nytimes.com/2015/02/12/world/europe/captain-convicted-in-italy-for-role-in-costa-concordia-disaster.html?_r=0.

247. Choe Sang-Hun & Su-Hyun Lee, *Divers Begin Bringing Bodies Out of Capsized Ferry*, N.Y. TIMES (Apr. 19, 2014), <http://www.nytimes.com/2014/04/20/world/asia/pilot-steering-ferry-had-no-experience-in-treacherous-waterway.html>.

248. *Id.*; In-Soo Nam, et al., *South Korea Ferry Probe: Cargo Was Three Times Recommended Maximum*, WALL ST. J. (Apr. 23, 2014, 10:04 AM), *Ferry Bore Triple Its Proper Load*, at p. A8, col. 5, <http://www.wsj.com/articles/SB100014240527023045>

two of the twenty-nine crewmembers survived.²⁴⁹ The ferry was carrying three times its permissible cargo limit, with most of the ballast water dumped to add the extra weight.²⁵⁰

The captain and three crewmembers were indicted for homicide through “willful negligence” and eleven crewmembers on misdemeanors.²⁵¹ The owner and top manager of Chonghaejin Marine Company, the operator of the ferry, committed suicide.²⁵² Sixty-nine year old Captain, Lee Jun-seok, was sentenced to thirty-six years’ imprisonment with five to twenty year sentences for the crewmembers, except the ship’s engineer who received thirty years.²⁵³ Park Gio-ho, the Chief Engineer was accused of abandoning two crewmembers that could have been saved.²⁵⁴ The South Korea’s Seafarers Act requires the captain to remain on the ship until the passengers are safely removed.²⁵⁵

The prosecution presented evidence that the crew failed to timely evacuate the passengers while ordering them to remain in their cabins.²⁵⁶ Prosecutors also evidence that some crewmembers

18704579518993969767898; (stating that the ferry reported a cargo weight of 3,608 tons, but it’s the maximum recommended weight load was 987 tons).

249. Associated Press, *Ferry Captain, 3 Crew Members Charged with Homicide*, N.Y. POST (May 15, 2014), <http://nypost.com/2014/05/15/15-crew-members-indicted-over-south-korean-ferry-disaster/>.

250. See Choe Sang-Hun, *Legacy of a South Korean Ferry Sinking*, N.Y. TIMES (Apr. 11, 2015), <http://www.nytimes.com/2015/04/12/world/asia/legacy-of-south-korea-sewol-ferry-sinking.html>; see also Choe Sang-Hun, et al, *In Ferry Deaths, a South Korean Tycoon’s Downfall*, N.Y. TIMES (July 26, 2014), <http://www.nytimes.com/2014/07/27/world/asia/in-ferry-deaths-a-south-korean-tycoons-downfall.html>.

251. *Ferry Captain, 3 Crew Members Charged with Homicide*, N.Y. POST (May 15, 2014), <http://nypost.com/2014/05/15/15-crew-members-indicted-over-south-korean-ferry-disaster/>.

252. Choe Sang-Hun, *Businessman Wanted in Fatal South Korean Ferry Disaster Is Found Dead*, N.Y. TIMES (July 21, 2014), http://www.nytimes.com/2014/07/22/world/asia/businessman-wanted-in-fatal-south-korean-ferry-disaster-is-found-dead.html?_r=0.

253. Choe Sang-Hun, *Judgment Awaits for Crew of South Korea Ferry*, N.Y. TIMES (Nov. 9, 2014), <http://www.nytimes.com/2014/11/10/world/asia/judgment-awaits-for-crew-of-south-korea-ferry.html> [<http://perma.cc/C652-SUM2>].

254. *Id.*; Steven Borowiec, *Victims of South Korea’s Sewol Ferry Disaster Remembered One Year On*, TIME (Apr. 15, 2015), <http://time.com/3824576/south-korea-sewol-anniversary-paengmok/> [<http://perma.cc/T2Y2-52SZ>].

255. Seafarers Act, Act No. 11690, Mar. 23, 2013, art. 10 (S. Kor.), http://elaw.klri.re.kr/eng_mobile/viewer.do?hseq=28908&type=new&key= (“A captain shall not leave his/her ship from the time cargoes are loaded and passengers start to go on board until the time all cargoes are unloaded from his/her ship and passengers leave his/her ship . . .”).

256. Choe Sang-Hun, *Judgment Awaits for Crew of South Korea Ferry*, N.Y. TIMES (Nov. 9, 2014), <http://www.nytimes.com/2014/11/10/world/asia/judgment-awaits-for-crew-of-south-korea-ferry.html> [<http://perma.cc/C652-SUM2>].

had returned to their cabins to change uniforms and retrieve various objects, despite the recommended evacuations by emergency dispatchers.²⁵⁷

In addition, the Korean Coast Guard Captain, who first arrived on the scene, was sentenced to four-years' imprisonment for professional misconduct.²⁵⁸ The director and two employees of the Korea Shipping Association were arrested, accused of destroying evidence in the probe of the Sewol's parent corporation.²⁵⁹ South Korea is prosecuting eleven ferry and cargo company officials as well as port inspectors on embezzlement and accidental homicide charges.²⁶⁰ The oldest son of the company's owner was sentenced to three years in prison for embezzlement.²⁶¹

The president of Chonghaejin Marine Company, the ferry operator, was sentenced to ten years' imprisonment, while four other officers received three to six year sentences.²⁶² Two officers received suspended sentences.²⁶³ In addition a Korean shipping association official, charged with overseeing ship safety, was sentenced to three years for letting the ferry leave port without checking its cargo and storage.²⁶⁴ Two dockworkers who loaded the vessel received two-year prison sentences.²⁶⁵

The Sewol disaster gave rise to national mourning. The South Korean Prime Minister resigned for the government's mishandling

257. *Id.*

258. Holly Yan et al, *3 Arrested Over Evidence, Call Center Raided in South Korea Ferry Probe*, CNN (May 14, 2014), <http://www.cnn.com/2014/04/28/world/asia/south-korea-ship-sinking/index.html> [<http://perma.cc/3WW4-UU3L>].

259. *Id.*

260. Choe Sang-Hun, *Captain Gets 36 Years for Deserting Korean Ferry*, N.Y. TIMES (Nov. 11, 2014), http://www.nytimes.com/2014/11/12/world/asia/south-korea-ferry-captain.html?mtref=www.google.com&gwh=0ED7B4F04DA58ED2AFA0A2CFE3CCC5A9&gwt=pay&assetType=nyt_now [<http://perma.cc/8NKX-788V>].

261. *Id.*

262. Choe Sang-Hun, *Chief of Ferry Company in South Korea Is Given 10-Year Jail Sentence*, N.Y. TIMES (Nov. 20, 2014), <http://www.nytimes.com/2014/11/21/world/asia/chief-of-ferry-company-in-south-korea-given-10-year-jail-sentence.html>.

263. *Id.*

264. *South Korea Ferry Boss Jailed for 10 Years Over Sewol Sinking*, THE GUARDIAN (Nov. 20, 2014), <http://www.theguardian.com/world/2014/nov/20/south-korea-sewol-ferry-operator-boss-jailed-10-years> [<http://perma.cc/7WJA-3F3F>]; see also Choe Sang-Hun, *Chief of Ferry Company in South Korea Is Given 10-Year Jail Sentence*, N.Y. TIMES (Nov. 20, 2014), <http://www.nytimes.com/2014/11/21/world/asia/chief-of-ferry-company-in-south-korea-given-10-year-jail-sentence.html>.

265. *South Korea Ferry Boss Jailed for 10 Years Over Sewol Sinking*, GUARDIAN (Nov. 20, 2014), <http://www.theguardian.com/world/2014/nov/20/south-korea-sewol-ferry-operator-boss-jailed-10-years> [<http://perma.cc/7WJA-3F3F>].

of the ferry disaster.²⁶⁶ He said, “I offer my apology for having been unable to prevent this accident from happening and unable to properly respond to it afterwards.”²⁶⁷

An overloaded Bangladesh ferry capsized and sank on August 4, 2014, in swollen waters of the Padma River.²⁶⁸ Over two hundred passengers were on the ferry, which had a capacity of eighty-five.²⁶⁹ Over one hundred people perished.²⁷⁰ The owner, captain, and four others were charged with culpable homicide.²⁷¹ The ferry was operating on an expired license.²⁷²

The Sea Smooth passenger ferry collided with the Lamma IV crew ferry in Hong Kong Harbor on October 1, 2012.²⁷³ Thirty-nine people died and ninety-two people were injured in the collision.²⁷⁴ The Sea Smooth Captain, Sai-ming was convicted on February 14, 2015, on thirty-nine counts of manslaughter and endangering the safety of others at sea, and sentenced to eight years in prison.²⁷⁵ Lamma IV Captain, Chow Chi-wai, was sentenced to nine months for endangering the safety of others.²⁷⁶ The retired senior boat inspector was subsequently charged with perjury and the marine department assistant director was charged with misconduct.²⁷⁷

266. Rich Schapiro, *South Korea's Prime Minister Resigns Over Handling of Ferry Disaster*, N. Y. DAILY NEWS, (Apr. 27, 2014), <http://www.nydailynews.com/news/world/south-korea-ferry-entire-steering-crew-custody-prosecutor-article-1.1769816>; see also Steven Borowiec, *Victims of South Korea's Sewol Ferry Disaster Remembered One Year On*, TIME (Apr. 15, 2015), <http://time.com/3824576/south-korea-sewol-anniversary-paengmok/> [<http://perma.cc/T2Y2-52SZ>].

267. Rich Schapiro, *South Korea's Prime Minister Resigns Over Handling of Ferry Disaster*, N. Y. DAILY NEWS, (April 27, 2014, 2:17 AM), <http://www.nydailynews.com/news/world/south-korea-ferry-entire-steering-crew-custody-prosecutor-article-1.1769816>.

268. *Bangladesh Charges Ferry Owner, Captain Over Deadly Sinking*, THE SUN DAILY, (Aug. 6, 2014, 9:13 PM), <http://www.thesundaily.my/news/1133977> [<http://perma.cc/XMT5-HT2X>].

269. *Id.*

270. *Id.*

271. *Id.*

272. *Id.*

273. *Hong Kong Lamma Ferry Disaster Captain Jailed for Eight Years*, BBC NEWS (Feb. 16, 2015), <http://www.bbc.com/news/world-asia-china-31483668?print=true> [<http://perma.cc/N2YX-YWUM>].

274. *Id.*

275. *Hong Kong Lamma Ferry Disaster Captain Jailed for Eight Years*, BBC NEWS (Feb. 16, 2015), <http://www.bbc.com/news/world-asia-china-31483668?print=true> [<http://perma.cc/N2YX-YWUM>].

276. *Id.*

277. Wendy Laursen, *Officials Charged Over Lamma IV Collision*, THE

A sixty-six foot trawler smuggling immigrants to Italy capsized on April 18, 2015, with an estimated 900 drownings.²⁷⁸ The captain was arrested for reckless multiple homicides while he and a crewmember were also charged with illegal immigration.²⁷⁹

The Chinese cruise ship, Eastern Star (Oriental Star), was struck by a tornado on June 2, 2015, during a heavy storm on the Yangtze River.²⁸⁰ Only fourteen crew members and passengers, out of 456, survived.²⁸¹ Two survivors were the captain and chief engineer.²⁸² The captain was immediately taken into custody.²⁸³ Other captains had heeded a weather warning, but the Eastern Star sailed on.²⁸⁴

A Philippine ferry capsized on July 2, 2015.²⁸⁵ At least fifty-nine perished, with 145 survivors, including all eighteen crew members. Police filed murder complaints against the captain and the crew.²⁸⁶ Perchance the captains should have gone down with their ships.

MARITIME EXECUTIVE, (Mar. 18, 2015, 11:08 PM), <http://www.maritime-executive.com/article/officials-charged-over-lamma-iv-collision>.

278. Manuela Mescio Manuelo, *How Migrants' Ordeal Turned Into Tragedy at Sea: Overloaded and Listing Boat Collided with Rescue Vessel; Captain and Crewman Detained*, WALL ST. J., (Apr. 21, 2015, 7:38 PM), <http://www.wsj.com/articles/captain-error-caused-migrant-ship-to-capsize-investigators-say-1429614614>.

279. Manuela Mescio Manuelo, *How Migrants' Ordeal Turned Into Tragedy at Sea: Overloaded and Listing Boat Collided with Rescue Vessel; Captain and Crewman Detained*, WALL ST. J., (Apr. 21, 2015, 7:38 PM), <http://www.wsj.com/articles/captain-error-caused-migrant-ship-to-capsize-investigators-say-1429614614>.

280. Michael Forsythe, *Decisions by Captain in Yangtze Ship Disaster Come Under Scrutiny*, N.Y. TIMES (June 3, 2015), http://www.nytimes.com/2015/06/04/world/asia/decisions-by-captain-in-yangtze-ship-disaster-come-under-scrutiny.html?mtrref=www.google.com&_r=0 [<http://perma.cc/5SU9-TDLT>].

281. *Id.*

282. *Id.*

283. *Id.*

284. *Id.*

285. ASSOCIATED PRESS, *Murder Complaints Filed Against Ferry Crew*, N.Y. TIMES, (July 4, 2015), at A9 on July 5, 2015, <http://www.nytimes.com/2015/07/05/world/asia/murder-complaints-filed-against-ferry-crew-in-philippines.html?mtrref=www.google.com> [<http://perma.cc/Q2T7-DWF7>].

286. *Id.*

B. *Airplanes*²⁸⁷

Two major airplane crashes resulting in criminal prosecutions were ValuJet and the Air France Concorde. ValuJet Flight 592 took off from Miami International Airport at 2:03 p.m. on May 11, 1996.²⁸⁸ It crashed in the Everglades shortly after take off, killing all 110 on board.²⁸⁹

The cause was quickly traced to unexpended oxygen tanks in the cargo compartment.²⁹⁰ ValuJet hired SabreTech to replace the current oxygen tanks that were over ten years old, from three airplanes it had recently acquired.²⁹¹ The mechanics did not place plastic shielding caps over the firing pins of the removed tanks, but certified they had followed the proper steps.²⁹² The oxygen containers should not have been shipped as cargo under the circumstances.²⁹³ An uncontrolled fire raged in the cargo hold.²⁹⁴ The pilot was unable to safely return to the airport with the tragic consequences.²⁹⁵

A grand jury issued a twenty-four count indictment on July 13, 1999, against SabreTech, Daniel Gonzalez, the director of maintenance, and two mechanics, Eugene Flores, and Mauro Valenzuela.²⁹⁶ The jury acquitted SabreTech of willful violations of the Hazardous Materials Transportation Act but found the

287. See generally Judith R. Nemsick & Sarah Gogal Passeris, *Criminalizing Aviation: Placing Blame Before Safety*, AM. BAR ASSO'N (Mar. 21, 2012), <http://apps.americanbar.org/litigation/committees/masstorts/articles/winter2012-criminalizing-aviation-blame-safety.html> [<http://perma.cc/XJ6J-GABD>]; Stephen P. Prentice, *Criminal Liability and Aviation Safety*, AVIATIONPROS, (Apr. 8, 2013), <http://www.aviationpros.com/article/10916883/criminal-liability-and-aviation-safety>.

288. *United States v. SabreTech, Inc.*, 271 F. 3d 1018, 1019 (11th Cir. 2001).

289. *Id.* at 1020.

290. NAT'L. TRANSP. SAFETY BD, AIRCRAFT ACCIDENT REPORT: IN-FLIGHT FIRE AND IMPACT WITH TERRAIN VALUJET AIRLINES, FLIGHT 592 DC-9-32, N904VJ, EVERGLADES, NEAR MIAMI, FLORIDA, MAY 11, 1996 101-02 (Aug. 19, 1997), <http://www.nts.gov/investigations/AccidentReports/Reports/AAR9706.pdf>.

291. *Id.* at 4-6. The oxygen generators are about the size of a thermos bottle. *Id.* at 9. They rest in the overhead compartments above passenger seats. *Id.* at 6. They are intended to provide a minimum of fifteen minutes of emergency oxygen in an emergency. *Id.* at 10.

292. NAT'L. TRANSP. SAFETY BD., *supra* note 290 at 133.

293. *United States v. SabreTech, Inc.*, 271 F. 3d 1018, 1023 (11th Cir. 2001).

294. *Id.* at 1020.

295. See generally *Lessons Learned from Transport Airplane Accidents, Release 10*, FED. AVIATION ADMIN. (Apr. 16, 2015), <http://lessonslearned.faa.gov/> [<http://perma.cc/VF84-A92J>].

296. *SabreTech Charged with Murder in ValuJet Crash*, CNN (July 13, 1999, 9:05 PM), <http://www.cnn.com/US/9907/13/valujet.indictments.03/>; see also *SabreTech, Inc.*, 271 F. 3d at 1020-21

company guilty of recklessly causing the transportation of hazardous materials in air commerce.²⁹⁷ Flores and Gonzalez were acquitted.²⁹⁸ Mauro Valenzuela was not tried because he skipped trial and became a fugitive from justice.²⁹⁹

The Court of Appeals reversed eight of the nine years after the accident.³⁰⁰ The court held that the record indicated the personnel committed mistakes, but not crimes, under the existing statute.³⁰¹ It affirmed the conviction on one count of willful failure to train.³⁰² The ValuJet saga ended in August 2002 when a judge fined SabreTech \$500,000, which was probably uncollectible since the company had no assets or money.³⁰³

The Miami-Dade County State Attorney also filed a 221-count indictment against SabreTech.³⁰⁴ It included 110 counts of third-degree felony murder, 110 counts of manslaughter, and one count of illegal transportation of hazardous waste.³⁰⁵

Air France Concorde number 4590 crashed shortly after takeoff from Charles de Gaulle Airport on July 25, 2010.³⁰⁶ One hundred passengers and nine crewmembers died in the crash with four additional fatalities occurred on the ground.³⁰⁷

France blamed the crash on a titanium metal strip, which fell off a Continental Airlines DC-10 onto the tarmac five minutes

297. United States v. SabreTech, Inc., 271 F. 3d 1018, 1021 (11th Cir. 2001).

298. *Id.*

299. *Id.* at 1021 n.2.

300. *Id.* at 1018.

301. *Id.* at 1019.

302. *Id.* at 1025.

303. Ken Kaye & Robin Benedick, *Judge Puts an End to ValuJet Saga*, SUN SENTINEL (Aug. 28, 2002), http://articles.sun-sentinel.com/2002-08-28/news/0208280106_1_sabr [<http://perma.cc/7JQC-ZY5N>]. The company was out of business by the time the state charges were filed. Rick Bragg, *Politics Hinted in Valuejet-Crash Charges*, N.Y. TIMES (July 15, 1999), <http://www.nytimes.com/1999/07/15/us/politics-hinted-in-valujet-crash-charges.html>.

304. Press Release, Donald R. Ungurait, Miami-Dade Office of the State Attorney, 11th Judicial Circuit, SABRETECH, Inc. Charged with Felony Murder in ValuJet Crash (July 13, 1999) (on file with Miami-Dade Office of the State Attorney), <http://www.miamisao.com/press/1999.htm#071399>.

305. *Id.*

306. Nicola Clark, *French Court Overturns Convictions in Concorde Crash*, N. Y. TIMES (Nov. 29, 2012), http://www.nytimes.com/2012/11/30/business/global/french-court-overturns-conviction-in-concorde-crash.html?_r=0.

307. Bart Jansen, *French Court Overturns Concorde Crash Conviction*, USA TODAY (Nov. 29, 2012, 12:10 PM), <http://www.usatoday.com/story/travel/flights/2012/11/29/continental-airlines-air-france-concorde-crash/1734417/>.

before the Concorde took off.³⁰⁸ The strip allegedly punctured a tire of the Concorde, sending rubber fragments into the plane's fuel tank, which resulted in a fiery inferno.³⁰⁹

France indicted Continental Airlines, the mechanic who replaced the titanium strip, and the mechanic's manager.³¹⁰ Charges were also brought against the head of the Concorde program at Aerospatiale, Concorde's chief engineer, and the head of Direction Générale de l'Aviation Civile, France's airline regulator.³¹¹ The allegation is that they knew foreign objects could damage the fuel tanks, but nevertheless allowed the planes to be flown.³¹²

In 2010 a French court found Continental and the mechanic guilty of involuntary manslaughter, but acquitted the other defendants.³¹³ A French appellate court reversed Continental's and the mechanic's convictions on November 29, 2012,³¹⁴ twelve years after the crash.

Plane crashes are often tragic and spectacular. The ensuing investigation will usually pinpoint the cause of the crash. If the cause is pilot error, then there probably will not be a prosecution because the pilot would have perished in the crash. The Air France, Concorde, and ValueJet crashes reflect causes that were not pilot related.

VI. NATURAL DISASTERS

A. Storms

Hurricane Katrina was a major disaster for New Orleans. One thousand eight hundred thirty-three fatalities were recorded and an additional 135 people were missing in the Gulf States.³¹⁵ Dr. Anna

308. See Saskya Vandoorne, *Continental Airlines and Mechanic Guilty in Deadly Concorde Crash* CNN (Dec. 6, 2010, 5:59 PM), <http://www.cnn.com/2010/WORLD/europe/12/06/france.concorde.trial/>; see also Jansen, *supra* note 307.

309. Jansen, *supra* note 307.

310. *Q&A: Concorde Crash Trials*, BBC NEWS (Nov. 29, 2012), <http://www.bbc.com/news/world-europe-11924949>.

311. *Id.*

312. *Id.*

313. See Vandoorne, *Continental Airlines and Mechanic Guilty in Deadly Concorde Crash* CNN (Dec. 6, 2010, 5:59 PM), <http://www.cnn.com/2010/WORLD/europe/12/06/france.concorde.trial/>.

314. Clark, *supra* note 306.

315. *Hurricane Katrina Statistics Fast Facts*, CNN (Aug. 24, 2015, 11:30 AM), <http://www.cnn.com/2013/08/23/us/hurricane-katrina-statistics-fast-facts/>; Cain Bureau & Allen G. Breed, *Priest Author Ginart Among Those Still Missing In Hurricane Katrina*, HUFFINGTON POST, (Aug. 29, 2010, 9:47 AM) <http://www.huffingtonpost.com/>

Pou and two nurses at Memorial Hospital in New Orleans were arrested for the alleged mercy killings of patients trapped in the squalid conditions of the hospital.³¹⁶ A grand jury refused to indict Dr. Pou and the charges were dropped against the nurses.³¹⁷

On the other hand, the owners of the St. Rita Nursing Home, 112 miles outside of New Orleans, had to wait two years for a jury verdict of not guilty when they were prosecuted for not evacuating patients before Katrina struck.³¹⁸ They were charged with thirty-five counts of negligent homicide and twenty-four counts of extreme cruelty.³¹⁹

Four police officers were convicted of killing two and wounding four persons attempting to flee the city.³²⁰ Another officer was convicted of covering up the misdeeds.³²¹ An additional officer was acquitted.³²²

Another *natural disaster* coupled with human culpability occurred in France, which barred development in designated coastal zones.³²³ Cyclone Xynthia struck the French coast on February 28, 2010, killing twenty-nine and flooding hundreds of homes in the neighboring villages of La Faute-sur-Mer and L'Aiguillon-sur-Mer.³²⁴ The homes were built in a "red zone," where construction should have been barred.³²⁵ Many of the

2010/08/29/arthur-ginart-priest-katrina-missing-father-red_n_698277.html.

316. See Sheri Fink, *The Deadly Choices at Memorial*, N. Y. TIMES MAGAZINE (Aug. 25, 2009), at MM28 of the Sunday Magazine on Aug. 30, 2009, <http://www.nytimes.com/2009/08/30/magazine/30doctors.html?pagewanted=all>.

317. *Id.*

318. *Katrina Nursing Home Owners Acquitted*, NBC NEWS (Sept. 7, 2007, 10:26 PM), http://www.nbcnews.com/id/20649744/ns/us_news-crime_and_courts/t/katrina-nursing-home-owners-acquitted/#.Vh4qdrRViko.

319. *Id.*

320. Chris McGreal, *Five New Orleans Police Officers Sentenced in Hurricane Katrina Killings*, GUARDIAN (Apr. 4, 2012, 4:32 PM), <http://www.theguardian.com/world/2012/apr/04/new-orleans-police-officers-katrina> [<http://perma.cc/8U3X-6FKG>].

321. *Id.*

322. *Id.*

323. See generally Jessica Anne Wentz, *Government Officials' Liability After Extreme Weather Events: Recent Developments in Domestic and International Case Law*, COLUM. L. SCH.: CLIMATE LAW BLOG (Feb. 18, 2015), <http://blogs.law.columbia.edu/climatechange/2015/02/18/government-officials-liability-after-extreme-weather-events-recent-developments-in-domestic-and-international-case-law/comment-page-1/> [<http://perma.cc/87V2-7QJ5>].

324. *Mayor Sentenced Over Storm 'Xyantia' Deaths*, FRENCH-PROPERTY.COM (Jan. 7, 2015), http://www.french-property.com/news/french_property/xynthia_vendee_mayor_sentenced/; see also Wentz, *supra* note 323.

325. *Mayor Sentenced Over Storm 'Xyantia' Deaths*, FRENCH-PROPERTY.COM (Jan. 7, 2015), http://www.french-property.com/news/french_property/xynthia_vendee_

victims were the elderly or children who were trapped in their homes, where they drowned.³²⁶ The Mayor, a town councilor, her son, and the owner of a building company were charged with manslaughter.³²⁷ The Mayor was sentenced on December 7, 2011, to four years in prison.³²⁸ The official responsible for administering building permits received two years, and her son was sentenced to eighteen months for not ensuring the seawall was being monitored.³²⁹ The storm knocked down seawalls, allowing the coast to be flooded.³³⁰

Natural forces, such as earthquakes and hurricanes can be devastating. The tragedy can be compounded when accompanied by human fault, as in Hurricane Katrina. The French prosecution raised the issue, which is present throughout the world, governments willing to allow development in areas with large natural vulnerabilities.³³¹

B. *Earthquakes*

An unusual case from Italy received great attention in the scientific community. A system of small swarm earthquakes struck the L'Aquila, Italy area from 2008 into early 2009.³³² A special meeting of experts was held in L'Aquila to publicly discuss the risks.³³³ A devastating 6.3 earthquake struck L'Aquila one week later on April 4, 2009, killing 309 with over 1,100 severely injured.³³⁴ Six scientists and a public official at the conference were indicted in 2010 for manslaughter for criminal negligence because

mayor_sentenced/.

326. *French Mayor Jailed for Four Years Over 2010 Storm Deaths*, RFI ENGLISH (Dec. 12, 2014), <http://www.english.rfi.fr/visiting-france/20141212-france-mayor-jailed-four-years-xynthia-storm> [<http://perma.cc/Y6KP-VARZ>].

327. See generally Wentz, *supra* note 323.

328. *Mayor Sentenced*, *supra* note 325.

329. *French Mayor Jailed for Four Years Over 2010 Storm Deaths*, RFI ENGLISH (Dec. 12, 2014), <http://www.english.rfi.fr/visiting-france/20141212-france-mayor-jailed-four-years-xynthia-storm> [<http://perma.cc/Y6KP-VARZ>].

330. See generally Wentz, *supra* note 323; *Mayor Sentenced*, *supra* note 325; *French Mayor Jailed for Four Years Over 2010 Storm Deaths*, RFI ENGLISH (Dec. 12, 2014), <http://www.english.rfi.fr/visiting-france/20141212-france-mayor-jailed-four-years-xynthia-storm> [<http://perma.cc/Y6KP-VARZ>].

331. See generally Denis Binder, *Act of God? Or Act of Man?: A Reappraisal of the Act of God Defense in Tort Law*, 15 REV. LITIG. 1 (1996).

332. See Kristian Cedervail, *New Fault Lines? On Responsibility and Disasters*, 5 EUR. J. RISK REG. 137 (2014).

333. *Id.*

334. *Id.*

they inadequately assessed the risks of earthquakes.³³⁵ They were found guilty in October 2013 after a yearlong trial.³³⁶ The prosecutions set off international controversy.³³⁷ The convictions of the six scientists were reversed on October 10, 2014, but the conviction was affirmed for the public official who said at the public meeting that “there was no danger.”³³⁸ Another Italian scientist said the trial “pushed scientists in Italy to become latter-day Cassandra, always erring on the side of catastrophe.”³³⁹

VII. WORKPLACE

State courts, for a quarter-century, have allowed criminal prosecutions for workplace accidents, holding they were not preempted by the federal Occupational Safety and Health Administration statute.³⁴⁰ The reality is that a major workplace accident will normally violate safety rules and regulations, often opening the door to criminal prosecutions.³⁴¹

A California case led the way.³⁴² Seven workers plunged to their deaths from an overloaded platform hanging from a rock.³⁴³ The California Court of Appeals held that a corporation could be prosecuted for manslaughter.³⁴⁴

A germinal case involved the defunct Film Recovery Systems,

335. *Id.*

336. *Id.*

337. *Id.*

338. See Francis X. Rocca, *Scientists on Trial for What They Said: Ordeal of Italian Seismologists Reveal Risks When Researchers Must Go Public in a Hurry*, CHRONICLE OF HIGHER EDUCATION, Oct. 14, 2011, at 1, A3.

339. Elizabeth Kolbert, *The Shaky Science of Earthquake Prediction is Still on Trial*, SMITHSONIAN MAGAZINE (June 2015), <http://www.smithsonianmag.com/science-nature/shaky-science-behind-predicting-earthquakes-180955296/>; Over five thousand scientists signed a letter in support of the scientists; see also Francis X. Rocca, *Scientists on Trial for What They Said: Ordeal of Italian seismologists reveal risks when researchers must go public in a hurry*, CHRONICLE OF HIGHER EDUCATION, Oct. 14, 2011, at 1, A3.

340. See e.g. *People v. Chi. Magnet Wire Corp.*, 534 N.E.2d 962 (Ill. 1989), *cert. denied* 493 U.S. 809 (1989); *People v. Hegedus*, 443 N.W.2d 127 (Mich. 1989); *People v. Pymm*, 563 N.E.2d 1 (N.Y. 1990), *cert. denied* (1991); *Wisconsin ex rel. Cornellier v. Black*, 425 N.W.2d 21 (Wisc. Ct. App. 1988); see generally *Getting Away with Murder: Federal OSHA Preemption of State Criminal Prosecutions for Industrial Accidents*, Note, 101 HARV. L. REV. 535 (1987).

341. See generally Joseph P. Kahn, *When Bad Management Becomes Criminal*, INC. (Mar. 1, 1987), <http://www.inc.com/magazine/19870301/4106.html>.

342. *Granite Constr. Co. v. Super. Ct. of Fresno City.*, 197 Cal. Rptr. 3 (Cal. Ct. App. 1983).

343. *Id.*

344. *Id.*

Inc.³⁴⁵ The state successfully prosecuted three senior workers on murder and reckless homicide charges after a worker died of cyanide poisoning.³⁴⁶ The judge also held Film Recovery Systems and two related corporations guilty of involuntary manslaughter.³⁴⁷ The company's president, plant manager, and plant foreman were sentenced to twenty-five years in prison.³⁴⁸ The deceased, an undocumented Polish immigrant, labored over open vats filled with cyanide used to extract silver from x-ray films.³⁴⁹ The Film Recovery Systems case is believed to be the first one in legal history where "corporate executives were found guilty at the district court level of murder (i.e. second degree murder, killing by acting with reckless lack of caution)"³⁵⁰

Another representative case is *People v. Hegedus*.³⁵¹ The Michigan case involved an employee "dying of carbon monoxide poisoning while working in a company owned van."³⁵² A supervisory employee was charged with involuntary manslaughter.³⁵³

An explosion at a BP refinery in Port Arthur, Texas, on March 23, 2005, resulted in the death of fifteen workers and more than 180 injured.³⁵⁴ BP pled guilty in October 2007 to one felony count of the Clean Air Act, paying a fine of \$50 million.³⁵⁵

Shri (Sheharbano) Sangji, a research assistant, was killed in a lab fire at the University of California, Los Angeles ("UCLA") on December 29, 2008.³⁵⁶ She was not wearing a protective lab coat when she was attempting to transfer t-butyl lithium from one

345. Barry Siegel, *Officers Convicted: Murder Case a Corporate Landmark*, L.A. TIMES (Sept. 15, 1985), http://articles.latimes.com/1985-09-15/news/mn-23348_1_corporate-officers [<http://perma.cc/YDL5-HR7S>].

346. *Id.*

347. Siegel, *supra* note 345.

348. *Id.*

349. *Id.*

350. James J. Brummer, *Excuses and Vindications: An Analysis of the Film Recovery Systems Case*, 18 BUS. & PROF. ETHICS J., 21, 21–22 (1999).

351. *People v. Hegedus*, 443 N.W.2d 127 (Mich. 1989).

352. *Id.* at 128.

353. *Id.* at 128.

354. Jim Malewitz, Jolie McCullough, Ben Hasson, & Lise Olsen, *A Deadly Industry*, EHS TODAY (Mar. 31, 2015), <http://ehstoday.com/safety/deadly-industry>.

355. Tyson Slocum, *Cost of Doing Business: BP's \$730 million in fines/settlements + 2 criminal convictions*, PUBLICCITIZEN (May 5, 2010), http://www.biologicaldiversity.org/news/media-archive/a2010/BPPProfile_PublicCitizen_05-05-10.pdf.

356. Kim Christensen, *Deadly UCLA Lab Fire Leaves Haunting Questions*, L.A. TIMES (Mar. 1, 2009), <http://articles.latimes.com/2009/mar/01/local/me-uclaburn1>.

sealed container to a second sealed container.³⁵⁷ The chemical is highly flammable.³⁵⁸ The syringe burst open. The chemical caught on fire when it came into contact with the open air. She died of her burns eighteen days later.³⁵⁹ The Los Angeles District Attorney charged UCLA with four felony counts of willfully violating California's Health and Safety Standards, while Professor Patrick Harran, the supervising professor, was indicted on four counts for failure to provide proper safety training and failing to require protective gear to lab workers.³⁶⁰

The allegations include violation of the state codes for employee training on handling hazardous chemicals and minimizing the risk of explosions as well as proper staff safeguards and clothing.³⁶¹ The inexperienced, with little training or supervision, Ms. Dangji was wearing a sweatshirt rather than a protective vest when the accident occurred.³⁶²

UCLA settled in July 2012 by agreeing to follow comprehensive safety measures and endowing a \$500,000 scholarship in her name.³⁶³ The University also paid almost \$4.5 million in defending the case.³⁶⁴ UCLA spent an additional \$20 million in improving lab safety.³⁶⁵

Professor Harran settled in June 2014 by entering into a five-year "deferred prosecution agreement," agreeing to perform eight hundred hours of non-teaching community service in the UCLA hospital system, "develop and teach an organic chemistry course for college-bound inner-city students for five summers," and pay

357. *Id.*

358. *Id.*

359. *Id.*

360. Kim Christensen, *UCLA Professor Strikes Deal in Lab Fire Case, Avoids Prison*, L.A. TIMES (June 20, 2014, 5:45 PM), <http://www.latimes.com/local/education/la-me-ucla-lab-fire-plea-20140621-story.html>.

361. Allie Grasgreen, *Fallout From a Lab Tragedy*, INSIDE HIGHER ED. (Jan. 3, 2012), <https://www.insidehighered.com/news/2012/01/03/ucla-faces-criminal-charges-lab-accident>.

362. *Id.*

363. Kim Christensen, *UC Regents Strike Plea Deal in UCLA Chemistry Lab Death*, L.A. TIMES (July 28, 2012), <http://articles.latimes.com/2012/jul/28/local/la-me-0728-lab-death-20120728>.

364. Kim Christensen, *UCLA's Legal Fees In Fatal Lab Fire Case Nearing \$4.5 Million*, L.A. TIMES, (Oct. 16, 2014, 11:40 AM), <http://www.latimes.com/local/education/la-me-ucla-legal-20141016-story.html>.

365. *Id.*

\$10,000 to the Grossman Burn Center.³⁶⁶ The charges will be dropped after five years if he complies with the terms of the settlement.³⁶⁷ This case, believed to be the first against a laboratory, sent shock waves throughout the research community.³⁶⁸

The Los Angeles County District Attorney also filed felony charges against Bumble Bee Foods, its former safety manager, and the director of plant operations on April 27, 2015 for a workplace fatality.³⁶⁹ Jose Melena, unbeknownst to his coworkers, entered a thirty-five foot covered oven for a repair on October 12, 2012.³⁷⁰ Workers poured twelve thousand pounds of tuna into the pressure cooker, shut the door, and turned it on.³⁷¹ He was essentially cooked to death in the pressure cooker.³⁷²

CONCLUSION

Most accidents, disasters, and tragedies, whether originating from natural or human causes, will have multiple causes. They will usually involve some degree of human error, which in turn can give rise to criminal prosecutions. The errors could involve emergency planning, design, construction, maintenance, response, or inspections.

Prosecutors have become aggressive in seeking out responsible parties. The net of criminal liability is no longer limited to those directly involved in causing the disaster, but may now extend to those involved in the response, as well as officials whose derelictions in office helped create the risk.

The trend is for increasing criminal prosecutions on a global

366. Kim Christensen, *UC Regents Strike Plea Deal in UCLA Chemistry Lab Death*, L.A. TIMES (July 28, 2012), <http://articles.latimes.com/2012/jul/28/local/la-me-0728-lab-death-20120728>.

367. Kim Christensen, *UCLA Chemistry Professor Avoids Prison in Fatal Lab Fire Case*, L.A. TIMES, (June 21, 2014 10:44 AM), <http://www.latimes.com/local/lanow/la-me-ln-ucla-professor-avoids-prison-fatal-lab-fire-20140620-story.html>.

368. Jyllian N. Kemsley, *Learning from UCLA: Details of the Experiment that Led to a Researcher's Death Prompt Evaluations of Academic Safety Practices*, 87 CHEMICAL & ENGINEERING NEWS, Aug. 3, 2009, at 29, http://www.suagm.edu/umet/biblioteca/Reserva_Profesores/Miriam_Falero_chem_203/04_L1b_seguridad_curso_chem203lab.pdf; Paul Basken, *Liability in the Lab: UCLA Case Sends a Message to Universities*, CHRONICLE OF HIGHER EDUCATION, Jun. 23, 2014, at 1.

369. Matt Hamilton, *Bumble Bee Foods, 2 Others Charged After Employee Died in Pressure Cooker*, L.A. TIMES, (Apr. 27, 2015, 3:39 PM), <http://www.latimes.com/local/lanow/la-me-ln-bumble-bee-charged-death-20150427-story.html>.

370. Hamilton, *supra* 369.

371. *Id.*

372. *Id.*

level in both civil law and common law jurisdictions. The crimes charged are not limited to traditional “common law” offenses, but include a seemingly infinite number of statutory crimes, often dependent on the creativity and ingenuity of prosecutors.

Criminal prosecutions are not only brought under traditional vicarious liability principles, since corporations can only act through individuals, but also against parent corporations for the misdeeds of subsidiaries.

Not all prosecutions will be successful, but the filing of criminal charges against corporations, and especially officers, directors, employees, and government officials sends a message about the misconduct.

Major categories of enforcement include oil spills, mining disasters, maritime disasters, structural failures, and workplace accidents. Not all cases involve a loss of life. A few cases, especially the UCLA lab tragedy and the L’Aquila Earthquake, sent tremors through the scientific community.

It is an interesting phenomenon that while many cases involve speedy justice, others drag on for a decade or longer, letting the criminal Sword of Damocles dangle over the defendants, both individuals and corporations.