COMPARING U.S. AND EU HAZARDOUS WASTE LIABILITY FRAMEWORKS: HOW THE EU LIABILITY DIRECTIVE COMPETES WITH CERCLA

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I. INTRODUCTION

On October 4, 2010, 184 million gallons of toxic sludge surged out of a depositing tank belonging to MAL Zrt., an aluminum production and trade company in Ajka, Hungary.[1] The spill killed eight people, injured 150, destroyed crops, and displaced hundreds of residents.[2] However, under the EU Council Directives, Ajka red sludge is not actually classified as a hazardous waste. Accordingly, Hungary's permitting process did not require MAL to guarantee sufficient financial funds for cleanup of a potential waste site.[3] In light of the magnitude of damage and the government's regulatory shortcomings, members of the EU Parliament are reevaluating the EU's current hazardous waste liability framework.[4] In the meantime, the U.S. Supreme Court and the Fifth Circuit have issued

1. Claudia Ciobanu, *Poor Safeguards Against Further Spills,* INTER PRESS SERVICE, Oct. 14, 2010, http://www.ipsnews.net/print.asp?idnews=53157.

2. *Id*. It is estimated that clean up of the site will cost tens of millions of dollars and take at least one year to complete. Julian Siddle, *'One Year' to Clean Toxic Spill in Hungary*, BBC NEWS, Oct. 6, 2010, http://www.bbc.co.uk/news/world-europe-11481740.

3. Ciobanu, *supra* note 1. The EU Mining Waste Directive is scheduled for implementation starting 2012 and would regulate operation of mining wastes. *Id*.; *see also* Council Directive 2006/21, 2006 O.J. (L 102) 15–33 (EC). A WWWF European Policy Officer stated that industry leaders lobbied heavily against an earlier implementation date and stringent permitting policies, which would require financial assurances to cover reasonable liability in the event of a hazardous release. Ciobanu, *supra* note 1. The red sludge is not considered a hazardous substance under U.S. EPA guidelines either. Dan Bilefsky & Judy Dempsy, *Caustic Sludge Floods Several Hungarian Towns*, N.Y. TIMES, Oct. 5, 2010, at A8, *available at* http://www.nytimes.com/2010/10/06/world/europe/06hungary.html?ref=hungarian_sludge_spill.

4. *Hungary's Toxic Spill Puts Regulation in Spotlight*, MANILLA BULLETIN, Oct. 25, 2010, http://www.mb.com.ph/articles/284107/hungarys-toxic-spill-puts-regulation-spotlight.

decisions that limit Superfund liability in the U.S.[5]

This Paper compares and contrasts U.S. hazardous waste liability laws under CERCLA with those provided in the EU Council Directive on Environmental Liability and will examine the movement of case law by U.S. Federal Courts and the EU Court of Justice. Following a close analysis of both frameworks, this paper illustrates how CERCLA's broad definitions, retroactive application, detailed enumeration of responsible parties, citizen's suit provision, and additional exemptions make it superior to the EU system. With the exception of the EU's biodiversity and natural resource protection clauses, the U.S. liability structure consistently provides more expansive coverage and better statutory explanations. Unfortunately, rather than moving forward and continuing to establish a strict model of liability, the United States is taking a step back and potentially mitigating environmental liability through Supreme Court decisions. This paper discusses the implications of recent decisions, encourage the United States not to scale back its rigorous policies, and support adoption of biodiversity and natural resources provisions analogous to those of the EU Liability Directive.[6]

Part II provides a general overview of the regulatory framework in the U.S. and EU. The paper does not delve into individual states' or countries' hazardous waste regulations, which may be more stringent than the bar set by the U.S. or EU.[7] Part III addresses specific notable aspects of each framework and significant distinctions between the two. Part IV examines case law trends, including recent noteworthy decisions. This paper highlights the areas where the European Union and United States have eased their environmental liability regulations and suggests recommendations for strengthening the policies currently in place.

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5. *See* Burlington Northern & Santa Fe Ry. Co. v. United States, 129 S. Ct. 1870 (2009)[hereinafter "Burlington II"]; Celanese Corp. v. Martin K. Eby Construction Co., 620 F.3d 529 (9th Cir. 2010).

6. For example, the Directive expands its coverage to include protection of and compensation for damage to biodiversity. Council Directive 2004/35, O.J. (L 143) 56 (EC).

7. Comprehensive Environmental Response Compensation and Liability Act, 42 U.S.C. §§ 9601–9675 (2010); Council Directive 2008/98, 2008 O.J. (L 312) 3–30 (EC).

II. AN EXAMINATION OF THE REGULATORY FRAMEWORK FOR HAZARDOUS WASTE LIABILITY IN THE U.S. AND THE EU

A. An Overview of CERCLA Liability in the U.S.

Congress enacted the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) in 1980 in response to health and environmental concerns stemming from hazardous industrial pollution.[8] The Act authorizes a federal response to a hazardous substance release and imposes liability for the clean-up of hazardous waste sites on parties responsible for the contamination.[9] Under the Act, the following four classes of persons are considered potentially responsible parties (PRPs): (1) present owners and operators of a facility; (2) past owners or operators of the facility; (3) generators of hazardous waste that arrange for disposal or treatment, and; (4) transporters of hazardous waste.[10] Because the Act imposes strict liability on all persons classified as PRPs, a determination of causation, negligence, or intent by the plaintiffs is unnecessary.[11]

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8. Burlington II, 129 S. Ct. 1870 (2009). Congressional action was driven largely by the 1977 hazardous contamination of the Love Canal dumpsite, which led to a state of health emergency in New York and the evacuation of 200 homes. CAROLE STERN SWITZER & PETER GRAY, CERCLA: COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY RESPONSE ACT (SUPERFUND) 3 (2d ed. 2002).

9. 42 U.S.C. § 9604. The Act authorized two types of responses (1) short term removals where there is high risk to human health and the environment (2) long term remedial action for serious risks, but that do not pose an immediate threat to human life. *Id*.

10. 42 U.S.C. § 9607(a) (1)–(4). CERCLA's liability for non-negligent generators arranging for disposal was probably the most significant shift from common law. ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 295 (3d ed. 2000). The term facility is construed very broadly under the Act. SWITZER & GRAY, *supra* note 8, at 25. The definition of facility includes vessels, structures, installations, equipment, pipe or pipelines, wells, pits, ponds, lagoons, impoundments, ditches, landfills, storage containers, motor vehicles, rolling stocks, aircrafts, or any site where a hazardous substance has been deposited. 42 U.S.C. § 9601(9).

11. OHM Remediation Servs. v. Evans Cooperage Co., 116 F.3d 1574 (5th Cir. 1997) (a superfund recovery action where the leading responsible party was insolvent); JAMES SALZMAN & BARTON H. THOMPSON, ENVIRONMENTAL LAW AND POLICY 226 (3d ed. 2010) (CERCLA does not expressly state a liability standard, but points to section 311 of the Clean Water Act's oil response program for guidance, which designates the use of common law. Courts have interpreted the common law principles as creating a strict, joint and several liability standard.). *See* SWITZER & GRAY, *supra* note 8, at 25.

Furthermore, if the harm is indivisible, the liability is joint and several under CERCLA.[12] This liability framework is based on the "polluter pays" principle, where the producers of the hazardous substance are ultimately held accountable for the harm caused by the disposal.[13]

The rigid liability standards designed to avert use of taxpayer funds implicate concerns of fairness, such as disproportionate liability or the unjust punishment of parties that were in full compliance of the law at the time the events transpired.[14] These controversial provisions may be one reason why no other nation has adopted the exact approach espoused by CERCLA, while various countries have shaped their environmental regulations after other U.S. environmental laws, like the Clean Air Act and the National Environmental Policy Act.[15]

Despite heavy criticism of the costs associated with the Superfund, a 1995 study by the Brookings Institution indicates Superfund costs comprise less than 5% of the total expenses associated with satisfying all federal environmental regulations.[16] Nevertheless, the burden of these expenses on certain responsible parties can be devastating, resulting in bankruptcy or closure of business.

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12. OHM Remediation Servs., 116 F.3d at 1578–79.

13. Jon-Erik Magnus, *Lyon's Roar, Then a Whimper: The Demise of Broad Arranger Liability in the Ninth Circuit After the Supreme Court's Decision in Burlington Northern*, 3 GOLDEN GATE U. ENVTL. L. J. 427, 430 (2010). "CERCLA's broad, remedial purpose is to facilitate prompt cleanup of hazardous waste sites and to shift cost of environmental response from taxpayers to parties who benefitted from wastes that caused harm." OHM Remediation Servs., 116 F.3d at 1578–79 (citing In re Bell Petroleum Servs., Inc., 3 F.3d 889, 894 (5th Cir. 1993)).

14. SALZMAN & THOMPSON, *supra* note 11, at 227; PERCIVAL ET AL., *supra* note 10, at 397–98 (describing constitutional challenges to CERCLA's liability provisions). Claims that retroactive application of CERCLA violates due process or that CERCLA violates the commerce clause have consistently failed. PERCIVAL ET AL., *supra* note 10, at 397–98; *see also* United States v. Olin Co., 107 F.3d 1506 (11th Cir. 1997); U.S. Trust Co. v. New Jersey, 431 U.S. 1, 17 (1977); United States v. Monsanto Co., 858 F.2d 160, 173–74 (4th Cir. 1988); United States v. Ne. Pharm. & Chem. Co., 810 F.2d 726, 732–34 (8th Cir. 1986).

15. SALZMAN & THOMPSON, *supra* note 11, at 222.

16. KATHERINE N. PROBST ET. AL., FOOTING THE BILL FOR SUPERFUND CLEANUPS: WHO PAYS AND HOW? 111–12 (1995).

B. An Overview of the EU Council Directives on Hazardous Waste Liability

Similar to the United States, European environmental action on hazardous waste legislation was catalyzed by a series of large-scale disasters.[17] Four historical incidents led to the development of European legislation on industrial regulation for responding to hazardous threats.[18] In 1976, a chemical plant explosion near Milan, Italy, resulted in the highest known dioxin release in the world.[19]

The toxic release killed much of the wildlife in the affected Seveso region and caused serious long-term health effects on humans.[20] In the wake of the Seveso incident, the chemical company reassured the community that disposal of the contaminated waste was under way. However, several weeks later, 41 barrels of dioxin-contaminated soil from the spill site were uncovered in a barn in France, all secretly transported during the "clean up" process.[21] Shortly thereafter, another disturbing discovery revealed that the soil underneath a Dutch city was heavily contaminated with chemical pollutants.[22]

The adverse effects of the hazardous wastes shed light on

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17. B. De Marchi, S. Funtowicz & J. Ravetz, *Seveso: A Paradoxical Classic Disaster, in* THE LONG ROAD TO RECOVERY: COMMUNITY RESPONSES TO INDUSTRIAL DISASTER 86, 86 (James K. Mitchell ed., 1996) (attributing European development of uniform industrial regulations to a series of environmental disasters); Hila J. Alderman, Comment, *The Ghost of Progress Past: A comparison of Approaches to Hazardous Waste Liability in the European Community and the United States*, 16 HOUS. J. INT'L L. 311, 318–20 (1993).

18. Marchi et al., *supra* note 17, at 90; Alderman, *supra* note 17, at 318.

19. Brenda Eskenazi et al., *Relationship of Serum TCDD Concentrations and Age at Exposure of Female Residents of Seveso, Italy*, ENVIRONMENTAL HEALTH PERSPECTIVES, Jan. 2004, *available at* http://ehp03.niehs.nih.gov/article/fetchArticle.action?articleURI=info:doi/10.1289/ehp.6573 (discussing the long term health consequences of the Seveso disaster on women in the affected regions).

20. P. Blümler, *Dioxin: Seveso, Vietnam, and Everyday Exposure, available at* http://www.econmr.org/datapool/page/30/dioxin.pdf (explaining the sequence of events related to dioxin exposure of the Seveso region and the health consequences on children and adults).

21. *Id*. at 13.

22. Ruud Cino, *Soil Pollution in the Netherlands: A Refocused Policy on Soil and the Strategy of the Public and Private Sector*, Oct. 11, 2006, http://www.renaremark.se/filarkiv/holland2006/A1_Ruud_Cino.pdf.

the need for preventative measures and triggered serious reforms of industrial management in Europe.[23] The European Community worked to issue the Seveso Directive, which established a regulatory framework for managing industries that handle hazardous materials.[24]

In 1996, the EU adopted the Seveso II Directive on the control of major-accident hazards, expanding the purview of Seveso I.[25] One of the Directive's progressive policies imposed a responsibility to provide information on potential safety hazards to authorities and parties at risk of being harmed by an industrial disaster.[26] Because the Seveso Directives are limited to prevention of major hazardous accidents, liability and instruction following a hazardous release will likely be within the ambit of the EU's directives.[27] The European Union's legal authority to develop binding Directives is derived from Article 288 on the Treaty of the Functioning of the European Union.[28]

The EU Environmental Liability Directive defines relevant terms and outlines the regulatory framework for hazardous releases occurring in Member States.[29] The Directive was codified on April 30, 2004, and Member States were given a

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23. *See* Marchi et al., *supra* note 17.

24. *Id*.; Council Directive 82/501, 1982 O.J. (L 230) 1–18 (EEC) (replaced by Council Directive 96/82/EC); *see also Chemical Accidents (Seveso II)—Prevention, Preparedness and Response*, EUROPEAN COMMISSION: ENVIRONMENT, Apr. 4, 2012, http://ec.europa.eu/environment/seveso/index.htm (stating the history of Seveso I and Seveso II Directives).

25. Council Directive 96/82, 1996 O.J. (L10) 13–33 (EC) (amended by Council Directive 2003/105/EC).

26. Josée van Eijndhoven, *Disaster Prevention in Europe*, *in* LEARNING FROM DISASTER: RISK MANAGEMENT AFTER BHOPAL 119 (Sheila Jasanoff ed., 1994) (discussing the characteristics of the Seveso Directives). The Seveso Directive was the first EU policy mandating industries to present information to the public. *Id*.

27. Council Directive 2004/35/EC, O.J. (L 143) 56 (EC).

28. Consolidated Version of The Treaty on the Functioning of the European Union art. 288, Mar. 25, 1957, 2008 O.J. (C 115) 171–72 (formerly art. 249, Treaty Establishing the European Community). "To exercise the Union's competences, the institutions shall adopt regulations, directives, decisions, recommendations and opinions." *Id*. "A directive shall be binding, as to the result to be achieved, upon each Member State to which it is addressed, but shall leave to the national authorities the choice of form and methods." *Id*.

29. *Id*.; *see* Council Directive 2008/98, 2008 O.J. (L 312) 3–30 (EC) (amending Council Directive 2006/12, 2006 O.J. (L 114) 9–21 (EC)).

three year period to transpose the legislation into their domestic laws.[30] By July 2010, the transposition of the Directive was successfully completed in every Member State. Because of the slow transposition process, there are few practical applications of the Directive.[31] Accordingly, the EU Court of Justice's decisions will play a pivotal role in determining the implementation and reach of the Directive.[32]

The Directive incorporates objectives of prevention and resolution of "environmental damage."[33] Similar to the U.S. scheme, the foundation for liability is rooted in the "polluter pays" principle.[34] Therefore, operators carrying out inherently dangerous occupational activities are strictly liable for ensuing environmental damage.[35] The Directive focuses on restoring purely ecological damage, which encompasses damage to natural resources, protected species, habitats, water, and soil.[36] The Directive establishes legal grounds for environmental enforcement claims separate from traditional damages to property, economic loss, or personal injury.[37] Member States' civil liability systems are the primary compensatory tool for traditional damages, just as state tort law guides these damages in the United States.

III. SIMILARITIES AND DISTINCTIONS BETWEEN THE EU AND U.S. REGULATORY FRAMEWORKS

Developed nations spend roughly 1.5 to 2% of their GDPs satisfying environmental regulations.[38] Although environmental compliance expenditures comprise a small percentage of the

30. *Environmental Liability*, EUROPEAN COMMISSION, Nov. 28, 2011, http://ec.europa.eu/environment/legal/liability/index.htm.

31. *Id.*

32. *Id.*

33. *Environmental Liability*, *supra* note 30.

34. *Id.*

35. *Id.*

36. *Id.*

37. *Id.*

38. JANET STONE MCGUIGAN, EUROPEAN COMMISSION, THE POTENTIAL IMPACT OF ENVIRONMENTAL LIABILITY: THE AMERICAN AND EUROPEAN CONTEXTS 1 (2000).

total GDP, they still cost countries billions of dollars annually.[39] Examining the environmental liability structure of two influential nations will highlight the differentiating characteristics and will help identify the more stringent policies within each regime. In comparing the two liability structures, we are assuming that the U.S. and EU authorities engage in a relatively similar remediation process when removing contamination and restoring the environment.[40] We are also assuming that the type, degree, and gravity of damage occurring in both countries are generally akin to one another.[41] Finally, this paper assumes that the litigious behavior in Europe is comparable to that of interested parties in the United States.[42] These assumptions acknowledge there are potential unknowns which are not the focus of this analysis.

Both CERCLA and the EU Liability Directive embody certain similar principles. For example, both schemes adopt the polluter pays doctrine and do not place financial limits on responsible parties' liability.[43] Like CERCLA, the EU Directive does not cover environmental damage resulting from maritime oil disasters and nuclear accidents.[44] This section analyzes the

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39. Nicholas A. Ashford, *Reflections on Environmental Liability Schemes in the United States and European Union: Limitations and Prospects for Improvement*, MIT TECHNOLOGY AND LAW PROGRAM, May 5, 2010, *available at* http://dspace.mit.edu/handle/1721.1/55293; Press Release, Europa, Questions and Answers Environmental Liability Directive (Apr. 27, 2007), http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/07/157&format=HTML&aged=1&language=EN&guiLanguage=en.

40. *See* MCGUIGAN, *supra* note 38, at iii (explaining that a number of assumptions are necessary to make before comparing the EU and U.S. liability regimes).

41. *See id.*

42. *See id.*

43. *See* Questions and Answers Environmental Liability Directive, *supra* note 39. The EU Liability Directive does allow public authorities to decide on an individual basis, whether to limit the liability of a responsible operator. *Id.* This may occur when the expense of continued restoration would be inconsistent with the environmental benefits. *Id.*

44. PERCIVAL ET. AL., *supra* note 10, at 348; Questions and Answers Environmental Liability Directive, *supra* note 39. In Europe, maritime oil pollution is covered by the 1992 International Convention on Civil Liability for Oil Pollution Damage and the 1992 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage. *Id.* Several international civil liability conventions cover nuclear activities, including the Paris Convention. *Id.* In the United States, oil contamination is covered by the Oil Pollution Act and nuclear pollution falls

specific approaches adopted by the two nations in critical areas, including damages covered, responsible parties, potential plaintiffs, extent of liability, defenses, and exemptions. With respect to all of the principles, the U.S. approach is more stringent and expansive. Although the EU has emulated certain attributes of the U.S. structure, the Liability Directive leaves too much room for subjectivity and has been characterized as ambiguous.[45] The following chart gives a broad overview of particular features of each nation's liability structure.

COMPARISON OF CERCLA AND THE EU LIABILITY DIRECTIVE[46]

Topic	U.S. Approach	EU Approach
Retroactivity	Applies retroactively.	Only applies prospectively, not retroactively.
Potentially Responsible Parties	Past and Present operators, past and present owners of property, party arranging for disposal of wastes, and transporters of waste.	Focus on operator which was the primary source of the contaminations.
Potential Plaintiffs	Citizen suits are permitted by members of the public against PRPs directly, or	Two-tiered approach: Member States are obliged to force clean up. Only if the State is negligent in its

under the Nuclear Waste Policy Act of 1982. PERCIVAL ET. AL., *supra* note 10, at X.

45. *See* Randy M. Mott, *Defects in the EU Environmental Liability Directive: Narrow Jurisdictional Predicates Complicate Future Enforcement*, Dec. 2007, http://www.eco-web.com/edi/index.htm.

46. MCGUIGAN, *supra* note 38, at i–v (summarizing the key differences between the U.S. and EU frameworks); *see* Council Directive 2004/35/EC, art. 14(2), O.J. (L 143) 47–49 (EC) (assessing the effectiveness of the Directive in terms of actual remediation of environmental damage and the availability at reasonable costs of, and conditions for, financial security for the activities listed in its Annex III).

	against the government forcing them to act.	duty can a citizen bring a suit to force clean up.
Strict Liability	Strict liability across the board.	Strict liability for damaged caused by inherently dangerous activities and fault-based liability for damage to biodiversity caused by a non-dangerous activity.
Liability Apportionment	Traditionally joint and several liability, however *Burlington II* implicates a shift towards proportionate liability.	Member States decide whether potentially responsible parties are joint and severally liable or proportionally liable. Most Member States have adopted a system of joint and several liability.
Defenses	Affirmative defense for environmental damage from natural phenomenon, acts of war, and acts of unrelated third party. CERCLA also provides for an innocent landowner defense and a bona fide prospective purchaser defense.	Mandatory Defenses: The Directive does not cover environmental damage from natural phenomenon, acts of war, and acts of third party. Optional Defenses: established by Member State, such as permit or unforseeability given the state of scientific and technical knowledge.

Exemptions	De micromis and municipal solid waste exemptions.	None.
Damage covered	Limited to cleaning up contamination, and restoring land; contains a natural resources provision that is infrequently used.	Includes damage to biodiversity, land, and water.
Financial Security Provisions	In the process of developing some financial security provisions.	The EU issued a report in 2010 discussing the availability of financial security products, which will help determine whether the Directive should be amended to require insurance. Currently eight member states have introduced mandatory financial security systems.

A. Damages Covered

Rather than covering traditional injuries, both CERCLA and the EU Directive attempt to repair damage to the natural environment and prevent adverse effects on human health and communally shared goods.[47] Although both schemes have a

47. Gerhard Roller, *Liability*, *in* REFLECTIONS ON 30 YEARS OF EU ENVIRONMENTAL LAW: A HIGH LEVEL OF PROTECTION? 133, 136 (Richard Macrory ed., 2006). Natural

shared purpose, the EU Directive's scope of damages extends much further than that of CERCLA.[48] CERCLA primarily focuses on removing all contaminated matter, hazardous substances, and potentially harmful remnants of the release.[49]

The EU Directive takes a broader approach, which emphasizes both clean up of the site and rehabilitation of the natural resources and biodiversity previously located on the site. This includes restoring damage to protected species and natural habitats, water damage, and land damage.[50] The Directive's biodiversity coverage entails all species and habitats protected under the 1992 Habitat Directive, as well as most endangered species and migratory birds protected under the 1979 Birds Directive.[51]

CERCLA includes a natural resources provision enabling federal and state governments to recover additional funds to restore damage to natural resources when response actions are insufficient.[52] But the natural resources provision has rarely been applied, leaving very little case law on the matter.[53] The absence of precedent also makes it unclear whether the scope of

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goods include water, plants, wild animals, climate, and other natural resources that do not implicate private property restrictions. *Id*.

48. *See* MCGUIGAN, *supra* note 38, at 27–28 (examining the different damages covered under the EU and U.S. frameworks).

49. SWITZER & GRAY, *supra* note 8, at 13–14 (listing physical cleanup actions which typically occur, including public health monitoring, providing alternative water supplies, and relocating affected communities); MCGUIGAN, *supra* note 38, at 27–28.

50. Council Directive 2004/35/EC, art. 2, O.J. (L 143) 59 (EC); Roller, *supra* note 47, at 136. The Directive's protection of biodiversity makes it the most expansive environmental liability legislation, surpassing the regimes of all member states. Questions and Answers Environmental Liability Directive*, supra* note 39.

51. Questions and Answers Environmental Liability Directive*, supra* note 39. The habitats and species protected by the Directive are known as the Natura 2000 network and include 22,000 individual sites encompassing almost 17% of EU land area and 140,000 square km of marine area. *Id*.

52. 42 U.S.C.A. § 9607(f); *see also* SWITZER & GRAY, *supra* note 8, at 95. The definition for natural resources can be found at 42 U.S.C.A. § 9601(16).

53. Lawrence Hurley, *Lawyers Still Cleaning Up Over Superfund Site*, N.Y. TIMES, Jan. 3, 2011, http://www.nytimes.com/gwire/2011/01/03/03greenwire-lawyers-still-cleaning-up-over-superfund-sites-92748.html?pagewanted=1 (reasoning attorneys have declined to use the natural resources provision because natural resource damages are expensive to litigate).

the statute extends to wildlife.[54] Meanwhile, the European Union explicitly made restoration of wildlife and biodiversity a priority by codifying it into the language of its Directive.[55] The EU's concentration on rehabilitation of the environment distinguishes it from the U.S.'s narrower cleanup and removal approach.[56]

B. Responsible Parties

The U.S. framework seeks to place responsibility for damage on as many parties as possible, even those remotely connected to the site, to avoid charging taxpayers for the cleanup costs of contamination.[57] Consequently, CERCLA extends liability to past and present property owners, past and present operators of a facility, persons producing hazardous waste who arrange for the disposal of the waste, and transporters of the hazardous waste who play a role in determining the disposal site.[58] Federal and state entities are not immune from CERCLA liability.[59] The Superfund has intentionally developed an expansive list of responsible parties, to ensure that remediation costs are recovered from the parties that benefitted from the activities taking place on the site.[60] The Superfund's expansive liability scheme provides a preemptive solution to dealing with orphan sites, where the party primarily responsible for the contamination cannot be found or is insolvent and is unable to

54. *Id.*

55. *See* Council Directive 2004/35, 2004 O.J. (L 143) 59–60 (EC).

56. *See* MCGUIGAN, *supra* note 38, at 27–28 (explaining the EU liability regime initially included compensation for damages to health and property, which are not within the ambit of the Superfund). Personal injuries and property damage were eliminated from the final directive 2005/35/EC. Ashford, *supra* note 39, at 4.

57. PERCIVAL ET. AL., *supra* note 10, at 267; Burlington II, 129 S. Ct. 1870, 1885 (2009).

58. 42 U.S.C. § 9607(a)(1)–(4).

59. MCGUIGAN, *supra* note 38, at 31 (finding a noticeable number of responsible parties at Superfund sites are companies providing public services, such as municipalities or recycling operations).

60. Emilee Mooney Scott, *Bona Fide Protection: Fulfilling CERCLA's Legislative Purpose by Applying Differing Definitions of "Disposal",* 42 CONN. L. REV. 957, 966–68 (2010).

cover the cleanup expenses.[61]

Although the far-reaching U.S. system could theoretically result in over a hundred responsible parties, studies indicate that most Superfund sites have 10 or fewer responsible parties.[62] The advantage of a broad liability scope is less taxpayer money used in the remediation process when one or more parties are insolvent.[63] Unfortunately, burdening attenuated parties with a disproportionate share of liability triggers a great deal of criticism.[64]

The European system acknowledges the possibility of an inequitable outcome under CERCLA and, therefore, has departed from the U.S. liability framework by placing the burden of cleanup primarily on the operator responsible for the contamination.[65] To encourage cautious behavior and to effectively impact industry operations, the EU Directive requires that polluters have clear knowledge of their potential financial liability.[66] The EU framework also differs from the Superfund by failing to clarify whether the Commission, Member States, or local governments may be identified as responsible parties.[67] The ambiguity present under the EU regime limits the range of potentially liable parties, which may hinder cost recovery for cleanup.[68]

C. Potential Plaintiffs

In the United States, polluters are generally prosecuted by the Department of Justice on behalf of the EPA, or by state or local governments.[69] Although the U.S. scheme is handled

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61. Michael Carter, *Successor Liability Under CERCLA: It's Time to Fully Embrace State Law*, 156 U. PA. L. REV. 767, 773. (2008).

62. MCGUIGAN, *supra* note 38, at 6 (discussing the estimated economic impacts of Superfund to make predictions regarding the European liability regimen).

63. *See* SWITZER & GRAY, *supra* note 8, at 25.

64. *See* SALZMAN & THOMPSON, *supra* note 11, at 225–27.

65. MCGUIGAN, *supra* note 38, at 31–32.

66. *See* Questions and Answers Environmental Liability Directive, *supra* note 39.

67. MCGUIGAN, *supra* note 38, at 31–32.

68. MCGUIGAN, *supra* note 38, at 31–32.

69. ROBERT ESWORTHY, CONG. RESEARCH. SERV., RL 34384, FEDERAL POLLUTION CONTROL LAWS: HOW ARE THEY ENFORCED? 9 (2008).

almost entirely by government authorities, the citizen suit provision of CERCLA permits the public to initiate an action forcing environmental compliance at a site.[70] Citizen suits are limited to violations of reporting requirements, but are a successful mechanism for bringing environmental violations to the EPA's attention.[71] Unlike the EU system, "any person" may bring a suit directly against a breaching responsible party.[72]

Even though citizen suits are not permitted directly against responsible parties in the EU, the Directive authorizes the public to bring a claim against the government for inaction.[73] Affected citizens and nongovernmental organizations advocating environmental protection will have a right to compel the competent, State recognized authorities to act.[74] The EU has adopted a two-tiered approach, where Member States are responsible for bringing liability claims and seeking recovery from the polluter.[75] Only when the State has neglected to execute its duty or has performed it poorly does the second tier permit the public to bring a suit against the State authorities for failing to prosecute and remediate the contaminated site.[76] The public's case must be brought by a state-approved public interest group, which acts on a subsidiary basis.[77] The subsidiary

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70. 42 U.S.C § 9659(a) ("[A]ny person may commence a civil action on his own behalf" (1) against any person violating a provision of CERCLA; or (2) against government authorities that neglect to fulfill their duties); SALZMAN & THOMPSON, *supra* note 11, at 227.

71. SWITZER & GRAY, *supra* note 8, at 80–81 (noting that citizen suits filed directly against PRPs are increasing).

72. 42 U.S.C. § 9659(a)(1); *see* AM Int'l Inc. v. Datacard Corp., 106 F.3d 1342, 1349 (7th Cir. 1997) (holding the purchaser was a proper citizen suit plaintiff under CERCLA based on the plain language of the statute).

73. Questions and Answers Environmental Liability Directive, *supra* note 39. Citizens must submit their observations with reasonably backed evidence to the authorities. The authorities are required to respond to the request for action. *Id.*

74. Questions and Answers Environmental Liability Directive, *supra* note 39.

75. Roller, *supra* note 47, at 134 (discussing the history and development of the European liability framework). *See White Paper on Environmental Liability*, at 21–22, COM (2000) 66 final (Feb. 9, 2000).

76. Roller, *supra* note 47, at 134; MCGUIGAN, *supra* note 38, at 30.

77. Roller, *supra* note 47, at 134. The White Paper created a two-tier approach that gave the public power to prosecute polluters in certain situations, arguably shifting Europe's civil liability structure to a public law scheme. *White Paper on Environmental*

scheme directs the EU environmental law away from the private sector and into the public law realm.[78] Despite the EU's attempt to empower the public, the Directive falls short of the rights granted to citizens under CERCLA. By permitting citizen suits directly against responsible parties, CERCLA entitles the public to act as private attorneys general.[79]

D. Extent of Liability: Strict Liability, Joint and Several Liability, Retroactivity, and Punitive Damages

1. Strict liability

CERCLA imposes strict liability on all responsible parties. Consequently, a determination that a party falls into one of the four enumerated categories imputes responsibility on the party, even if the party abided by all laws.[80] CERCLA is limited exclusively to hazardous wastes,[81] which would probably also be identified as hazardous wastes under EU law.[82] The EU directive imposes strict liability on parties engaging in the inherently dangerous activities listed in Annex III and fault-based liability for biodiversity damage generated by non-dangerous activities.[83]

Activities falling under Annex III include (1) waste management operations, (2) agricultural and industrial activities requiring permits under the 1996 Integrated Pollution Prevention and Control Directive, (3) the release of pollutants into the water or air, (4) manufacture, use, storage, processing, filling, release, or transport of dangerous chemicals specified in the corresponding Council Directives, and (5) any contained use, release, or transport of genetically modified micro-organisms.[84]

Liability, at 21–22, COM (2000) 66 final (Feb. 9, 2000).

78. Roller, *supra* note 47, at 133–34.

79. SWITZER & GRAY, *supra* note 8, at 80.

80. 42 U.S.C. § 9607(a)(1)–(4) (2002).

81. SWITZER & GRAY, *supra* note 8, at 13.

82. *See* Council Directive 91/689, 1991 O.J. (L 337) 26–27 (EC).

83. MCGUIGAN, *supra* note 38, at 26; *see* Council Directive 2004/35/CE, Annex III, 2004 O.J. (L 143) 56, 70–71 (EC); Roller, *supra* note 47, at 135.

84. Council Directive 2004/35/EC, O.J. (L 143) 60, 70–71 (EC). Regardless of fault, an operator will be liable for environmental damage within the scope of the Directive when engaging in any of the Annex III activities listed above. *Id.* art. 3(1)(a).

All activities within the ambit of the Directive must be occupational in nature, which means the actions performed were part of an economic enterprise, business, or project.[85] The EU system therefore encompasses a broader range of activities, including both abnormally dangerous and non-dangerous activities.[86]

2. Joint and Several Liability

The U.S. courts have traditionally applied joint-and-several liability on all responsible parties in Superfund cases, regardless of the extent of their involvement.[87] Prior to *Burlington II*, the assumption was that a responsible party could be liable for the entire amount of the cleanup, unless they had a defense or mitigating circumstance.[88] Liability apportionment was limited to cases where divisibility was obvious and initiated by the parties involved in the case.[89] *Burlington II* therefore implicates a seismic shift in the hazardous waste liability tradition because the Supreme Court encouraged liability apportionment by supporting a district court's independent decision to allocate damages without any instigation from the responsible parties.[90] The district court went through great measures on its own accord to allot liability without any evidence from the defendants on the apportionment issue.[91] By affirming the

85. Roller, *supra* note 47, at 136 (identifying "occupation" as a broad term that includes the economic activities of public, private, for profit, and nonprofit entities).

86. MCGUIGAN, *supra* note 38, at 26; Roller, *supra* note 47, at 135. A negligent operator engaging in professional activities not listed in Annex III may be liable if his negligence causes damage to species and natural habitats protected at the EU level under the 1992 Habitats and 1979 Birds Directives. Questions and Answers Environmental Liability Directive, *supra* note 39.

87. PERCIVAL ET AL., *supra* note 10, at 305–06.

88. United States v. Atchison, Topeka & Santa Fe Ry. Co., No. CV-F-92-5068 OWW, CV-F-96-6226 OWW, CV-F-96-6228, 2003 WL 25518047, at *80–82 (E.D. Cal. July 15, 2003), *aff'd in part, rev'd in part sub nom.* United States v. Burlington Northern & Santa Fe Ry. Co., 520 F.3d 918 (9th Cir. 2008), *rev'd* 129 S. Ct. 1870.

89. *See id.* at *80–83; Seth Jaffe, *The Supreme Court Decision in Burlington Northern: There Are Limits to Liability Under CERCLA,* LAW & THE ENVIRONMENT (May 4, 2009), http://www.lawandenvironment.com/2009/05/articles/cercla/the-supreme-court-decision-in-burlington-northern-there-are-limits-to-liability-under-cercla.

90. *See* Jaffe, *supra* note 89.

91. Michael Foy, *Apportioning Cleanup Costs in the New Era of Joint and Several*

district court, the Supreme Court implies apportionment rather than joint-and-several liability as the rule.[92]

The EU regime delegates the authority to implement joint and several or proportional liability to the Member States.[93] Most Member States have adopted a joint and several liability system.[94] Only Denmark, Finland, France, Slovakia, and Slovenia elected for proportionate liability in multi-party causation cases.[95] Given the absence of a uniform policy, a party's liability may vary from state to state, producing serious confusion where the contamination spreads across borders.[96]

3. Retroactivity

CERCLA's stringent nature is manifested through its retroactive application; if a party is determined to be a potentially responsible party, then it will be liable under the statute, regardless of when the incident occurred.[97] Approximately 35–55% of the total cleanup costs of CERCLA can be attributed to the cleanup of sites in the United States contaminated prior to the enactment of CERCLA. Congress promulgated CERCLA with the intention of cleaning up existing hazardous waste pollution.[98]

In contrast, the EU framework only applies liability prospectively.[99] As a result, a great deal of contaminated sites

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CERCLA Liability, 51 SANTA CLARA L. REV. 625, 642 (2011); *see* United States v. Atchison, Topeka & Santa Fe Ry. Co., 2003 WL 25518047, at *82, *88–91.

92. *See* Jaffe, *supra* note 89.

93. Council Directive 2004/35/CE, 2004 O.J. (L 143) 56, 58 (EC)

94. *Report on Environmental Liability, supra* note 46, at 4.

95. *Id.*

96. *Environmental Liability*, *supra* note 30. (describing the resulting broad divergence amongst Member States on several of the key implementing provisions of the Directive).

97. SWITZER & GRAY, *supra* note 8, at 49.

98. United States v. Olin Corp., 107 F.3d 1506, 1513–14 (11th Cir. 1997); MCGUIGAN, *supra* note 38, at 25 (the "two . . . main purposes of CERCLA" are "prompt cleanup of hazardous waste sites and imposition of all cleanup costs on the responsible party"); Gen. Elec. Co. v. Litton Indus. Automation Sys., 920 F.2d 1415, 1422 (8th Cir. 1990).

99. MCGUIGAN, *supra* note 38, at 25. Member States must implement the Directive by Apr. 30, 2007. Council Directive 2004/35/CE, art. 19(1), 2004 O.J. (L 143) 56, 65 (EC).

may be left unresolved and require supplemental government funds or legislation before they are remediated.[100] Not only does the EU framework exempt from its scope any damage caused prior to April 30, 2007, but the Directive is also inapplicable to damage subsequent to the date of implementation which "derive[d] from a specific activity that took place and finished before said date."[101] Therefore, a party's actions before the implementation of the directive may exempt them from liability if those actions eventually lead to a spill occurring after the enactment of the regulations.[102] But this does not necessarily relieve or exempt bad actors from all their previous behavior, since the Directive leaves it up to Member States to decide the question of damages caused prior to the application of the Directive. The Directive also provides that an operator of a facility is relieved of liability if more than 30 years have passed since the release or incident occurred.[103] Therefore, a determination of which operator's previous actions led to the ensuing damage, and the dates of those pivotal actions, will likely create an abundance of litigation and transactional costs. These costs have been ameliorated by the U.S. system's use of retroactive strict liability.[104]

4. Punitive Damages

CERCLA's civil penalties provision enables the EPA to fine a responsible party who has failed to comply with an order to cleanup a site.[105] These civil penalties function as punitive damages and distinguish CERCLA from the Directive, which only provides for compensatory damage.[106] For a Class I

Any damage, event, or incident taking place prior to Apr. 30, 2007 is outside of the Directive's ambit. *Id*. art. 17.

100. *See* MCGUIGAN, *supra* note 38, at 25.

101. Council Directive 2004/35/EC, art. 17, art. 19.

102. *See id*.

103. *See id*. art. 16–17.

104. MCGUIGAN, *supra* note 38, at 26.

105. 42 U.S.C. § 9609(a)(1)(D)–(E); SWITZER & GRAY, *supra* note 8, at 77.

106. *Compare* 42 U.S.C. § 9609(a)(1)(D)–(E) (providing for a schedule of civil penalties for violations of settlement agreements, administrative orders and consent decrees), *with* Council Directive 2004/35/CE, art. 5–8, O.J. (L 143) 56, 61–62 (EC) (providing that the competent authority may recover from the operator only for costs it

administrative penalty under CERCLA, a party may incur a fine of up to $25,000 per violation.[107] For a Class II violation, the EPA may fine a party up to $25,000 a day and treble damages for expenses the EPA incurs in clearing the hazards.[108] There is insufficient data demonstrating the effectiveness of civil penalties on impacting industry behavior. Nevertheless, there is no doubt that the fines are substantial and would likely compel a reasonable actor to promptly rectify the infraction. The absence of analogous provisions in the Directive may inhibit polluters from responding to environmental offenses as rapidly. Member states may address this issue by enacting more stringent regulations that impose considerable penalties on violators.[109]

E. Defenses and Exemptions

Europe adopted its liability scheme more than 20 years after the United States enacted CERCLA.[110] In developing defenses to its environmental liability regime, the EU modeled its Directive after the American structure.[111] However, the Superfund goes beyond than the Directive by allowing several additional devices for relief, alleviating potentially harsh outcomes under CERCLA.[112] The list of exemptions and defenses provided by CERCLA and subsequent amendments illustrates the evolution of the regulatory framework, acknowledging CERCLA's need for flexibility in certain circumstances.[113] Both the Directive and CERCLA recognize

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has actually incurred in relation to preventive or remedial actions taken under the Directive).

107. SWITZER & GRAY, *supra* note 8, at 77. When assessing the appropriate fine for a Class I penalty, the EPA considers the nature and gravity of the violation, the violator's solvency, and previous bad acts. *Id.*

108. 42 U.S.C. § 9609(b); *see also* SWITZER & GRAY, *supra* note 8, at 77.

109. Council Directive 2004/35/CE, art. 16, 2004 O.J. (L 143) 64 (EC).

110. Ashford, *supra* note 39, at 4, 6 (indicating the EU took into consideration the "trials and tribulations" of CERCLA's regulatory model).

111. *See* 42 U.S.C. § 9607(b); Council Directive 2004/35/EC, art. 17, 2004 O.J. (L 143) 64 (EC); *see also* Ashford, *supra* note 39, at 4.

112. *See* MCGUIGAN, *supra* note 38, at 26–27 (EC Directive encompasses fewer exemptions than the Superfund).

113. *See* 42 U.S.C. § 9607(b). Most courts have identified the statutory defenses as

statutory defenses for acts of war, natural phenomenon, and acts or omissions of an unrelated third party.[114] Other affirmative defenses under CERCLA include the Bona Fide Prospective Purchaser Defense and the Innocent Landowner Defense.[115] The Bona Fide Prospective Purchasers Provision limits cleanup liability for prospective purchasers that know about the Brownfield.[116] The Innocent Purchaser Defense extends to innocent land purchasers who can establish they did not have actual or constructive knowledge of the presence of hazardous substances at the time the land was acquired.[117] Finally, U.S. courts are split on whether passive owners should be liable if they did not engage in any active conduct related to the disposal, but the hazardous release occurred on their property.[118]

In addition to the defenses added onto CERCLA through revisions, CERCLA is also unique from the Directive for de micromis and municipal solid waste exemptions for small scale generators of waste and public facilities.[119]

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exclusive and affirmative. California v. Neville Chem. Co., 358 F.3d 661, 672 (9th Cir. 2004);(deleted b/c does not substantiate sentence); Blasland, Bouck & Lee, Inc. v. City of N. Miami, 283 F.3d 1286, 1304 (11th Cir.2002) (holding that CERCLA bars equitable defenses); Gen. Elec. Co. v. Litton Indus. Automation Sys., 920 F.2d 1415, 1418 (8th Cir.1990) (holding that CERCLA does not provide for an unclean hands defense to liability), cert. denied, 499 U.S. 937, 111 S. Ct. 1390, 113 L.Ed.2d 446 (1991); *Smith Land*, 851 F.2d at 90 (concluding that under CERCLA the doctrine of caveat emptor is not a defense to liability for contribution).

114. 42 U.S.C. § 9607(b); Council Directive 2004/35/EC, art. 4, 8, 2004 O.J. (L 143) 64 (EC).

115. 42 U.S.C. § 9607(b), (q).

116. *Id.* § 9607(q).

117. *Id.* § 9607(b) (Innocent purchaser defense arises out of an omission in connection with a contractual relationship).

118. Compare Nurad, Inc. v. William E. Hooper & Sons Co., 966 F.2d 837 (4th Cir. 1992) (upholding liability of a passive land owner), *with* United States v. CDMG Realty Co., 875 F. Supp. 1077 (3d Cir. 1995) (rejecting passive owner liability where the land owner owned the property prior to the hazardous release).

119. *See* 42 U.S.C. § 9607(o)–(p); Council Directive 2004/35/EC, O.J. (L 143) 64 (EC).

IV. CASE LAW TRENDS IN THE EU AND THE U.S.

A. The U.S. Narrows the Broad Reach of CERCLA Liability

1. Burlington & Santa Fe Ry. Co. v. United States

In *Burlington II,* the Supreme Court held that Shell was not liable as an arranger for the hazardous contamination of the Arvin facility and that the district court's apportionment of the railroads' liability was reasonable.[120] Brown & Bryant, Inc., was an agricultural chemical, storage, and distribution company that operated in Arvin, California.[121] Brown purchased and stored chemicals and pesticides from suppliers such as Shell.[122] Brown regularly bought an agricultural pesticide known as D-D from Shell.[123] Shell produced D-D and began to require the bulk purchases of the chemical by its clients, including Brown.[124] Consequently, Brown began purchasing D-D in larger quantities and storing it on-site in bulk storage tanks.[125] From there, chemicals were transferred to bobtail trucks, nurse tanks, and pull rigs, often resulting in leaks and spills. Shell transported the D-D to Brown's Arvin facility FOB destination through a common carrier, which meant Shell accepted the risk and expense of transportation of the goods to the destination.[126] The trucks then moved the D-D through hoses to Brown's bulk storage tanks.[127] This process was messy and unrefined, resulting in constant spills during the transfer process.[128]

Once cognizant of the ongoing hazardous spilling occurring during the transfer of D-D, Shell took actions to encourage safer handling.[129] These actions included distribution of safety

120. Burlington II, 129 S. Ct. 1870, 1872 (2009).

121. *Id*. at 1874.

122. *Id*. at 1874–75.

123. *Id*. at 1875.

124. *Id*.

125. *Id*.

126. *Id*. The district court concluded that once the common carrier entered the Arvin facility, the liability for the chemical shifted to B&B. *Id*. at n.2.

127. *Id*.

128. *Id*.

129. *Id*.

manuals and handbooks, financial incentives for distributors making safety improvements, and eventually the institution of Shell's policy mandating inspection of distributers by qualified professionals and self-certification that companies were in compliance with the regulatory framework.[130] None of Shell's actions corrected Brown's poor handling of D-D.[131] They retained a "sloppy" operation that eventually led to soil and ground water contamination.[132] Several years later, Brown became insolvent and shut down operations.[133] The EPA and California Department of Toxic Substances Control (DTSC) then used their CERCLA authority to begin cleanup of the site.[134]

The U.S. District Court for the Eastern District of California found that Burlington Northern, Santa Fe Railway, and Shell were all PRPs.[135] The railroads were considered PRPs because they owned the facility that Brown operated, while Shell was liable because it had generated hazardous substances and arranged for their disposal via its sale and distribution of D-D.[136] The district court then took it upon itself to apportion liability rather than impose joint and several liability.[137]

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130. *Id*.

131. *Id*. In 1981 after undergoing two inspections, the B&B Arvin facility certified to Shell that it had updated its facility to meet Shell's safety recommendations. *Id*.

132. *Id*. at 1875.

133. *Id*. at 1876.

134. *Id*.; 42 U.S.C. § 9604 authorizes the federal government to respond to the threat of a hazardous release and undertake cleanup efforts).

135. Burlington II, 129 S Ct. at 1876.

136. The Railroads' liability falls under 42 U.S.C. 9607 (a)(1)–(2); Shell's liability falls under §9607(a)(3). The Railroads' only owned a portion of the B&B facility containing hazardous releases. Burlington II, 129 S. Ct. at 1877. The district court found that no more than 10% of the total contamination occurred on the Brown parcel belonging to the Railroads. *Id*. at 1883.

137. *Id*. at 1880–81. None of the PRPs actually presented evidence in support of the findings for apportionment of damages. United States v. Burlington N. & Santa Fe Ry. Co., 520 F.3d 918, 932 (9th Cir. 2008), *rev'd,* 129 S. Ct. 1870 (2010) [hereinafter "Burlington I"]. Instead, the court determined the divisibility of harm based on percentage of land area ownership, duration of the lease term, quantity of release on specific parcels, and a volumetric analysis of the chemicals released. Burlington II, 129 S. Ct. at 1881. Although CERCLA imposes strict liability, it does not necessarily require joint and several liability in all cases. United States v. Chem-Dyne Co., 572 F.Supp 802, 807–08 (S.D. Ohio 1983). When assessing divisibility of harm in CERCLA cases, the "universal starting point" is § 433A of the Restatement (Second) of Torts. *Id*. at 1881.

On appeal, the Ninth Circuit found the district court erred in apportioning liability and imposed joint and several liability on all three PRPs.[138] It reasoned that CERCLA's strict liability approach still applies to parties with limited responsibility for the contamination.[139] The Act's intent was to hold the benefitting polluter, not the taxpayer responsible for cleanup costs.[140]

The Supreme Court reversed the Ninth Circuit's decision and held (1) Shell was not liable as an arranger and (2) the District Court's apportionment analysis was reasonable and joint and several liability should not be imposed here.[141] The Court explained that because CERCLA did not define "arrange" or "arranger," a plain language meaning should apply.[142] The Court reasoned that "arrange" indicated intentional action geared towards a particular result.[143] Shell was thus relieved of liability because it did not take "intentional steps to dispose of hazardous waste."[144] Had Shell sold Brown the D-D with the intent that any of the chemical be disposed of in the process, then Shell would have been liable.[145] The Court stressed that arranger liability "requires a fact-intensive inquiry that looks beyond the parties' characterization of the transaction as a 'disposal' or 'sale' and seeks to discern whether the arrangement was one congress intended to fall within the scope of CERCLA's strict liability provisions."[146]

The Supreme Court also adopted the district court's liability calculations, but noted that the lower court's reasoning was

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Under the Restatement apportionment is appropriate if "there is a reasonable basis for determining the contribution of each cause to a single harm." Burlington II, 129 S. Ct. at 1881. (citing Restatement (Second) of Torts § 433A(1)(b) (1963–1964)).

138. Burlington I, 520 F.3d at 932.

139. *See id*. at 927.

140. *Id*. at 933.

141. Burlington II, 129 S. Ct. at 1883–84.

142. *Id*. at 1878–79.

143. *Id*. at 1879.

144. *Id*. at 1873.

145. *Id*. *cf*. United States v. Aceto Agric. Chem. Co., 872 F.2d 1373 (8th Cir. 1989) (holding that a manufacturer of pesticides could be held liable as an arranger because hazardous releases were an "inherent part" of the product's use).

146. Burlington II, 129 S. Ct. at 1879.

flawed because "equitable considerations play no role in the apportionment analysis."[147] Apportionment is appropriate only if there is a determination that damages are divisible on a "reasonable basis."[148] According to the Supreme Court, the liability was divisible here despite the somewhat complicated mathematical calculations and series of estimations the district court engaged in.[149] Consequently, it is unclear from the Court's dicta when damages are clearly divisible.[150] If "equitable considerations" are not a factor and divisibility is not obvious, what then is the Court's rationale for "independently" dividing liability?[151] And how can an apportionment analysis resulting in taxpayers choking up 91% of the cleanup costs align with the purpose of CERCLA?[152]

The *Burlington II* rationale softens liability for generators of products that sell materials inevitably resulting in hazardous waste.[153] Even knowledge that one's product is directly contributing to hazardous releases does not create culpability under CERCLA. The outcome produced is a polluter deriving monetary benefit from product sales, yet being relieved of liability when that product produces significant environmental harm, leaving the taxpayer to bear the burden of cleanup costs.

2. Celanese Corp. v. Eby Construction Co.

Following the high court decision in *Burlington II*, the Fifth Circuit made the first substantive application of *Burlington II*

147. *Id.* at 1882 n.9.

148. *Id.*

149. *Id.* at 1881–83.

150. *See id.*; *see also* Steve Jones, *Applying* BNSF, *District Court in New York Finds "Best Available Evidence" is Sufficient to Apportion Liability*, MARTEN LAW, July 22, 2009, http://www.martenlaw.com/newsletter/20090722-superfund-liability-apportionment# (citing *In re* MTBE, 643 F. Supp. 2d 461, 470–71 (S.D.N.Y. 2009) (holding "(1) a fact finder may rely on the 'available evidence' in apportioning liability among joint tortfeasors; and (2) the burden of production necessary to support a showing of divisibility is 'low'")).

151. *See* Burlington II, 129 S. Ct. at 1884–85 (Ginsburg, J., dissenting).

152. *See id.* (A determination that Shell was not liable as an arranger under 42 U.S.C. 9607A(c) and that the Railroads were liable for 9% of the total site contamination, means that 91% of the costs will be footed by government funds).

153. Magnus, *supra* note 13, at 451.

and limited Superfund liability in another arranger case.[154] Eby Construction Co. was hired to install an underground water pipeline that would cross several other underground pipelines in the process.[155] Eby began by excavating an area and then installed its own pipeline beneath the others.[156] In the process, an Eby employee damaged a methanol pipe belonging to Celanese Co., which resulted in a slow deterioration of the pipe and eventually led to a leak of at least 232,000 gallons of methanol.[157]

Federal and state agencies assisted Celanese with a prompt clean up of the site and prevention of groundwater contamination.[158] Celanese sued Eby as an arranger under CERCLA and the Texas Solid Waste Disposal Act (SWDA).[159] The district court held a contractor that unknowingly busted a methanol pipe was not a potentially responsible party under CERCLA because it did not take intentional steps or plan for the release of methanol from the Celanese pipeline.[160]

The Fifth Circuit affirmed, reasoning that Eby was unaware

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154. *See* Celanese Corp. v. Eby Construction Co, 629 F.3d 529 (9th Cir. 2010); Douglas Guarino, *Appellate Ruling First to Limit Superfund Liability After High Court Decision*, INSIDE EPA (Oct. 5, 2010) http://www.insideepa.com/; *see also* Meline MacCurdy, *Superfund Liability Update: A Summary of Cases Decided in 2010 Construing the Supreme Court's BNSF Decision*, MARTEN LAW (Nov. 4, 2010), http://www.martenlaw.com/newsletter/20101104-cases-construing-bnsf-decision.

155. Celanese, 620 F.3d at 530.

156. *Id*.

157. *Id*. at 530–31. Eby and all of its employees were unaware of the damage caused to the methanol pipeline and there was no subsequent report of the event. *Id*. Celanese removed and disposed of 232,000 gallons of methanol from the subsurface at the site, but the exact amount of methanol released is unknown. *Id*.

158. *Id*.

159. *Id*.

160. *Id*. at 533. The district court's decision was made prior to the BNSF decision and was based on the reasoning of *Geraghty & Miller, Inc. v. Conoco Inc.*, which held arranger liability requires a "nexus" between the defendant's actions and the disposal of the hazardous material. 234 F.3d 917, 929 (5th Cir. 2001). This standard required Eby to have knowledge of the incident before it could be held liable. Celanese, 620 F.3d at 532 n.1. The lower threshold of "knowledge" stated in *Geraghty* has now been displaced by the "intent" standard implemented by the Supreme Court in BNSF. *Id*. Under the *Geraghty* standard, Shell would have been liable as an arranger, because it had the requisite knowledge that its products were resulting in hazardous release. *See* Geraghty, 234 F.3d at 929; *see also* Burlington II, 129 S. Ct. at 1881.

of the damage and therefore could not possibly have intended for the hazardous release. The court rejected Celanese's argument that Eby's failure to investigate the incident was equivalent to intentionally taking action to dispose of the methanol.[161] The court also explained that *Burlington II* declined to impose arranger liability on a defendant with a greater degree of responsibility and culpability (referring to Shell); therefore, the contractor in this case should not be held responsible.[162]

Celanese illustrates an application of *Burlington II*, and emphasizes how the burden of intent will often be difficult to satisfy for a contractor or manufacturer of a new or raw product.[163] Prior to the *Burlington II* decision, Shell would very likely have been liable as an arranger under CERCLA in the Fifth Circuit, Ninth Circuit, and Eighth Circuit.[164] *Burlington II* has displaced the standards applied in these courts and has subsequently resulted in less liability for product manufacturers.[165] A possible solution to the problem posed by proving intent with regards to arranger liability is to amend CERCLA. CERCLA's failure to define the term "arranger," has permitted the courts to step in and interpret the Act in a manner that conflicts with its stated objectives.

B. The EU Struggles with Implementation and Compliance of the Liability Directive

1. The EU Court of Justice Applies the Liability Directive

Since the Liability Directive was fully transposed by all Member States in 2010, approximately 50 suits have been filed under the Directive.[166] In the first substantive ruling, the

161. Celanese, 620 F.3d at 529.

162. *Id*. at 533; *cf*. Frontier Commc'n Co. v. Barret Paving Materials Inc., 631 F. Supp. 2d 110 (Dist. Me. 2009) (after following BNSF's fact-intensive inquiry, held sufficient evidence was present to demonstrate the defendant had an intent to dispose of wastes).

163. *See* Magnus, *supra* note 13, at 451.

164. Geraghty, 234 F.3d at 929; Burlington I, 520 F.3d 918, 932 (2008); Aceto, 872 F.2d at 1384.

165. *See* Burlington I, 520 F.3d at 937; *see also* Magnus, *supra* note 13, at 451.

166. *Environmental Liability: Applying the 'Polluter Pays' Principle*, EURACTIVE, Nov. 23, 2010, http://www.euractiv.com/en/climate-environment/environmental-liability-

European Court of Justice explained when attributing liability Member States only need to circumstantiate a "weak link of causation" between the operator's actions and the hazardous release.[167] Mere evidence of a possibility of causation is sufficient to coerce payment from the operator of the facility.[168] For example, evidence that a past operator used a particular chemical that was also found at a contaminated site will suffice to ascribe liability to the operator.

In the suit brought by the Italian Economy Ministry against the refinery companies, the European Court of Justice ascertained liability based on the fact that a chemical used by the refineries was found present on the contaminated site.[169] The litigation resulted from the contamination of the Augusta Harbor off the coast of Sicily. Several chemical companies have operated their facilities adjacent to the harbor for decades. Italian authorities eventually ordered cleanup of the harbor, which had collected more than two meters of sediment pollution. Upon establishing the link of causation, the refinery and all current landowners were ordered to pay for damages and necessary measures to contain the contamination.[170]

The European Court's broad application of the directive and expansive view of responsible parties illustrate the breadth of the EU Liability Directive's likely application.[171] Although the Liability Directive imposes strict liability, causation is necessary when imputing liability to past operators or when there are multiple operators simultaneously contributing to the source of contamination. Under CERCLA's strict liability approach, no

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applying-polluter-pays-principle-linksdossier-499899.

167. *See* Mott, *supra* note 45.

168. Case C-378/08, Raffinerie Mediterranee (ERG) SpA v. Ministero dello Sviluppo Economico 2010 ECJ CELEX 608J0378 (Mar. 4, 2010).

169. *Id.* at 21.

170. *Id.*; *see* Stevens & Bolton, *Study on the Implementation Effectiveness of the Environmental Liability Directive (ELD) and Related Financial Security Issues*, EUROPEAN COMMISSION, 2009, *available at* http://ec.europa.eu/environment/legal/liability/index.htm (select study in paragraph three) (listing environmental incidents that will likely fall under the Directive and should be decided on by the European Court of Justice).

171. *See* 42 U.S.C. § 9609; *see also* Council Directive 2004/35/EC, art. 17, O.J. (L 143) 64 (EC).

showing of causation is necessary; however, causation would likely be a factor in apportioning liability among responsible parties.[172]

Whether Shell would be liable under the EU Directive if the hazardous release occurred in the EU, is unclear. Applying the "polluter pays"[173] principle, Shell should bear some responsibility given the profit they accumulated from the ensuing contamination.[174] However, the Directive's emphasis on operator liability implicates a more limited list of potentially responsible parties. Therefore, Shell's liability may depend on the environmental regulations of individual Member States.[175]

2. Issues with Compliance: The Effect of Encumbering Transboundary Hazardous Waste Movement

Compliance of the Member States in implementing the directives has proven to be challenging.[176] Hazardous waste comprises about 1% of Europe's total waste stream.[177] Unlike the United States, where the dormant commerce clause ensures the individual states do not pass legislation that improperly burdens or discriminates against interstate commerce, free hazardous waste movement across Member States is expressly restricted in the European Union. The limitations on hazardous waste movement between Member States increase the likelihood of criminal activity surrounding disposal of these wastes,

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172. See 42 U.S.C. § 9609;

173. The principle behind the "polluter pays" notion is to encourage a more thoughtful product maker or distributor. *See generally* PETER G. DAVIES, EUROPEAN UNION ENVIRONMENTAL LAW: AN INTRODUCTION TO KEY SELECTED ISSUES, 233–46 (2004).

174. *See* MARIA LEE, EU ENVIRONMENTAL LAW: CHALLENGES, CHANGE, AND DECISION-MAKING 213–37 (2005) (explaining a product manufacturer will place more thought on his product and who he sells to if he holds responsibility for hazardous releases derived from his sale).

175. See Council Directive 2004/35/EC, art. 17, O.J. (L 143) 64 (EC) (permitting Member States to adopt more stringent environmental regulations).

176. Mott, *supra* note 45.

177. European Environmental Agency, Europe's Environment: The Third Assessment, Luxembourg, Office for Official Publications of the European Communities, 2003, p.155 ILL; *see also* TOM VANDER BEKEN, EUROPEAN WASTE INDUSTRY AND CRIME VULNERABILITIES 50 (2007) (advocating for a cautious expansion of laws concerning the movement of hazardous and nuclear wastes).

especially in territories where waste disposal costs are extremely high.[178]

Relaxing guidelines for hazardous waste travel gives industries cost-effective disposal options and decreases the probability corporations will engage in illegal disposal practices.[179] Permitting free movement of municipal wastes has promoted compliance with the EU guidelines.[180] Public and social apprehension about easing hazardous waste movement laws focuses on excessive dumping in impoverished states.[181] Protesters in the European community allege that cheapening the cost of hazardous waste disposal comes at the expense of a few member states and their citizens and therefore raises serious environmental justice issues.[182] Balancing the price of industrial practices with the potential ethical issues involved is both complex and controversial. But if the cost of disposal is impractical and continuously leading to illegal movement of wastes, the current system needs to be reevaluated.[183]

Refusing to accommodate industries will not lead to a practical long-term solution to criminal disposal actions. Given that the EU's liability framework does not impose punitive damages on violators, there are fewer repercussions for breaking the law.[184] The EU should consider allowing a certain amount of annual transboundary hazardous waste movement to alleviate disposal costs for industries, while forbidding excessive dumping and victimization of particular Member States.[185]

V. CONCLUSION

Because the EU developed its liability framework nearly 20 years after the United States, the breadth and application of the Directive remains uncertain. Meanwhile, CERCLA has

178. TOM VANDER BEKEN, EUROPEAN WASTE INDUSTRY AND CRIME VULNERABILITIES 50 (2007).

179. *Id*.

180. *Id*.

181. *Id*.

182. *Id*.

183. *See id*.

184. Council Directive 2004/35/EC, O.J. (L 143) 59 (EC).

185. *See* BEKEN, *supra* note 178, at 50.

undergone various amendments and modifications to create a stringent system intended to give the EPA broad power to authorize cleanup and recover costs from responsible parties.

After examining both the EU and U.S. liability frameworks, it is evident that CERCLA's expansive definitions, retroactive application, detailed list of responsible parties, citizen's suit provision, and accommodating exemptions make the U.S. structure better developed. Aside from the EU's biodiversity and natural resource protection clauses, the U.S. has established a tougher approach to the improper handling of hazardous wastes. Because the U.S. liability scheme provides better methodology for compensating cleanup recovery costs, U.S. taxpayers are less likely to pay for remediation than are their European counterparts. However, given the recent trends in U.S. case law, there may be a notable shift in liability under CERCLA.

The Supreme Court's decision in *Burlington II* relieves parties from liability, which traditionally would have been responsible under CERCLA.[186] Under the new precedent, a party cognizant of harm caused by hazardous releases of its original product bears no burden of cleanup costs.[187] *Burlington II* mitigates the number of potentially responsible parties, narrowing the wide liability net cast by CERCLA. This problem may be ameliorated through an amendment to CERCLA explicitly defining the term "arranger" as a party who regardless of intent, arranges for the disposal of a hazardous waste.

Furthermore, the Supreme Court's apportionment of liability in *Burlington II* may cause a shift away from joint and several liability in the United States.[188] There is little incentive for manufacturers of hazardous products to investigate the parties purchasing its products and the compliance of these parties in disposal. *Burlington II* does not align with the purpose of CERCLA and does not promote manufacturers to sell to responsible corporations.[189] The Supreme Court's holdings in

186. *Id*.; *see also* Jaffe, *supra* note 89 (explaining how the Burlington II decision is predicted to drastically change Superfund litigation in the United States).

187. *See* Burlington II, 129 S. Ct. at n.9.

188. *See id*. at 1885.

189. *See Id*.

Burlington II will likely encourage future decisions by lower federal courts, which mitigate the influence of CERCLA's strict joint and several liability regime.[190]

The U.S.'s rigid policy approaches in CERCLA have often aroused criticism, but have been crucial to obtaining monetary relief from parties that benefitted from the pollution rather than taxpayers. CERCLA is arguably one of the few instances where U.S. environmental law is comprised of stricter regulations and harsher punishments than the European Union. The United States should continue to set an example for the European Union and not minimize the impact of its legislative framework through case law.

190. *See* MCGUIGAN, *supra* note 38, at 26–27.