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Take This Job and Shove It: The Pragmatic Philosophy of Johnny Paycheck and a Prayer for Strict Liability in Appalachia

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**TAKE THIS JOB AND SHOVE IT:
THE PRAGMATIC PHILOSOPHY OF JOHNNY PAYCHECK
AND A PRAYER FOR STRICT LIABILITY IN APPALACHIA**

EUGENE “TREY” MOORE III*

*“I been workin’ in this factory
For nigh on fifteen years
All this time I watched my woman
Drownin’ in a pool of tears
And I’ve seen a lot of good folks die
That had a lot of bills to pay
I’d give the shirt right offa’ my back
If I had the guts to say
Take this job and shove it
I ain’t working here no more”*

—Johnny Paycheck, *Take This Job and Shove It*, 1977

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I. INTRODUCTION

Appalachia developed over millions of years creating a unique watershed pouring forth crystal clear water to both the Eastern seaboard above the New River and the headwaters of the Ohio and Kentucky Rivers feeding the Mississippi.¹ Appalachia is one of the oldest, most

* St. Mary's University School of Law, J.D. Candidate, May 2018; Texas State University, M.F.A., 2010; University of Texas at Austin, B.A. 1995. This Comment is the genesis of many incredible risks, chances, and connections. In 2009, I proposed a writing workshop project to Judy Bonds of Coal River Mountain Watch. She in turn passed along my proposal to Jerry Hardt of Kentuckians for the Commonwealth and Larry Gibson of Keeper of the Mountains Foundation. I eventually conducted over fifty hours of oral history interviews in Kentucky and West Virginia: Teri Blanton, McKinley Sumner, Cody Montgomery, Stanley Sturgill, Rick Handshoe, and Chuck Nelson to name a few. Their passion, knowledge, and love for Appalachia and their culture left an indelible impression. I wrote this Comment on the foundation of their stories. Their prayers for help whisper through my mind on any given day. I humbly offer this Comment to them in appreciation for the open doors and food offered at their tables. Teri, I never gave up and thank you for your friendship. I thank my family, Gene Moore, Carol Moore, Amber, Canaan, Emanuel, and Ellie Felice, for their support and encouragement; without you none of this would be possible or worth it. "Let not mercy and truth forsake thee; bind them about thy neck; write them upon the table of thine heart."—Proverbs 3:3.

1. See Wilma Dykeman, *Appalachian Mountains*, *ENCYCLOÆDIA BRITANNICA*, <https://www.britannica.com/place/Appalachian-Mountains> [<https://perma.cc/B6S3-TAER>] (last

biodiverse ecosystems in the world² with intermittent and perennial springs flowing near every valley.³ Many rural landowners exclusively use water from private wells.⁴ Some landowners lease their property to mining companies to extract the rich layers of underground coal.⁵

Most coal companies in Appalachia mine coal through a process known as surface mining or strip mining.⁶ First, all of the trees are cut down, and topsoil is bulldozed into nearby valleys until the subsurface lays bare.⁷ The shale and sandstone resting above the coal is blown up

updated June. 22, 2017) (describing physical features, climate, plant and animal life, the people and economy, and study of the Appalachian Mountains).

2. See Trey Moore (Treuwulf), *Cody Montgomery & Appalachia*, YOUTUBE (Mar. 14, 2011), <https://www.youtube.com/watch?v=QwstygvZCBo> [hereinafter *Cody Montgomery*] (discussing the biodiversity in Appalachia).

3. See *A Stream Classification System for the Appalachian LCC*, APPALACHIAN LANDSCAPE CONSERVATION COOPERATIVE, http://applcc.org/research/applcc-funded-projects/final-narrative-stream_classification (last visited Sept. 15, 2017) (following “Stream Classification Story Map” hyperlink; then “Access this Story Map . . .” hyperlink for the interactive article).

4. See John G. Shiber, *Arsenic in Domestic Well Water and Health in Central Appalachia, USA*, 160 WATER, AIR, AND SOIL POLLUTION 327, 335, 337–38 (2005) (stating 90% of rural Kentucky relies on private wells and springs, “and groundwater is a source for [forty-eight percent] of the state’s public water” supply). 56% of West Virginians rely on groundwater, and 77% of Ohio’s population depends on groundwater. *Id.* at 335; Jessica Lilly, Glynis Board & Roxy Todd, *Inside Appalachia: Water in the Coalfields*, W. VA. PUB. BROAD. (Jan. 16, 2015), <http://wvpublic.org/post/inside-appalachia-water-coalfields#stream/0> [<https://perma.cc/4ZEY-N2GR>] (explaining the use of private wells in the area); see also *Inside Appalachia: Water in the Coalfields*, SOUND CLOUD, <https://soundcloud.com/wvpublicnews/insideappalachiacoalfieldwater> [<https://perma.cc/DY3E-4FV4>] (last visited Sept. 19, 2017).

5. Tom D. Miller, *Absentees Dominate Land Ownership*, THE HERALD-ADVERTISER & THE HERALD-DISPATCH, reprinted in WHO OWNS WEST VIRGINIA? 2 (Huntington Publishing Co., 1974).

6. See Trey Moore (Treuwulf), *Stanley Sturgill: Black Mountain and Mountain Top Removal*, YOUTUBE (May 15, 2011), <https://www.youtube.com/watch?v=A8N3IUOt4FU> (explaining the mountain removal process by mining companies from the perspective of a community battling to save its water resources).

7.

‘[V]alley fills’ are constructed from and used to dispose of the spoil or coal mine waste material generated during mining operations. The fills are constructed by filling a designated portion of a valley with spoil or waste material. Fills that are constructed at the beginning of a valley are called ‘head-of-hollow fills.’

W. Va. Coal Ass’n v. Reilly, 728 F. Supp. 1276, 1281 (S.D. W.Va. 1989); see *Cody Montgomery*, *supra* note 2 (showing acid mine drainage of a reclaimed surface mine and explaining the mountain top removal process). In 2008, the Bush Administration replaced a rule allowing excess spoil and coal mine waste within the stream buffer zone, if it is not reasonably possible to avoid dumping into the valley. Excess Soil, Coal Mine Waste, and Buffers for Perennial and Intermittent Streams, 73 Fed. Reg. 75814, 75814 (Dec. 12, 2008); see also 33 C.F.R. § 323.2(e) (2016) (defining

daily with diesel fuel and ammonia nitrate.⁸ Then, the shale and sandstone are pushed into the valleys, ultimately transforming the rolling mountains of Appalachia into a barren plateau of abandoned strip mines.⁹ The coal is mined with massive draglines and dump trucks.¹⁰ The natural hydrology of Appalachia is permanently destroyed by surface mining, which releases heavy metals and sediments from the exploded rock into the headwater streams.¹¹ Under the authority of a United States Army Corps of Engineers permit, the intermittent headwater streams are minimally protected using underlain pipes.¹² Near the end of these valley fills, sediment or settlement ponds are constructed in the path of the intermittent and now buried streams.¹³ Using the coal industry's "best technology," bulldozers construct a pond with an earthen dam.¹⁴ A

acceptable fill materials under an Army Corps permit: "[e]xamples of such fill material include, but are not limited to . . . overburden from mining . . .").

8. See e.g., Hunter Nichols, *HUGE Mining Explosion Caught on Camera*, YOUTUBE (Sept. 25, 2012), <https://www.youtube.com/watch?v=rKOxmXXpHj8> (showing strip mining explosion); gmc sierrahd, *Strip Mining Keeps the Lights On*, YOUTUBE, (July 16, 2013) <https://www.youtube.com/watch?v=VmgyNzRSBn0> (beginning at six minutes). Surface mining is permitted up to 300 feet to the nearest house. See 30 C.F.R. § 761.11(e) (2016) (codifying areas where surface coal mining operations are prohibited or limited); see also *id.* § 761.15 (describing procedures for obtaining a waiver of prohibition on surface mining within the buffer zone of an occupied dwelling); *Id.* §§ 816.61–816.68 (2017) (describing procedures regulating the use of explosives in strip mining operations). Regulations require extensive review of any proposed blasting intended to occur within 1,000 feet of a dwelling or other buildings. *Id.* § 816.61(d). Residents within 1/2 mile of the permitted blasting area may request the blasting operator to survey the resident's home to document pre-blast damage and other physical factors that may be affected by the blast. *Id.* § 816.62(b)–(c) (2017).

9. See *Reilly*, 728 F. Supp. at 1281 (explaining treatment ponds are "constructed by filling the stream . . . with earth and rock"); see also Rob Perks, *Time to End Mountaintop Removal Coal Mining*, NAT. RESOURCES DEF. COUNCIL (Nov. 9, 2009), <https://www.nrdc.org/sites/default/files/appalachian.pdf> [<https://perma.cc/NW86-3F39>] (estimating nearly 2,000 miles of intermittent streams are buried or polluted by valley fills).

10. John G. Mitchell, *When Mountains Move*, NAT'L GEOGRAPHIC MAG. (Mar. 2006), <http://science.nationalgeographic.com/science/earth/surface-of-the-earth/when-mountains-move.html>

11. Robert L. Hopkins II et al., *Exploring the Legacy Effects of Surface Coal Mining on Stream Chemistry*, 713 HYDROBIOLOGIA 87, 87 (2013).

12. 33 U.S.C. § 1344 (2014).

13. *Reilly*, 728 F. Supp. at 1281 ("The ponds at issue are located in existing streambeds downstream from the fills The primary purpose of the pond is to allow sediments suspended in the runoff to 'settle out' of the water It is undisputed that a NPDES permit is required for the discharges from the pond into the stream at the outlet.").

14. 30 U.S.C. § 1265(b)(10)(B)(i) (2012) ("[C]onducting surface coal mining operations so as to prevent, to the extent possible using the best technology currently available, additional

metal culvert is placed a few feet below the top of the earthen dam.¹⁵ Water from the valley's intermittent stream collects below the mine in the sediment pond.¹⁶ Surface water from the sediment pond reenters the stream loaded with known pollutants.¹⁷

The settlement pond is designed to temporarily hold the runoff from mine sites allowing the heavy metals to descend to the bottom of the pond.¹⁸ The water exiting the pond at the culvert, known as the discharge monitor point, becomes the first place regulators from state agencies charged with compliance under the Clean Water Act may monitor the quality of the water at surface mining sites.¹⁹ Any pollutants introduced into the stream from the mining site above the discharge monitor point may not be tested until the water exits the culvert.²⁰

The Clean Water Act (CWA) and the Surface Mining Control and Reclamation Act (SMCRA) were important steps in protecting the environment from coal-mining companies that externalize their costs by polluting surrounding communities.²¹ Unfortunately, in Appalachia,

contributions of suspended solids to streamflow, or runoff outside the permit area, but in no event shall contributions be in excess of requirements set by applicable State or Federal law[.]”.

15. *Reilly*, 728 F. Supp. at 1289.

16. *Id.*

17. *See id.* (“[B]ecause [the Clean Water Act] was not intended to license discharges to freely use waters of the United States as waste treatment systems, the definition makes clear that treatment systems created in those or from their impoundment *remain* waters of the United States.”) (citing 45 Fed. Reg. 33,298 (May 19, 1980) (emphasis added)); Trey Moore (Treuwulf), *Rick Handshoe: Settlement Ponds and Water*, YOUTUBE (June 20, 2011), <https://www.youtube.com/watch?v=gHIN3TvPrL8> [hereinafter *Handshoe*] (describing a sediment pond located on an active surface mine site and the consequences it has on the water).

18. *Handshoe*, *supra* note 17 (describing the effects of liquid caustic soda being dumped into water sources).

19. *Kentuckians for the Commonwealth v. Rivenburgh*, 317 F.3d 425, 448 (4th Cir. 2003); *see State Compliance Monitoring Expectations*, ECHO.EPA.GOV, <https://echo.epa.gov/trends/comparative-maps-dashboards/state-compliance-monitoring-expectations> [https://perma.cc/CZR3-KN7P] (last visited Sept. 27, 2017) (discussing the national goals for compliance with standards set forth by the Environmental Protection Agency, including frequency of evaluations and measuring of compliance).

20. *See Ohio Valley Env'tl. Coalition v. Aracoma Coal Co.*, 556 F.3d 177, 214–16 (4th Cir. 2009) (discussing the time frame in which regulatory authorities have the ability to monitor water quality and stream waters to fill ponds).

21. *See* 30 U.S.C. § 1265(b)(22) (2012) (setting forth standards regarding placement of excess spoil material);

Federal and state surface mining laws require that after an area has been mined, the disturbed area be ‘reclaimed’ and returned, to the extent possible to its original contour and condition. . . . Due to the ‘swell factor’ associated with earth removal, not all the earth and rock that was removed during

efforts to protect the environment have been framed as a “War on Coal,”²² while state regulators struggle to find the money and the willpower to properly regulate massive mining operations in their states.²³ A long history of mining interests influence and dominate local government and the Eastern Kentucky economy.²⁴ In the absence of federal or state enforcement, citizens often turn to common law claims of negligence and nuisance, permitted under SMCRA, to reclaim their land and make themselves whole again.²⁵ Unfortunately, neither jurisdictional precedents nor the lax enforcement of federal environmental law sufficiently protect the people of Appalachia—they await the eventual harm that characterizes the historical relationship between surface mining and local communities.²⁶

Accumulating scientific and investigative research provides evidentiary proof of surface mining’s overbearing effect on Appalachia.²⁷ Appalachian communities surrounding surface mining

mining operations is needed to return the land to its original contour. The excess earth and rock, or ‘overburden’ or ‘spoil’ as it is sometimes called, must be disposed of in a manner consistent with federal and state law.

Reilly, 728 F. Supp. at 1280–81.

22. Compare Steve Cicala, *Who’s Waging the War on Coal? Not the U.S. Government*, FORBES (Oct. 27, 2016, 9:40 AM), <http://www.forbes.com/sites/ucenergy/2016/10/27/whos-waging-the-war-on-coal-not-the-government/#1b7a27447543> (arguing that companies competing to provide cheaper electricity to customers, not the “War on Coal,” has harmed coal communities) with 100% FED Up, *Lol! Obama’s Radical EPA Chief Says There Was No “War on Coal” . . . But Oops . . . That’s Not What The Poster Behind Her Says!*, 100PERCENTFEDUP.COM (Feb. 9, 2017), <http://100percentfedup.com/lol-obamas-radical-epa-chief-says-there-was-no-war-on-coal-but-ooptshats-not-what-the-poster-behind-her-says> (arguing the “War on Coal” exists in Washington, despite official statements).

23. See Bill Estep, *Report: Kentucky Inspecting Too Few Surface Mines*, LEXINGTON HERALD LEADER (Nov. 29, 2012, 12:18 PM), <http://www.kentucky.com/news/local/article44391438.html> [<https://perma.cc/2PVF-YRE7>] (noting the fact that less than 88% of inspections by surface-mining regulators were complete, combined with a 70% compliance rate in environmental standards, indicates an oversight in Kentucky).

24. See generally Dean Hill Rivkin, *Lawyering, Power, and Reform: The Legal Campaign to Abolish the Broad Form Mineral Deed*, 66 TENN. L. REV. 467 (1999) (explaining the history and political struggle behind the broad form deed in Kentucky and its role in strip-mining damage).

25. See 30 U.S.C. § 1270 (2012) (authorizing citizen suits for violations under the Surface Mining Control and Reclamation Act).

26. See HARRY M. CAUDILL, NIGHT COMES TO THE CUMBERLANDS: A BIOGRAPHY OF A DEPRESSED AREA 74 (1963) (discussing broad form deeds passed the right to “coal men” to divert and pollute the water and to cover the surface with toxic mining refuse)

27. See Timothy L. Negley & Keith N. Eshleman, *Comparison of Stormflow Responses of Surface-Mined and Forested Watersheds in the Appalachian Mountains, USA*, 20 HYDROLOGICAL

operations suffer from lower property values and a need for diversified employment opportunities.²⁸ While Appalachia provided America with “cheap” coal to fuel the economy,²⁹ Appalachia in many ways has been forgotten and left to languish in poverty and unemployment.³⁰

This Comment presents scientific and economic evidence supporting a determination that surface mining in Appalachia is an abnormally dangerous activity. The author questions precedential judicial interpretations of early state decisions that improperly balanced economic and community interests before and after the passing of the SMCRA and the Clean Water Act.³¹ If harmed by surface mining activities, a landowner may file negligence, nuisance, trespass, and any other common law claims under SMCRA.³² But, common law claims are limited by the reach of their remedies.³³ Damages are generally limited to monetary compensation for past harms when the outcome is positive.³⁴ Strict liability for surface mining in Appalachia would have

PROCESSES 3467, 3467 (2006) (indicating surface mining and reclamation increases stormflow responses); Hopkins II et al., *supra* note 11, at 87 (exploring the long-term effects of surface coal mining on streams in the Raccoon Creek watershed in central Appalachia); Michael Hendryx & Melissa M. Ahern, *Mortality in Appalachia Coal Mining Regions: The Value of Statistical Life Lost*, 124 PUB. HEALTH REP. 541 (2009) (explaining “the human cost of the Appalachian coal mining economy outweighs its economic benefits.”).

28. See Sheryl G. Stolberg, *Beyond Coal: Imagining Appalachia’s Future*, N.Y. TIMES (Aug. 17, 2016), <https://www.nytimes.com/2016/08/18/us/beyond-coal-imagining-appalachias-future.html> [<https://nyti.ms/2jMCK3V>] (encouraging individuals in Appalachia to set aside political and environmental feuds to create an entrepreneurial economy).

29. See BARBARA FREESE, *COAL: A HUMAN HISTORY* 112–13 (2003) (describing Appalachia as the gateway to cheap coal in the east during the late 1700s).

30. See *Unemployment Rates in Appalachia, 2014*, APPALACHIAN REGIONAL COMMISSION (Aug. 2017), https://www.arc.gov/research/MapsofAppalachia.asp?MAP_ID=27 [<https://perma.cc/FZ6E-NAQG>] (indicating unemployment rates can reach up to fourteen percent in some portions of Appalachia); see *Appalachian Poverty*, FAHE, <https://fahe.org/appalachian-poverty> [<https://perma.cc/BL9L-KZDJ>] (comparing the average U.S. poverty rate in 2010–2014 as 15.6% to 19.7% in Appalachia).

31. 30 U.S.C. § 1201 (2012); 22 U.S.C. § 1251 (2012).

32. 30 U.S.C. § 1270(e) (2012).

33. See Jason J. Czarnecki & Mark L. Thomsen, *Advancing the Rebirth of Environmental Common Law*, 34 B.C. ENVTL. AFF. L. REV. 1, 4–5 (2007) (suggesting the available common law claims and remedies available in environmental torts).

34. See *id.* at 30 (indicating traditional forms of monetary relief are common, but inadequate). Pollution poses the significant problem of being a continual harm and in some cases an eternal harm. See *Boomer v. Atl. Cement Co.*, 257 N.E.2d 870, 871 (1970) (noting the current problem in effecting the control of air pollution). Permanent injunctions for nuisance or negligence

a sweeping and positive impact on the vulnerable communities of Appalachia.³⁵ Strict liability serves to hold the actor accountable and deter indifference and poor conduct, thereby placing the costs of liability on the risk-taker profiting from the enterprise rather than innocent neighbors.³⁶ A finding of strict liability for the abnormally dangerous activity of surface mining in Appalachia would force the coal mining industry to come to terms with the real harms and costs it externalizes on state and local communities.³⁷

Part II of this Comment explores the history of Appalachia and identifies the forces contributing to the disparate wealth differences between absentee landowners and local residents.³⁸ Part III describes federal laws promulgated to protect Appalachian communities and the legal struggles to determine which waters will be protected by federal law.³⁹ Part IV evaluates the long-term consequences of surface mining in Appalachia.⁴⁰ Part V discusses the evolving legal theory of strict liability for engaging in abnormally dangerous activities.⁴¹ Part VI applies the scientific and economic data from the last thirty years to analyze surface mining in Appalachia as an abnormally dangerous

claims will doubtfully survive appellate review. *See generally id.* at 871 (indicating temporary injunctions are a more appropriate remedy until compliance is met).

35. *See* RESTATEMENT (SECOND) OF TORTS: PHYSI. & EMOT. HARM § 519 (AM. LAW INST. 1977) (stating strict liability will be imposed from harm caused by abnormally dangerous activities).

36. *See generally* *Indiana Harbor Belt R. Co. v. Am. Cyanamid Co.*, 916 F.2d 1174, 1177 (7th Cir. 1990) (explaining strict liability will incentivize an actor to internalize a cost-benefit analysis); *Spano v. Perini Corp.*, 25 N.Y.2d 31, 35 (1969) (holding that “blasting involves a substantial risk of harm no matter the degree of care exercised . . .”).

37. *See e.g.*, Michael Hendryx, et al., *Lung Cancer Mortality Is Elevated in Coal-Mining Areas of Appalachia*, 62 LUNG CANCER 1, 5 (2007) [hereinafter *Lung Cancer*] (correlating the exposure to particulate matter and impurities from the coal-mining industry to higher lung cancer mortality in Appalachia).

38. *See e.g.*, BARBARA RASMUSSEN, *ABSENTEE LANDOWNING AND EXPLOITATION IN WEST VIRGINIA, 1760-1920*, at 2 (contending Virginia’s political system made absentee farmers vulnerable to the desires of industrialists).

39. 30 U.S.C. § 1201 (2012); 22 U.S.C. § 1251 (2012).

40. *See e.g.*, MELISSA FRY KONTY & JASON BAILEY, MOUNTAIN ASS’N FOR CMTY. ECON. DEV., *THE IMPACT OF COAL ON THE KENTUCKY STATE BUDGET 9* (2009) (estimating a cost of \$238.9 million dollars for the 2006 fiscal year to Kentucky for maintaining the coal haul road system as another example of externalized costs of the coal mining industry).

41. *See* RESTATEMENT (FIRST) OF TORTS § 520(a) & (b) (AM. LAW INST. 1938) (setting forth the elements for a finding of strict liability for an abnormally dangerous activity).

activity under the Third Restatement § 20.⁴² Part VII sets forth a jurisprudential theory supporting a change in jurisdictional views on surface mining in light of relevant scientific and economic evidence.

II. HISTORY: SHIFTING ECONOMIES AND ABSENTEE OWNERS

The Appalachian Mountains were untamed until the mid-1700s as early American colonists began inhabiting more remote areas.⁴³ The self-reliant people who populated Central Appalachia were dependent on community relationships, subsistence farming, and hunting.⁴⁴ As more settlers moved west, surveyors, speculators, geologists, and mapmakers appraised the giant seams of soft coal exposed by local rivers.⁴⁵ Speculators representing industrial interests moved quickly to purchase vast tracks of Appalachia, including Eastern Kentucky and West Virginia.⁴⁶ If speculators could not buy the land outright, they purchased the timber or mineral rights for minimal costs from landowners that did not realize the value beneath their feet.⁴⁷

While industrialists recognized the profitability of natural resources, Appalachia's geographic isolation and mountains presented formidable

42. See e.g., Michael Hendryx, *Mortality from Heart, Respiratory, and Kidney Disease in Coal Mining Areas of Appalachia*, 82 INT'L ARCHIVES OF OCCUPATIONAL & ENVTL. HEALTH 243, 243 (2008) [hereinafter *Mortality*] (correlating the rate of disease and mortality in coal-mining areas with that of environmental exposure to toxic agents in coal); see also Hendryx & Ahern, *supra* note 27, at 547 (identifying higher mortality rates in areas with higher mining).

43. See ROBERT SHOGAN, *THE BATTLE OF BLAIR MOUNTAIN: THE STORY OF AMERICA'S LARGEST LABOR UPRISING* 10 (2004) (describing the "sparsely populated" land inhabited by self-reliant farmers and hunters "set in their ways"); see also CAUDILL, *supra* note 26, at 5–7 (explaining many of the early inhabitants were indentured servants, orphans, debtors, and criminals brought from Great Britain who had escaped from the plantation system of the early colonies).

44. See CAUDILL, *supra* note 26, at 8–10 (describing the mountaineer subsistence lifestyle of the 1830s, characterized by a rugged struggle for survival, lack of literacy, and basic education).

45. See JOSEPH T. LAMBIE, *FROM MINE TO MARKET: THE HISTORY OF COAL TRANSPORTATION ON THE NORFOLK AND WESTERN RAILWAY* 26–27 (Ralph W. Hidy ed., 1954) (highlighting a number of geological surveys from 1839 to 1842 describing central Appalachia as a vast region of exploitable coal); FREESE, *supra* note 29, at 106 (describing the findings of coal by mapmakers and geologists in the Ohio River region).

46. CAUDILL, *supra* note 26, at 61 (explaining speculators from northern and eastern cities recognized the potential of the vast virgin forests as they purchased timber in the 1880s, but soon recognized the wealth of the bituminous coal underneath the land).

47. See RASMUSSEN, *supra* note 38, at 2 (stating early exploitation of mineral rights by out-of-state industrialists would have a lasting effect on the government, economy, and social welfare of West Virginia.)

obstacles to seizing the wealth of the region.⁴⁸ After the Civil War, railroads transported Appalachia's bituminous coal to manufacturing cities in the East.⁴⁹ As railroads and timber speculators ventured into Appalachia, they eventually discovered many Appalachians claimed land to which they had no legal title.⁵⁰ Eastern industrialists sent teams of surveyors and lawyers to survey the land and examine land titles that were not patented and proceeded to formally apply for patents through the state.⁵¹ Local inhabitants were denied their land ownership claims⁵² as absentee landowners secured vast land grants for nominal fees.⁵³

Mirroring the Industrial Revolution in Britain fifty years before,⁵⁴ American industrialization depended on coal to power the machines forming the backbone of its economy.⁵⁵ Railroad companies brought

48. See SHOGAN, *supra* note 43, at 1 (describing the construction of bridges and carving of tunnels through the Appalachian foothills in order to transport coal); cf. LAMBIE, *supra* note 45, at 28 (describing Norfolk's emergence and immediate decision to reach the mineral deposits of the Flat Top Region as threefold: (1) to supply fuel to the iron industry in Virginia; (2) to lower the cost of fuel for their own railroad, reducing operating costs; and (3) to supply the eastern markets for industrial and home use).

49. FREESE, *supra* note 29, at 112. Bituminous coal is highly volatile and higher in quality than lignite coal. *Id.* Bituminous coal was a valuable resource for the industrializing nation. See *id.* at 127 (stating railroads had fifty years of experience of supplying coal to urban markets and became monopolies that established their power by price fixing, cutting labor wages, and busting unions); see also SHOGAN, *supra* note 43, at 1 (stating Norfolk and Western railroad lines brought workers who constructed sixty bridges and eight tunnels to transport coal from its point of extraction).

50. CAUDILL, *supra* note 26, at 65 (stating agents examining land titles discovered locals either held no legal title or had tenuous claims at best).

51. See *id.* (describing "wildcat surveys" that allowed companies to apply for immense areas of unpatented land, including farm lands covered by prior patents).

52. *Id.* (stating "'junior' patents were void as to the lands within their compass which had been previously granted by the state, but subsequently the courts held them to be valid as to all intervening lands the mountaineers had neglected to appropriate.") Locals were often unable to mount the legal defense necessary to defend their lands against the imported and able attorneys serving eastern industrial interests. *Id.*

53. See *id.* at 71 (stating huge tracts of unclaimed land were "dirt cheap" and selling for "no more than 26 1/2 cents per acre.>").

54. See FREESE, *supra* note 29, at 71-99 (describing the process by which coal inevitably fueled England's industrialization).

55. Anthony Trollope spoke of the industrial city of Pittsburgh:

Even the filth and wondrous blackness of the place are picturesque when looked down upon from above. The tops of the churches are visible and some of the larger buildings may be partially traced through the thick brown settled smoke. But the city itself is buried in a dense cloud. I was never

thousands of European immigrants to Appalachia to mine coal.⁵⁶ As the Industrial Revolution thirsted for natural resources, Appalachia was stripped of timber, then its coal was extracted.⁵⁷

Foreseeing that the railroads were decades away from reaching more remote parts of Appalachia, speculators concentrated on acquiring only the mineral rights of inhabited lands.⁵⁸ Many of the mineral rights in Kentucky were secured under an instrument known as the “broad form” deed which conveyed the mineral rights with contractual privileges and immunities, including a waiver of liability for mining coal by any means the grantee chose.⁵⁹ By the 1900s, most of Appalachia’s mineral rights were owned by Eastern holding companies.⁶⁰ By 1924, Fordson Coal Company, a subsidiary of the Ford Motor Company, owned half of the land in Leslie County, Kentucky.⁶¹ In 1974, an investigation into the legal titles of non-public land in West Virginia showed twenty-four out-of-state corporations owned one-third of privately owned lands.⁶² Consolidation Coal Co., a wholly owned subsidiary of Conoco, was the

more in love with smoke and dirt than when I stood here and watched the darkness of night close in upon the floating soot which hovered over the house-tops of the city.

Id.

56. *See id.* at 139–40 (stating labor agents lured Slavs, Hungarians, and Italians directly from Europe to work in the mines). Generally, immigrants were housed in company-owned mining camps, worked for script instead of money, and lacked the ability and language skills to negotiate their wages or working conditions. *Id.*

57. *See* CAUDILL, *supra* note 26, at 71, 83 (describing how the Industrial Revolution and the expansion of the railroad drove people to mineral rich areas resulting in land exploitation).

58. *See id.* at 71–72 (explaining how speculators initially bought large amounts of land, but acquired only the mineral rights to appurtenant lands—which were more profitable—due to the slow evolution of the railroad).

59. *See id.* at 74 (describing the utilization and advantages of the broad-form deed).

60. Robert Shogan’s description of Eastern rail road company’s land acquisition practices is illustrative:

[T]he well-tailored, smooth-talking agents of the Norfolk and Western had descended on southern West Virginia like locusts, their checking accounts fattened by funds from Philadelphia and across the sea in the City of London, and systematically bought up all the land they could lay their hands on. And not just the land. They were careful to secure the mineral rights, too.

SHOGAN, *supra* note 43, at 1.

61. CAUDILL, *supra* note 26, at 65.

62. *See* Tom D. Miller, *Absentees Dominate Land Ownership*, THE HERALD-ADVERTISER & THE HERALD-DISPATCH, *reprinted in* WHO OWNS WEST VIRGINIA?, *supra* note 5, at 2 (comparing the total amount of land in West Virginia to that owned by private corporations and companies using the land for its minerals).

largest single landholder in West Virginia.⁶³ Coal companies and railroads exerted considerable power over state legislatures and local economies.⁶⁴ This influence was exemplified by company-owned towns lacking municipal governments;⁶⁵ lower tax assessments for large land and leaseholders;⁶⁶ and state funded infrastructure projects that supported mining interests.⁶⁷

The historical record reveals coal companies and absentee landholders employed highly skilled lawyers to challenge titles already in possession of local citizens.⁶⁸ In general, the mineral rights were procured at a fraction of their value.⁶⁹ The agents often purchased mineral and timber rights from an illiterate and unsophisticated population unlikely to imagine the possibility that their lands might become ripe for mining anything of value.⁷⁰ The consequences of the unilateral relationship

63. *Id.*

64. See Harry L. Baisden, *Coal, Timber, Gas Attract Absentee Landlords*, THE HERALD-ADVERTISER & THE HERALD-DISPATCH, reprinted in WHO OWNS WEST VIRGINIA?, *supra* note 5, at 8–9, 13–14, 18 (discussing the significant impact energy industries acquired to influence government and the economy in Appalachia as the town was built and owned by Island Creek Coal Co.); SHOGAN, *supra* note 43, at 37 (unfolding the immense economic influence of coal companies).

65. See Harry L. Baisden, *Coal, Timber, Gas Attract Absentee Landlords*, THE HERALD-ADVERTISER & THE HERALD-DISPATCH, reprinted in WHO OWNS WEST VIRGINIA?, *supra* note 5, at 13–14 (stating Holden, West Virginia was built and owned by Island Creek Coal Co., which paid for the town's public services). "A retired . . . schoolteacher [suggested] . . . 'You see the homes and stores in the valleys but you just don't think who owns all that property up on the hillsides.'" *Id.* at 13–14.

66. Tom D. Miller, *Route 99 Classic Example of Coal Firms' Influence*, THE HERALD-ADVERTISER & THE HERALD-DISPATCH, reprinted in WHO OWNS WEST VIRGINIA?, *supra* note 5, at 23 ("A study four years ago concluded assessments on coal lands should be four times the level on the 1970 tax books."). Tax payers were subsidizing the loss in revenue from lands owned by absentee holding companies at the cost of underfunding the state's public school system. *Id.*

67. See *id.* at 22–25 (explaining the legislative history of Route 99 that was built under the influence of mining interests). The road was built to withstand the heavy traffic of semi-trailers carrying equipment to strip mine sites that were previously inaccessible. *Id.* at 22–25.

68. See CAUDILL, *supra* note 26, at 61–62 (claiming companies retained lawyers "to scout the region and appraise the condition of land titles").

69. *Id.* at 75.

70.

Most of them 'touched the pen and made their mark,' in the form of a spidery X, in the presence of a witness whom the agent had thoughtfully brought along Unable to read the instrument or able to read it only with much uncertainty, the sellers relied upon the agent for an explanation of its contents—contents which were to prove deadly to the welfare of generations of the mountaineer's descendants.

between absentee landholder and local citizen play out in the communities of Appalachia, as landowners are forced to the courts and legislatures as the only means of reprieve, remedy, and justice.⁷¹

III. MINING INTERESTS INFLUENCE ON STATE LEGISLATURES AND THE COURTS

The broad form mineral deed drafted by coal and land companies in the late 1800s and early 1900s severed mineral rights from corresponding surface rights.⁷² The deed conferred on the grantee the use of the surface estate for “any means and by any way necessary or convenient” in the recovery of the minerals.⁷³ As early as 1892, Kentucky recognized the disparity in bargaining power between the landholder and the sophisticated mining interest.⁷⁴

When the coal mining industry mechanized fifty years later, surface mining developed as a highly efficient—although powerfully destructive—form of coal mining.⁷⁵ As the consequences of surface mining became irredeemably obvious, surface landowners charged

See id. at 74

71. *See id.* at 305 (describing how even when individuals went to seek legal remedy, courts upheld and enlarged the ancient deeds).

72. Rivkin, *supra* note 24, at 479.

73. *See id.* (emphasizing the complexity and length of the deed signed by indigenous landholders). It is worth noting these early deeds did not contain the right to strip mine; the method had not been developed at the time these deeds were used. *Id.*

74. *See, e.g.,* Wollums v. Horsely, 20 S.W. 781, 782 (Ky. 1892)

[The land in question] is proven to have been worth[,] in April, 1889, \$15 an acre, and that this value arises almost altogether from its mineral worth; and yet the appellee is asking the enforcement of a contract by means of which he seeks to obtain all the oil, gas, and minerals, and the virtual control of the land, at 40 cents an acre. . . . Equity should not help such a harsh bargain. . . . His agent, when the trade was made, assured the appellant that he would never be bothered by the contract during his lifetime. He was lulled in the belief that the Rip Van Winkle sleep of that locality in former days was to continue, and the grossly inadequate price of this purchase can only be accounted for upon the ground that the appellant was misled and acted under gross misapprehension. The contract was not equitable or reasonable, or grounded upon sufficient consideration, and no interest has arisen in any third party. A court of equity should therefore refuse its specific enforcement.

75. *See* Watson v. Kenlick Coal Co., Inc., 422 U.S. 1012, 1013–14 (1975) (Douglas, J., dissenting from denial of cert.) (explaining that seventy years prior, mineral rights had been deeded away). “This case is unfortunately no more than a mere footnote in a continuing tragedy of environmental and human despoliation. The rape of Appalachia for its precious coal has been a dark and dismal chapter in our Nation’s history[.]” *Id.* at 1013 (Douglas, J., dissenting from denial of cert.).

mining companies with nuisance, trespass, and breach of contract.⁷⁶ Surface owners in Appalachia were rebuffed in most of their legal endeavors for relief.⁷⁷ Many suits were foreclosed by the decision in *Buchanan v. Watson* which resoundingly validated the broad form deed.⁷⁸ In *Buchanan*, the Kentucky Court of Appeals held that although the parties did not expressly contemplate surface mining during the formation of the deed, to deny the right to remove the coal by the only feasible process was to defeat the purpose of the deed.⁷⁹ The court engaged in traditional contract interpretation allowing the broad form deed to encompass unbargained-for rights⁸⁰ in an effort to protect business interests that relied on the broad form deed to pursue mineral rights.⁸¹ The hardship for a more equitable interpretation of the deed was characterized as an industry hardship rather than the landowner's right to protect the surface from total destruction.⁸² As a result, *Buchanan's* interpretation of the broad form deed was insulated within the hallowed authority of *stare decisis*.⁸³

At the heart of the broad form deed controversy was whether surface landowners could legally refuse consent to surface mine for coal on their property.⁸⁴ A full legal assault, backed by overwhelming public

76. See Rivkin, *supra* note 24, at 482 (bemoaning that landowners must “resort[] to the courts” due to conflicts between surface and mineral owners).

77. *Id.* at 481–85.

78. 290 S.W.2d 40, 43–44 (Ky. 1956) (holding “law of property rights should remain stable,” as disturbing the long-standing rule would cause confusion).

79. *Id.* at 42.

80. See *id.* at 43 (applying “fundamental rules of constructions of deeds” in the absence of ambiguity). The court recognized the parties’ reliance on traditional and precedential rules of contract interpretation when forming their contractual rights and obligations. *Id.*

81. See *id.* at 43–44 (concluding “[t]he doctrine of *stare decisis* requires that we do not depart from the established rule”).

82. *Watson v. Kenlick Coal Co., Inc.*, 422 U.S. 1012, 1015, 1017–18 (1975) (Douglas, J., dissenting from denial of cert.) (“With the advance of technology, however, the stakes increased; each successive innovation was visited upon the mountaineers with the approval of the courts, which found these new and unforeseen techniques to fall within the scope of the aged and yellowing deeds. . .”).

83. See *Buchanan*, 290 S.W.2d at 44 (validating established rule as precedent that must not be altered).

84. See Rivkin, *supra* note 24, at 483 (identifying surface landowner defiance through protests, closures of property entrances, and borderline warfare).

sentiment, was raised against the broad form deed that included challenges under contractual theories, interpretation of adhesion contracts, and estoppel.⁸⁵ The court of last resort in Kentucky rejected every argument.⁸⁶ Undeterred by fifty years of judicial indifference, Appalachian landowners attempted to set forth policy changes in legislation that would protect the surface rights of landowners. Their efforts resulted in the passage of a bill in 1974 that required written consent by a landowner prior to the issuance of a surface mining permit.⁸⁷ The statute was later struck down as unconstitutional for its perceived lack of a public purpose.⁸⁸ Although public outrage concerning the coal mining industry remained constant from the 1940s to 1988, Kentucky citizens were left defenseless against the very economic, legal, and political bodies meant to protect them.⁸⁹ In 1988, after more than forty years of surface mining, Kentucky's Constitution was amended to include a limited and statutorily required interpretation of the broad form deed that, in the absence of express terms describing the method of extraction, limited extraction to the "methods of commercial coal extraction commonly known to be in use in Kentucky in the area affected at the time the instrument was executed."⁹⁰ Kentuckians fought for over forty years for the right to refuse consent to surface mining on their own property.

85. *Id.*

86. *Id.* at 484; see *Martin v. Kentucky Oak Mining Co.*, 429 S.W.2d 395, 399 (Ky. 1968), *overruled by Akers v. Baldwin*, 736 S.W.2d 294 (Ky. 1987) (holding all six issues landowners argued do not have "the overwhelming force" necessary to prevail over the established rule).

87. KY. REV. STAT. ANN. § 350.060(8) (1974), *invalidated by* Dep't for Nat. Res. & Envtl. Protection v. No. 8 Ltd. of Va., 528 S.W.2d 684 (Ky. 1975); Rivkin, *supra* note 24, at 486–87.

88. Dep't for Nat. Res. & Envtl. Protection v. No. 8 Ltd. of Va., 528 S.W.2d 684, 686–87 (1975) (finding the statutory grant of a consent requirement by a surface owner bears no real or substantial relationship to the public's general welfare). The court indicated that in the absence of a public purpose, police powers were not justified. *Id.* at 686; see Rivkin, *supra* note 24, at 488 (indicating the overwhelming support in passing the bill was a false flag; behind the legislative scene the coal industry was already mounting a formidable challenge).

89. See Rivkin, *supra* note 24, at 478 (stating unity of the legal system was significantly influenced by mining interests present in the legislative and judicial bodies, which perpetuated the inequalities characterized by heavy mining communities).

90. KY. CONST. § 19(2) (amended 1988).

IV. FEDERAL LEGISLATION'S ATTEMPT TO MITIGATE ENVIRONMENTAL INJURIES IN APPALACHIA

A. *The Intention and Purpose of SMCRA*

Concurrent with the struggle against the broad form deed in Kentucky, the federal government introduced legislation that emphasized an important policy shift in America toward protecting the environment against business interests that externalized environmental costs on local communities and state governments.⁹¹ SMCRA was passed in 1977 to regulate the environmental impacts of surface mining coal and other natural resources.⁹² Congress found coal extraction “essential to the national interest to insure the existence of an expanding and economically healthy underground coal mining industry.”⁹³ Congress also found that surface mining results in consequences adverse to commerce, as well as the public.⁹⁴ It destroys “the utility of the land for commercial, industrial, residential, recreational, agricultural, and forestry purpose[s],” and contributes to floods, pollutes water, causes landslides, destroys natural habitats, damages the property of citizens, “degrad[es] the quality of life in local communities,” and counteracts government programs to conserve and protect environmental interests.⁹⁵ Congress intended SMCRA to set forth federal guidelines that would monitor the permitting and reclamation of surface mine sites through federally approved state administration.⁹⁶ Interestingly, SMCRA section 1201(j) expressly recognizes a national interest in surface mining coal under the Commerce

91. Brian Peterson, Note, *Confusion in Regulating Coal Mine Water Pollution: Regulatory Overlap in SMCRA and the CWA*, 99 W. VA. L. REV. 595, 597 (1997) (stating the Carter administration passed SMCRA to regulate environmental impacts of surface mining, including the externalizing of environmental costs on local communities and state governments).

92. *Id.*

93. See Surface Mining Control and Reclamation Act, 30 U.S.C. § 1201(b) (2012) (noting Congressional findings expressly state that “coal mining operations *presently* contribute significantly to the Nation’s energy requirements”) (emphasis added). “Presently” may be up for judicial interpretation in the contemporary energy consumption context. Further, a formidable argument could be made that surface mining undermines the ability of conventional underground mining to compete with surface mining’s artificially deflated price in the market.

94. 30 U.S.C. § 1201(c) (2012); see 30 C.F.R. § 761.11(b) (2016) (requiring land under federal protection may not be surface mined without existing rights or meeting certain findings).

95. 30 U.S.C. § 1201(c) (2012); see 30 C.F.R. § 761.11(b) (2016) (discussing the destructive consequences extracting coal has on geographically vulnerable areas).

96. 30 U.S.C. § 1201(f), (g), (k) (2012); *Id.* § 1211(c) (9) & (10).

Clause, but simultaneously expresses this interest should be managed in “an environmentally sound manner[.]”⁹⁷ Overall, Congress found SMCRA’s intentions necessitate state and federal cooperation to “prevent and mitigate” destructive environmental practices.⁹⁸

While SMCRA recognizes the necessity of surface coal mining to the nation’s energy requirements and economic self-sufficiency, these compelling interests are to be balanced with environmental and agricultural productivity.⁹⁹ Balancing the competing interests assures the rights of surface landowners and those with interests in land are “fully protected from such [surface mining].”¹⁰⁰ Other legislative purposes include protecting the environment,¹⁰¹ prohibiting surface mining where reclamation is unfeasible,¹⁰² as well as promoting the reclamation of abandoned mine sites prior to the enactment of SMCRA.¹⁰³ After the state establishes regulatory programs no less stringent than SMCRA requirements,¹⁰⁴ the state retains “exclusive jurisdiction” over the enforcement of state regulations, subject to federal oversight.¹⁰⁵

SMCRA intended to curb environmental and community degradation in Appalachia through formalizing a permitting process requiring mining companies to assure state and federal governments that they would minimize damage to the surface and reclaim the land for agricultural and

97. *Id.* § 1201(j).

98. *Id.* § 1201(k). *But see* Telephone Interview with Mary V. Cromer, Staff Attorney, Appalachian Citizens’ Law Ctr. (Oct. 8, 2016) (on file with *The Scholar: St. Mary’s Law Review on Race and Social Justice*) (stating that in practice, Kentucky’s mining and clean water agencies feel free of the burden of federal oversight, are generally underfunded, and have enacted laws that are no more stringent than SMCRA requires).

99. *See* 30 U.S.C. § 1202(f) (2012) (stating expressly the nation’s economic and social well-being “strike a balance” with environmental and agricultural concerns).

100. *Id.* § 1202(b).

101. *Id.*

102. *Id.* § 1202(d). This particular purpose of the act could mean surface mining is not feasible in Appalachia if companies cannot find a way to conduct surface mining without harming the community and the environment. *See id.* § 1202(c) (explaining that if the Secretary disapproves of a proposed State program, he may reject it and await the resubmission of a revised State program).

103. *Id.* § 1202(h).

104. *Id.* § 1253(a)(2).

105. *Id.* The Secretary of the Interior retains a right of reentry under any properly permitted surface mining site. *Id.* § 1253(a). The conditions are delineated in §§ 1271 & 1273. *Id.*

environmental productivity.¹⁰⁶ Permit applications require a reclamation plan.¹⁰⁷ Reclamation plans must contain an “assessment of the probable cumulative impact of all anticipated mining in the area on the hydrologic balance specified,”¹⁰⁸ inside and outside of the permitted area.¹⁰⁹ The assessment should be comprehensive and cumulative; intend to preserve the hydrologic balance; anticipate and minimize water pollution; and avoid producing acid mine drainage.¹¹⁰ The permitting process requires mining companies post a performance bond covering the area of land on which the permittee will conduct surface coal mining and reclamation.¹¹¹ The amount of the bond must be “sufficient to assure the completion of the reclamation plan” by the state agency in the event of forfeiture.¹¹²

The state has jurisdiction over a permittee’s compliance with the permit,¹¹³ while the Secretary of Interior retains final authority to inspect surface mining sites.¹¹⁴ SMCRA mandates permittees monitor and record the groundwater, surface drainage, rainfall, and well logs at surface mine sites.¹¹⁵ In other words, the permittee, a coal mining

106. *See id.* § 1256 (stating “no person shall engage in . . . coal mining operations unless” they have obtained a permit); *Id.* § 1258 (requiring mining companies to submit a detailed description of the measures they would take to mitigate environmental injuries).

107. *Id.* § 1257(d).

108. *Id.* § 1260(b)(3). The environmental survey and report are fundamental to the proper implementation of best practices to curb environmental and community degradation. *See id.* § 1260(a) (indicating the regulatory authority can mandate compliance with reclamation plans).

109. *See id.* § 1257(a)(11) (stating “the permit shall not be approved until such information is available and is incorporated into the application”); *see also* Interview with Mary V. Cromer, *supra* note 98 (opining no permit should be issued that would allow “material damage” to the water outside the permitted area).

110. *See id.* § 1265(b)(10)(A) (minimizing disturbance during and after surface mining operation by “(i) preventing or removing water from contact with toxic producing deposits; and (ii) treating drainage to reduce toxic content which adversely affects downstream water upon being released to water courses”).

111. *Id.* § 1259(a). The performance bond shall cover the permitted area and will be sufficient to reclaim the land in the event of forfeiture. *Id.* § 1259.

112. *Id.* § 1259(a).

113. *Id.* § 1253(b).

114. *Id.* § 1267.

115. *Id.* § 1267(b)(2); *see* Interview with Mary V. Cromer, *supra* note 98 (stating that if damage to the water is discovered while the site is being mined, then the site should be re-permitted and protective measures initiated to maintain water quality standards).

company, is charged with its own regulation.¹¹⁶ Records and reports of state inspections are available to the public at “sufficient locations . . . so that they are conveniently available to residents in the areas of mining.”¹¹⁷ As provided for by SMCRA, mining companies may construct sediment ponds using the “best technology currently available” to prevent runoff outside the permit area.¹¹⁸ While sediment ponds are a preventative measure, “in no event shall contributions” to the streams “be in excess of requirements set by applicable [s]tate or [f]ederal law[.]”¹¹⁹ SMCRA approves of sediment ponds to treat polluted waters; however, coal operators must comply with regulations set forth by the Environmental Protection Agency (EPA).¹²⁰

SMCRA contains a citizen suit provision, but state and federal agencies are given the first opportunity to correct the problem.¹²¹ The Secretary of Interior may request the Attorney General initiate a civil action for any violation of SMCRA’s environmental standards.¹²² If the penalty does not lead to a cessation order,¹²³ the penalty shall not exceed \$5,000 for each violation.¹²⁴ Each day of a continuing violation may be construed as a separate violation.¹²⁵ In the event that federal regulators do not act, a civil action to compel SMCRA compliance may be brought by citizens who are, or may be, adversely affected by surface coal mining.¹²⁶ However, no action may commence if the Secretary is already prosecuting a civil action in a federal or state court, or if an action is brought “prior to sixty days after the plaintiff has given notice in

116. *Id.* § 1267(b)(1). While the practicality of the coal industry maintaining its own records seems understandable and desirable, it stretches the imagination that an industry that has challenged every effort to regulate safety and environmental concerns would be a willing and trusted partner in environmental stewardship.

117. *Id.* § 1267(f).

118. *Id.* § 1265(b)(10)(B)(i).

119. *Id.*

120. *Id.* § 1265(b)(10)(C); *see* 40 C.F.R. §§ 434.10, 434.11(o) (2016) (stating “treatment system” applies to any structure that treats coal mine drainage, coal preparation waste water, or drainage from coal preparation plant).

121. 30 U.S.C. §§ 1270–1271 (2012).

122. *Id.* § 1271(c).

123. *See id.* § 1271(a) (requiring the Secretary, or authorized representative, to order cessation of surface coal mining operations related to violation until such violation is abated).

124. *Id.* § 1268(a).

125. *Id.*

126. *Id.* § 1270(a).

writing of the violation.”¹²⁷ SMCRA expressly protects a citizen’s rights to pursue relief under the common law, after state and federal agencies fail to act.¹²⁸

If a coal operator successfully completes the reclamation plan as set out in the permit, and the bond is discharged, then the coal operator is released of all liability under SMCRA.¹²⁹ Any subsequent harm from latent problems falls to the state or local community to repair.¹³⁰ However, if pollution is discovered, the abandoned mine may fall under the authority of the Abandoned Mine Land provision of SMCRA.¹³¹

B. *The Clean Water Act and “[W]aters of the United States”*

The Clean Water Act (CWA) regulates the type and amount of pollutants allowed to enter all “waters of the United States.”¹³² Five years before SMCRA was drafted, Congress passed the Clean Water Act to “restore and maintain the chemical, physical[,] and biological integrity of the Nation’s waters.”¹³³ Initially, the CWA set goals to eliminate the discharge of pollutants by 1985.¹³⁴ When the CWA was passed, industrialists were concerned about whether waste treatment ponds would be considered “navigable waters of the United States,” and thereby fall under CWA’s authority to regulate pollutants.¹³⁵ Since the Clean

127. *Id.* § 1270(b)(1).

128. *Id.* § 1270(e).

129. *Id.* § 1269.

130. *See id.* § 1269(a) (highlighting coal extractors seem to escape liability for the harm of extraction after applying for release of performance bond or deposits, yet landholders are liable for the long-term consequences of surface mining); *see also* Peterson, *supra* note 91, at 615 (stating that while SMCRA prohibits landholder liability for reclamation, they may be held liable under CWA).

131. 30 U.S.C. § 1231 (2012); *see* Peterson, *supra* note 91, at 600–01 (stating the fund is unable to meet the needs of mined lands abandoned or reclaimed before 1977). Pollution from abandoned mines through forfeiture or improper state oversight poses serious environmental and economic harm. *Id.* at 596

132. 40 C.F.R. § 122.1(b)(1) (2016).

133. 22 U.S.C. § 1251(a) (2012).

134. *Id.* § 1251(a)(1).

135. *See* Scott Snyder, Comment, *The Waste Treatment Exclusion and Dubious Legal Foundation for the EPA’s Definition of “Waters of the United States”*, 21 N.Y.U. ENVTL. L.J. 504, 509–10 (2014) (stating the EPA intended to revise and develop the definition of “waste treatment systems,” later pointing out the EPA never actually did); *see also* Consolidated Permit Regulations, 45 Fed. Reg. 141, 148 (July 21, 1980) (to be codified at 40 C.F.R. pt. 122) (identifying industry petitioners objecting to the new definition of “waters of the United States”).

Water Act only governs discharges into “navigable waters” of the United States, if a stream is found to be a water of the United States, then discharges from waste treatment ponds, including sediment ponds, fall under CWA purview.¹³⁶ Yielding to industry pressure, the EPA postponed its regulation of waste treatment systems allowing the coal industry to continue utilizing natural bodies of water as treatment ponds.¹³⁷ The EPA’s suspension of deciding whether or not waste treatment systems were “waters of the United States” during the notice and comment period essentially became a *de facto* rule.¹³⁸ Some scholars question whether the waste treatment exclusion is legally permissible.¹³⁹ Nevertheless, the EPA excludes waste treatment systems from the definition of “waters of the United States,” despite the fact that waste treatment systems are constructed in the path of intermittent springs—a standard practice of surface mining.¹⁴⁰

C. *Case History of the Waste Treatment Exclusion in Appalachia*
(Army Corps of Engineers vs. EPA)

Since the passage of SMCRA and CWA, environmental and business interest groups have repeatedly litigated whether waters above settlement ponds are waters of the United States, producing plurality opinions and strong dissents.¹⁴¹ The central issue, as expressed in *West Virginia Coal Association v. Reilly*, is whether the EPA was granted the authority to adopt regulations prohibiting in-stream treatment ponds.¹⁴² A permit

136. Clean Water Rule: Definition of “Waters of the United States”, 80 Fed. Reg. 124, 37099 (June 29, 2015).

137. Snyder, *supra* note 135, at 514.

138. *See id.* at 515–16 (indicating current treatment of “waters of the United States” definition as though the suspended provision is deleted, even though it is still present).

139. *See id.* at 515–16, 529, 532 (stating it is doubtful whether the waste treatment exclusion would survive a Chevron test).

140. *See* 40 C.F.R. §122.2 (2016) (stating “[w]aste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act,” specifically manmade waters not originally created in the waters of the United States, are not considered “waters of the United States”); *see also* Snyder, *supra* note 135, at 520 (“[r]ather, at issue is the more discrete question of whether the definition permits the EPA to remove waters from ‘waters of the United States’ by regulation”).

141. *E.g.*, *Ohio Valley Env'tl. Coalition v. Aracoma Coal Co.*, 556 F.3d 177, 217 (4th Cir. 2009) (Michael, J., concurring in part and dissenting in part); *Kentuckians for the Commonwealth, Inc. v. Rivenbough*, 317 F.3d 425, 448 (4th Cir. 2003) (Luttig, J., concurring in part and dissenting in part).

142. 728 F. Supp. 1276, 1277 (S.D. W.Va. 1989).

under section 402 of the CWA (402 permit)¹⁴³ allows the discharge of pollutants subject to the National Pollution Discharge Elimination System (NPDES) guidelines for monitoring and evaluating regulated pollutants discharged into the waters of the United States.¹⁴⁴ While the EPA retains oversight, states are the primary regulators and issuers of permits for surface coal-mining operations.¹⁴⁵ However, the EPA may object and withdraw approval of the state permitting scheme after finding the state scheme is not in compliance with the NPDES guidelines.¹⁴⁶ Adding to the confusion, a permit under section 404 of the CWA (404 permit)¹⁴⁷ gives the Army Corps of Engineers discretion to issue permits for “the discharge of dredged or fill material into the navigable waters at specified disposal sites.”¹⁴⁸ In Appalachia, 404 permits allow mining companies to dispose of the overlying rock strata into the valleys surrounding surface mine sites.¹⁴⁹ This process buries intermittent and perennial streams while sediment ponds are constructed to control runoff from the mine site.¹⁵⁰

Reilly delineates the shifting and overlapping perspectives and jurisdictions of the EPA and the Army Corps of Engineers concerning in-stream treatment ponds of coal mining waste waters.¹⁵¹ Plaintiffs took exception that the EPA objected to sediment pond construction 1,000 feet

143. 33 U.S.C. § 1342 (2014).

144. *Id.*; see *Reilly*, 728 F. Supp. at 1278 (conditioning the issuance of permits for strip mining upon compliance of permittees with the requirements of the permit as set out by a scientific evaluation of the permitted area).

145. 30 U.S.C. § 1253 (2012).

146. 33 U.S.C. § 1342(c) (2014).

147. *Id.* § 1344.

148. See *Reilly*, 728 F. Supp. at 1278–79 (citing 33 U.S.C. § 1344(a) (1988)) (stating “discharge of dredged or fill material . . . [is] expressly excepted from” EPA’s authority at specified disposal sites).

149. See *id.* at 1281 (describing the methods in which valley fills are constructed and utilized); see also Perks, *supra* note 9, at 3 (explaining ramifications of overutilization of valley fills).

150. See *Reilly*, 728 F. Supp. at 1293 (concluding no procedures for the construction and operation of fills and ponds in compliance with SMCRA and CWA had been established). However, the court did not find the EPA exceeded its authority in objecting to the 404 permitting process. *Id.*

151. See *id.* at 1287 n.6 (describing the Memorandum of Agreement entered into in 1986 requiring fill material to include discharges of pollutants, but not for the *primary purpose* of disposing of waste to be regulated under the 402 permit) (emphasis added).

below one of the valley fills.¹⁵² Plaintiffs argued that discharges above the outfall points constituted discharges of fill material, which was beyond the control of a 402 permit and instead under control of the Army Corps of Engineers' 404 permit.¹⁵³ The court reframed the issue more narrowly, considering whether the EPA has statutory authority over fills and ponds, and whether the Army ceded control of fill material for purposes other than construction of in-stream waste systems.¹⁵⁴ The EPA contended that in-stream treatment ponds, and the waters above such ponds, are "waters of the United States," because they are an "impoundment of waters otherwise defined as waters of [the] United States."¹⁵⁵ The court deferred to the EPA's interpretation of its own regulations¹⁵⁶ and held that the EPA was vested with authority under the CWA to regulate fills and ponds.¹⁵⁷ However, the court did not address the EPA's authority to regulate fills and ponds through the internal waste stream rule, nor their veto power over 404 permits under the control of the Army Corps of Engineers.¹⁵⁸

In 2009, the issue of whether the EPA could require environmental impact studies on valley fills was addressed by the Fourth Circuit in *Ohio Valley Environmental Coalition v. Aracoma Coal Co.* by a three judge panel, with one judge dissenting and concurring in part.¹⁵⁹ The court found that the Corps' regulations were unambiguous and authorized the 404 permit under the CWA, allowing permittees to create valley fills and bury intermittent streams by creating an underdrain system.¹⁶⁰ Ohio

152. *Id.* at 1282.

153. *Id.*

154. *Id.* at 1285–86 (S.D. W.Va. 1989) (stating "[q]uestions as to the respective agencies' authority center upon the nature of the substance being discharged, the Army generally having authority over the discharge of fill, [and] EPA having authority over the discharge of pollutants").

155. *Id.* at 1289–90 (quoting 40 C.F.R. § 232(q)(4) and stating that exclusion of waste treatment ponds was never intended to apply to ponds constructed in United States Waters).

156. *See id.* at 1290 (quoting *Bowles v. Seminole Rock & Sand Co.*, 325 U.S. 410, 414 (1945)) ("When the construction of an administrative regulation . . . is in issue, deference is even more clearly in order . . . [T]he ultimate criterion is the administrative interpretation, which becomes of controlling weight unless it is plainly erroneous or inconsistent with the regulation.").

157. *Id.* at 1293.

158. *Id.*

159. 556 F.3d 177, 180 (4th Cir 2009).

160. *See id.* at 189 (citing 33 U.S.C. § 1344(a) (2000)) (stating the Corps "may issue permits for the discharge of dredged or fill material into the navigable waters at specified disposal sites" as long as the permits meet the standards set forth in SMCRA) (emphasis added). In this case,

Valley Environmental Coalition (OVEC) contended the fill was actually pollutants, and therefore fell under the regulation of the EPA—not the Corps.¹⁶¹ The Fourth Circuit delineated the various responsibilities and controls of the National Environmental Policy Act (NEPA), SMCRA, CWA, the Army Corps of Engineers, and West Virginia Department of Environmental Protection (WVDEP), and concluded that the “control and responsibility” beyond the filling of the valleys and buried intermittent streams remained with the state regulatory agency, WVDEP.¹⁶² OVEC challenged the Corps’ assessment of the environmental impact of the valley fills.¹⁶³ The court concluded the Corps followed CWA guidelines on the issuance of the 404 permit, and the permittee properly set forth plans to minimize and mitigate environmental impacts of the valley fill.¹⁶⁴ In the court’s opinion, SMCRA struck a balance between environmental protection and coal mining as an essential source of energy.¹⁶⁵ Furthermore, the court found in-stream settlement ponds represented the “best technology currently available” for treating runoff from valley fills.¹⁶⁶ The court determined in-stream settlement ponds to be a necessary component of waste treatment systems because of Appalachia’s unique geology.¹⁶⁷

Ultimately, the controlling case law of the Appalachian region proposes that environmental impact studies fall under the jurisdiction of

thirteen miles of streams were buried. *Id.* at 217 (4th Cir 2009) (Michael, J., dissenting in part and concurring in part).

161. *See id.* at 195–98 (stating the court could not accept OVEC’s argument that the larger valley fill project fell under the Corps’ authority because exclusive jurisdiction remains with the state agency complying with SMCRA). The court also determined that a NEPA analysis for a valley fill would be duplicative and unnecessary if the state agency had previously conducted its own analysis. *Id.* at 196.

162. *See id.* at 197 (stating even if OVEC’s argument was assumed to be true, the regulation was “ambiguous” and the Corps’s interpretation was entitled to deference).

163. *Id.* at 202–07.

164. *Id.*

165. *See id.* at 215–16 (insinuating SMCRA was an intervention into the control of the CWA’s mandate to regulate pollutants). Further the court states the Corps’s interpretation that stream segments connecting valley fills to sediment ponds were “waste treatment systems” and not “waters of the United States” was reasonable, and therefore entitled to deference under *Chevron* and *Seminole Rock* analysis. *Id.*

166. *Id.* at 216.

167. *See id.* (holding the impoundment of headwater streams to create an in-stream sediment pond are not to be deemed an impoundment of “waters of the United States,” but rather fall within the waste water exclusion).

state agencies which have met SMCRA and CWA guidelines.¹⁶⁸ While the EPA retains the right to review the state permitting process,¹⁶⁹ they may not require the state to duplicate scientific studies already completed.¹⁷⁰ Valley fills and in-stream settlement ponds have been found to be a necessary part of strip mining in Appalachia,¹⁷¹ even though science has shown the process contributes to hydrological pollution.¹⁷²

D. *The EPA's Final Ruling on the Definition of "[W]aters of the United States"*

In an effort to make the process of identifying waters protected under the CWA "easier to understand, more predictable, and consistent with the law and peer-reviewed science," the EPA clarified the definition of "waters of the United States" in 2015.¹⁷³ The final promulgation of the rule establishes CWA's authority to protect the waters of the United States.¹⁷⁴ The EPA expressed its intention to simplify and standardize the procedures, "particularly as [it] affect[s] crossings of covered ephemeral and intermittent tributaries."¹⁷⁵ The final ruling on the definition of waters of the United States is based on prevailing Supreme Court decisions¹⁷⁶ that explain the interconnectivity of waters of the

168. *See id.* at 212, 216 (holding specifically that, "[u]nder SMCRA, states have 'exclusive jurisdiction over the regulation of surface coal mining and reclamation operations' on non-Federal lands, so long as their regulatory program has been approved by the Secretary of the Interior as satisfying the Act's minimum requirements.").

169. *See id.* at 190 (explaining NPDES programs must be approved by the EPA before they can begin issuing CWA § 402 permits).

170. *See id.* at 196 (citing *Sylvester v. U.S. Army Corps of Eng'rs*, 884 F.2d 394, 401 (9th Cir. 1989) ("[O]rdinary notions of efficiency suggest a federal environmental review should not duplicate competently performed state environmental analyses.")).

171. *Id.* at 187.

172. *See Shiber, supra* note 4, at 337 (explaining coal mine piles and areas mined for decades are a "significant source of arsenic contamination in the region").

173. Clean Water Rule: Definition of "Waters of the United States", 80 Fed. Reg. 37,055 (June 29, 2015) (codified as 33 C.F.R. § 328 & 40 C.F.R. §§ 110, 112, 116, 117, 122, 230, 232, 300, 302, & 401).

174. *Id.* at 37,055 (applying CWA protection to "traditional navigable waters, interstate waters, and the territorial seas").

175. *Id.*

176. *Id.* at 37,054 (citing *U.S. v. Riverside Bayview Homes*, 474 U.S. 121 (1985); *Solid Waste Agency of N. Cook Cty v. U.S. Army Corps of Eng'rs*, 531 U.S. 159 (2001); and *Rapanos v. U.S.*, 547 U.S. 715 (2006)).

United States, including wetlands and other non-navigable waters.¹⁷⁷ The “significant nexus” test for determining whether a water is or is not a “waters of the United States” considers whether the water is “significantly related to the health of downstream waters by protecting the chemical, physical, or biological integrity of the water.”¹⁷⁸ Science supports the contention that protecting upstream sources is critical to protecting downstream waters.¹⁷⁹ In its definition, the EPA considered a report by the agency’s Science Advisory Board, which noted that waters are in many ways connected in the hydrological cycle through a continuum of connectivity.¹⁸⁰ The variations of connectivity are integral to understanding the “waters” function in the larger context of “waters of the United States.”¹⁸¹ The definition recognizes two types of waters requiring a case-by-case analysis to determine their relationship to traditional navigable waters, as science is able to more expressively communicate the interconnectivity of waters of the United States.¹⁸²

A broader definition of “waters of the United States” allows the EPA to evaluate interconnectivity before precluding the source from its control.¹⁸³ The case-by-case analysis adopted in the final definition

177. *Id.*

178. *Id.* at 37,061 (citing *U.S. v. Riverside Bayview Homes*, 474 U.S. 121 (1985); *Solid Waste Agency of N. Cook Cty v. U.S. Army Corps of Eng’rs*, 531 U.S. 159 (2001); and *Rapanos v. U.S.*, 547 U.S. 715 (2006)).

179. *Id.*

180. *See id.* at 37,057 (finding “[w]aters are connected in myriad ways, including physical connections and the hydrologic cycle; however, connections occur on a continuum or gradient from highly connected to highly isolated”).

181. *See id.* (emphasizing the EPA’s Office of Research and Development’s report on the “[c]onnectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence” finding “variations in the degree of connectivity are a critical consideration to the ecological integrity and sustainability of downstream waters”).

182. *See id.* at 37,057–58 (recognizing the eight jurisdictional water categories as traditional navigable waters, interstate waters, territorial seas, impoundments of jurisdictional waters, tributaries, adjacent waters, and “waters found after a case-specific analysis to have a significant nexus to traditional navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters in the region”). The definition also notes contributing waters are “inextricably linked” to their downstream waters. *Id.* at 37,067.

183. *See id.* at 37,054 (narrowing the definition of “waters of the United States” due to previous rules placing qualifiers on existing types of water).

appreciates the complexity of water connectivity acknowledged by the Supreme Court in *Rapanos*.¹⁸⁴

Connectivity of streams and wetlands to downstream waters occurs along a gradient that can be described in terms of the frequency, duration, magnitude, timing, and rate of change of water These terms, which we refer to collectively as connectivity descriptors, characterize the range over which streams and wetlands vary and shift along the connectivity gradient in response to changes in natural and [man-made] factors and, when considering a watershed context, can be used to predict probable effects of different degrees of connectivity over time. The evidence unequivocally demonstrates that . . . riparian/floodplain wetlands . . . are clearly connected to downstream waters in ways that profoundly influence downstream water integrity.¹⁸⁵

The Supreme Court's rulings combined with the underlying science support the position that intermittent and perennial streams characterizing the riparian wetlands of Appalachia should be evaluated on a case-by-case basis.¹⁸⁶ These streams should fall under the protection of the CWA before a 404 permit is approved.¹⁸⁷ It is worth noting that significant and prodigious case law in some jurisdictions holds that "waters of the United States" retain their status in perpetuity.¹⁸⁸ Promoting and establishing the nexus theory at trial could prove critical in establishing community harms downstream from surface mine sites.

184. *Id.* at 37,059.

185. *Id.* at 37,063.

186. *United States v. Riverside Bayview Homes*, 474 U.S. 121, 134–35 (1985).

187. *See id.* at 134–35 (providing a unanimous opinion that the Corps's conclusion that adjacent wetlands are inseparably bound with the "waters" of the United States). "[W]e therefore conclude that a definition of 'waters of the United States' encompassing all wetlands adjacent to other bodies of water over which the Corps has jurisdiction is a permissible interpretation of the [Clean Water Act]." *Id.* at 135.

188. *E.g.*, *United States v. Moses*, 496 F.3d 984, 989 (9th Cir. 2007) ("We do not see how a mere man-made diversion, however long ago undertaken, could change [a creek] from a water of the United States into something else."). *But see* H.R. 1105, 115th Cong. (1st Sess. 2017) H.R. 1105 is, as the name of the bill suggests, focused on stopping the WOTUS Act by denying force and effect to the "Clean Water Rule" Definition of "Waters of the United States" rule.

V. LONG-TERM CONSEQUENCES: KENTUCKY'S RELIANCE ON COAL

A. *Flooding*

Surface coal mining and reclamation constitute the dominant shift in land use in Central Appalachia over the last thirty years.¹⁸⁹ After the overlying rock strata are exploded and the coal is extracted, mining companies attempt to return the land to its original contours.¹⁹⁰ The remaining topsoil, if any was saved, is replaced and the reclaimed land is "revegetated."¹⁹¹ Unfortunately, soil compaction caused by heavy machinery impedes rainfall from naturally filtering through the soil of the reclaimed mining site.¹⁹²

In 2009, flash flooding and mudslides destroyed 300 to 400 homes and left thousands of people without power and tens of thousands of people without water in East Kentucky.¹⁹³ The Federal Emergency Disaster Management Agency (FEMA) provided assistance to individuals, households, businesses, and government agencies in Breathitt and Pike counties.¹⁹⁴ 897 applicants from Breathitt County were awarded \$4 million for assistance.¹⁹⁵ After the flooding, a lawsuit was filed against four mining companies alleging a sediment pond failed and aggravated

189. See Bethany N. Baxter, *Cause and Effect: Surface Mine Reclamation and Flood Litigation in Appalachia*, 4 KY. J. EQUINE, AGRI., & NAT. RESOURCES L. 135, 137 (2011) (admitting the mandated reclamation process is ineffective and widely criticized).

190. See 405 KY. ADMIN. REGS. 16:190 § 2(1) (2017) (describing regulations mining companies must follow after they operate on an area of land); see also KY. REV. STAT. ANN. § 350.415 (West 2017) (detailing the process of protecting land after it has been disturbed and layers of soil have been removed).

191. See 405 KY. ADMIN. REGS. 16:200 (2017) (setting requirements for revegetation of areas affected by surface mining activities).

192. See Joseph R. Ferrari, et al., *Surface Mining and Reclamation Effects on Flood Response of Watersheds in the Central Appalachian Plateau*, 45 WATER RESOURCES RES. 1, 1, 9 (2009) (describing the difficulty of water absorption after heavy machinery has compacted soil).

193. Dori Hjalmanson & Bill Estep, *Hundreds Left Homeless After Eastern Kentucky Flooding*, LEXINGTON HERALD LEADER (May 12, 2009, 12:00 AM), <http://www.kentucky.com/latest-news/article43998897.html> [<https://perma.cc/HPB9-AUZN>].

194. *Federal Disaster Assistance to Kentucky Tops \$18.8 Million*, FEMA (July 17, 2009), <https://www.fema.gov/news-release/2009/07/17/federal-disaster-assistance-kentucky-tops-188-million> [<https://perma.cc/9TSG-ZBFN>] [hereinafter *Disaster Assistance*].

195. *Id.*

the flooding.¹⁹⁶ The four mining companies charged with improper reclamation of surface mine sites settled the lawsuit in mid-2011.¹⁹⁷

In July of the same year, Pike County residents experienced severe flooding on Harless Creek leaving two people dead, dozens of families displaced, and thousands of people without power and water.¹⁹⁸ Damage was assessed by state officials at \$8.6 million but was expected to reach \$10 million.¹⁹⁹ FEMA approved more than \$5.5 million in federal disaster grants and loans.²⁰⁰ Pike County residents also filed suit, alleging violations of state reclamation regulations contributed to the flooding.²⁰¹

A recent long-term study evaluating reclaimed mine sites' response to severe rainfall showed an increase in storm runoff by three times the normal amount, resulting in substantially higher flooding risks.²⁰² Researchers in Kentucky conducted similar scientific studies that produced similar results.²⁰³ These studies show that reclamation impairs the hydrological ability of the land to absorb rainfall in Appalachia, thereby exasperating the potential for severe flooding in a region known

196. See Dori Hjalmanson, *Mining Worsened 2009 Flooding in Breathitt County, Lawsuits Say*, LEXINGTON HERALD LEADER (May 13, 2010, 12:00 AM), <http://www.kentucky.com/news/state/kentucky/article44031897.html> [https://perma.cc/PW9Q-F63V] (alleging four named coal companies were responsible for allowing a sediment holding pond to breach, thereby increasing flooding).

197. See Dori Hjalmanson, *4 Coal Companies Settle 2009 Mine Lawsuit Filed by Breathitt Residents*, LEXINGTON HERALD LEADER (Apr. 29, 2011, 12:00 AM), <http://www.kentucky.com/news/local/crime/article44092605.html> [https://perma.cc/8S9N-2SU3] (explaining the impact an engineering study had on the evidence against coal companies). The study showed variance in usage of rocky soil, rather than absorbent topsoil, leading to an inability to absorb rainfall. *Id.*

198. Dori Hjalmanson, *Officials Say Pike Flood Damage is the Worst in Years*, LEXINGTON HERALD LEADER (July 20, 2010, 12:00 AM), <http://www.kentucky.com/news/state/kentucky/article44040834.html> [https://perma.cc/RX56-5LL6].

199. Dori Hjalmanson, *Damage from Pike Flood Expected to Reach \$10 Million*, LEXINGTON HERALD LEADER (July 22, 2010, 5:29 PM), <http://www.kentucky.com/latest-news/article44041326.html> [https://perma.cc/4WPR-JFQG].

200. *Kentucky Disaster Assistance for Flooding Tops \$5.5 Million*, FEMA (Aug. 6, 2010), <http://www.fema.gov/news-release/2010/08/06/kentucky-disaster-assistance-july-flooding-tops-55-million> [https://perma.cc/3N27-GLG7] [hereinafter *Kentucky Disaster Assistance*].

201. Baxter, *supra* note 189, at 140–41.

202. See Ferrari, et al., *supra* note 192, at 8 (evaluating reclaimed mine sites and their response to severe rainfall).

203. See *id.* (affirming the results of previous empirical studies on a smaller scale).

for heavy rains and flash flooding.²⁰⁴ Reclamation contributes not only to the increase in severity of flooding, but also the costs borne by the federal government stemming from local residents applying for loans or assistance to rebuild communities ravaged by flooding.²⁰⁵

B. *Water Quality*

Surface mining degrades stream habitat and water quality.²⁰⁶ Groundwater and surface waters are often encumbered with dissolved solutes and ions that increase the conductivity of the stream and change the acidic balance of the waters.²⁰⁷ When coal is heavily pyritic, acid mine drainage becomes an environmental concern.²⁰⁸ Over time, changes in water chemistry may destroy the biodiversity of the streams.²⁰⁹ Although reclamation attempts to alleviate the consequences of surface mining in Appalachia, it is undeniable that surface coal mining negatively impacts the stream chemistry and ecology of Appalachia.²¹⁰ A 2013 study from Ohio found elevated lead and sulfate amounts as well as conductivity levels high enough to affect aquatic organisms in streams near surface mining sites reclaimed two to twenty-five years ago.²¹¹

The scientific data suggests not only that surface mining has an immediate impact on the hydrology of the landscape, but also that reclaimed surface mine sites continue to have long-lasting effects on the surrounding environment.²¹² Reclamation was intended to mitigate the adverse effects of surface mining. However, the continued existence of

204. *See id.* at 9–10 (finding an increase in flood response as mine reclamation reaches higher proportions of watershed area).

205. *See Disaster Assistance, supra* note 194 (identifying FEMA-approved grants and SBA disaster loans total approximately \$18 million dollars); *Kentucky Disaster Assistance, supra* note 200.

206. *See Hopkins II et al., supra* note 11, at 87 (citing studies that show surface mining correlates to “modifying topography, removing vegetation, exposing previously buried geologic materials, and even directly burying streams”).

207. *See id.* at 87–88 (indicating additional chemicals found in groundwater, such as sulfate, iron, aluminum, and selenium).

208. *Id.* at 88.

209. *See id.* (stating surface mining causes extinction of local species in affected streams and increases risks to human health).

210. *Id.*

211. *See id.* at 89, 91–93 (stating lead levels detected were “extraordinarily high given the US EPA maximum contaminant level of 15 ppb for drinking water”).

212. *Id.* at 91.

pollution decades after the reclamation process ended supports the assertion that reclamation as implemented fails to achieve its stated goals under SMCRA.²¹³

C. *Community Health*

Appalachia is a moderately, but thoroughly populated region.²¹⁴ Appalachian residents attribute exposure to air and water from coal mining sites for many of the chronic illnesses plaguing their communities.²¹⁵ A series of statistical surveys conducted by Michael Hendryx compared mortality rates from heavy coal mining counties with mortality rates from non-mining counties in Appalachia and throughout the United States.²¹⁶ Hendryx's studies accounted for known variables and identified an independent link to increased mortality in areas with heavy coal mining.²¹⁷ Counties with long-term mining operations have more pronounced mortality rates due to chronic heart, respiratory, and kidney diseases.²¹⁸ Furthermore, the research suggests the general population in Appalachian coal mining counties has an increased likelihood of exposure to toxic airborne particles.²¹⁹ Although only 1% of the Appalachian population works for the mining industry or has direct contact with the mining industry,²²⁰ the health consequences are found

213. *See id.* at 88, 91 (concluding that despite best intentions, reclamation failed to ease long-term effects of surface mining).

214. *See* KELVIN POLLARD & LINDA A. JACOBSEN, *THE APPALACHIAN REGION IN 2010: A CENSUS DATA OVERVIEW*, 2–5 (2011) (finding the average population was between fifty and eighty-seven people per square mile in certain Appalachian counties in 2010).

215. *Lung Cancer*, *supra* note 37 at 2.

216. *See id.* at 3 (defining “heavy coal mining” as counties that produced over 3 million tons of coal a year); *Mortality*, *supra* note 42, at 243 (comparing mortality rates from certain chronic illnesses in heavy coal-mining Appalachian counties with lower coal-mining Appalachian counties, non-coal mining Appalachian counties, and non-coal mining U.S. counties); Hendryx & Ahern, *supra* note 27, at 541 (examining “elevated mortality rates in Appalachian coal mining areas . . . and estimat[ing] the corresponding value of statistical life lost relative to the economic benefits of the coal mining industry”).

217. *See Lung Cancer*, *supra* note 37 at 4 (explaining that after accounting for factors such as poverty and smoking, the study still found more than 144 deaths from lung cancer in Appalachian coal-mining communities when compared to non-mining communities).

218. *See Mortality*, *supra* note 42, at 247 (stating the prevalence of chronic illness due to exposure is “hypothesized to be a long-term phenomena” due to large coal reserves being mined for “decades”).

219. *Lung Cancer*, *supra* note 37 at 5.

220. *Id.*

in all citizens including women and children not employed by the industry.²²¹

Pollutants increase the risk of heart, lung, and kidney disease.²²² Coal contains zinc, cadmium, lead, mercury, arsenic, and other toxins, while the cleaning and processing of coal adds even more impurities.²²³ When coal is mined and processed, large quantities of ambient particulate matter escape into the air and water.²²⁴ Notably, independent studies outside of Appalachia show that even low level exposure to lead, mercury, arsenic, and cadmium increases the risk of mortality from heart and kidney disease.²²⁵ Many Appalachian residents access water through private wells, and according to a U.S. geological survey, wells located near reclaimed surface mine sites have higher levels of aluminum, iron, and manganese.²²⁶

High poverty and unemployment rates, and low high school and college graduation rates, are common symptoms of higher mortality rates in coal mining communities in Appalachia.²²⁷ While many studies find high mortality rates are linked to smoking, poverty, poor education, and

221. Hendryx & Ahern, *supra* note 27, at 547.

222. *Mortality*, *supra* note 42, at 243.

223. *See id.* at 244 (providing other studies that report elevated arsenic levels in water sources around mine sites); Shiber, *supra* note 4, at 337 (stating most diseases associated with water arsenic exposure including “bladder, urinary tract, skin and lung cancers, cardiovascular diseases, and non-insulin-dependent diabetes mellitus” occur more frequently in Appalachia).

224. *Mortality*, *supra* note 42, at 244.

225. *See* Jaymie R. Meliker, et al., *Arsenic in Drinking Water and Cerebrovascular Disease, Diabetes Mellitus, and Kidney Disease in Michigan: A Standardized Mortality Ratio Analysis*, 6 ENVTL. HEALTH 4 (2007) (finding arsenic in drinking water increases mortality from heart and kidney disease).

226. STEVEN D. MCAULEY & MARK D. KOZAR, U.S. GEOLOGICAL SURVEY SCI. INVESTIGATIONS REPORT 2006-5059, GROUND-WATER QUALITY IN UNMINED AREAS AND NEAR RECLAIMED SURFACE COAL MINES IN THE NORTHERN AND CENTRAL APPALACHIAN COAL REGIONS, PENNSYLVANIA AND WEST VIRGINIA 32–33 (2006); *Mortality*, *supra* note 42, at 244.

227. *See* Hendryx & Ahern, *supra* note 27, at 544 (noting the stark contrasts between Appalachian counties with coal mining above the median as compared to the rest of the nation). Appalachian counties had a median household income of \$28,287, a poverty rate of 18%, 69.8% of adults with a high school education, 11.2% of adults with a college education, and a 7.0% unemployment rate; whereas the rest of the nation had a median household income of \$36,622, a poverty rate of 13.3%, 78.3% of adults with a high school education, 17.0% of adults with a college education, and a 4.7% unemployment rate. *Id.*

other covariates,²²⁸ Hendryx's studies adjusted for these known outcome-determinative variables.²²⁹ His studies reveal high mortality risks in both men and women in Appalachian counties with mining operations.²³⁰ "Total and chronic heart, respiratory[,] and kidney disease mortality rates are significantly higher in coal mining areas of Appalachia compared to non-mining areas of the country."²³¹ High poverty rates, high unemployment rates, and poor education in Appalachian communities also dispel the myth that mining benefits the surrounding community by creating jobs.²³² In *Mortality in Appalachian Coal Mining Regions: The Value of Statistical Life Lost*, Hendryx conducted a cost-benefit analysis measuring the economic contribution of the coal mining industry in Appalachia at \$8.09 billion.²³³ The analysis showed surface coal mining exacts a heavy price in health costs and lost income due to higher mortality risks in Appalachian coal mining communities, which costs \$18.166 billion per year.²³⁴

D. *Dependence: The Cost of Subsidies*

In 2006, the Mountain Association for Community Economic Development (MACED) investigated Kentucky's economic relationship

228. *See Mortality*, *supra* note 42, at 244 (providing many believed higher mortality rates in Appalachia resulted from poor diet and health habits combined with limited access to health care).

229. *See id.* (adjusting for covariates including: smoking rate, male population, college and high school education rates, poverty rates, race and ethnicity rates, health un-insurance rates, physician supply, rural-urban continuum code, and Southern state).

230. *See id.* at 247 (hypothesizing coal mining exposes entire communities to environmental toxins, not only those working directly with the coal mining industry, who predominantly have been men).

231. *Id.*; *see also* Hendryx & Ahern, *supra* note 27, at 547 (stating "[e]levated adjusted mortality occurred in both males and females, suggesting that the effects were not due to occupational exposure, as almost all coal miners are men").

232. *See* Hendryx & Ahern, *supra* note 27, at 547 (explaining coal mining is correlated with higher unemployment and poverty rates compared to non-coal-mining regions).

233. *See id.* at 546 (measuring the coal mining industry's contribution in 2005 at \$6.5 billion dollars in state income after coal severance taxes). Elevated stress, environmental degradation, and socioeconomic disadvantage were not accounted for in the study, but should be considered when evaluating community health in connection to the coal mining industry. *See id.* at 547 (stating coal dependent economies experience a mean net loss of population over time).

234. *See* Hendryx & Ahern, *supra* note 27, at 541-46 (reporting empirical results showing a range of economic costs in the several billions). Hendryx's study estimated the cost of a human life between \$3.8 million and \$6.3 million in 2000 and adjusting for the consumer price index between 2000 and 2005. *Id.*

to the coal mining industry.²³⁵ The investigation considered the costs and benefits to local and state economies balanced against the challenges of economic development to more sustainable sources.²³⁶ Compared to the rest of the United States, Kentucky ranks 47th in per capita income, falling from its 1970 ranking of 44th in the United States.²³⁷ Eastern Kentucky, the most heavily mined area in the state, is home to some of the poorest counties in the United States.²³⁸

The coal industry states that it creates jobs, lowers electricity rates, and generates tax revenue.²³⁹ While coal mining only represents 1% of employment in Kentucky, the proportional rates are much higher in counties with heavy coal mining operations.²⁴⁰ The 2006 MACED investigation found direct employment in the coal industry generated \$83 million in tax revenue.²⁴¹ Additionally, the coal industry creates downstream employment in related and non-related sectors, generating an estimated \$142 million in revenue.²⁴² The coal industry paid a total of \$303 million in taxes in 2006, including \$224 million in coal-severance

235. See KONTY & BAILEY, *supra* note 40, at 1 (showing empirical analysis of the coal industry's fiscal impact on Kentucky).

236. See *id.* at 1–4 (stating the study highlights the downward trends in employment and coal industry revenue over the last thirty years while contending that coal is a limited resource). The 1970s also marked a transition from conventional mining to surface mining. See JOEL DARMSTADTER, RESOURCES FOR THE FUTURE, PRODUCTIVITY CHANGE IN U.S. COAL MINING 8–13 (1997) <https://ageconsearch.umn.edu/bitstream/10874/1/dp970040.pdf> [<https://perma.cc/M5LY-8CNE>] (describing some of the efficiencies associated with surface mining compared to underground mining).

237. 2010: *Statistical Abstract: State Rankings*, U.S. CENSUS BUREAU, <http://www.census.gov/library/publications/2009/compendia/statab/129ed/rankings.html> [<https://perma.cc/C37F-D6SR>] [hereinafter *2010 Statistical Abstract*] (last updated Sept. 3, 2015); KONTY & BAILEY, *supra* note 40, at 23.

238. *2010 Statistical Abstract*, *supra* note 237.

239. See ARON PATRICK ET AL., KY. ENERGY AND ENV'T CABINET, DEP'T FOR ENERGY DEV. AND INDEP., & KY. COAL ASS'N, KENTUCKY COAL FACTS 3, 56 (14th ed. 2014) (noting an 11.8% decrease in production, a 15.5% decrease in employment, and the second lowest electricity price in the country).

240. See KONTY & BAILEY, *supra* note 40, at 17–18, 23 (stating Kentucky's coal industry, in 2006, employed 17,669 individuals who were paying sales tax, personal income tax, property tax and motor vehicle taxes); see also *Employment*, KY. COAL EDUC., http://www.coaleducation.org/ky_coal_facts/employment/ky_employment.htm [<https://perma.cc/5YDM-L54Y>] (last visited Sept. 4, 2017) (citing statistics showing the downward trend in employment from 47,190 in 1979 to 17,959 in 2006).

241. KONTY & BAILEY, *supra* note 40, at 18.

242. *Id.* at 20.

tax, sales tax on coal company purchases, corporate income tax, and other related taxes.²⁴³ However, Kentucky expended nearly \$240 million maintaining the coal haul road system that same year.²⁴⁴ Furthermore, the state subsidizes the coal industry²⁴⁵ and governmental services for all direct and indirect employees of the mining industry.²⁴⁶ While the study admits the near impossibility of generating precise figures, it concluded the total net impact of the coal industry on Kentucky in 2006 was a \$115 million cost to the state.²⁴⁷

The 2006 MACED study was based on a prior study conducted in 1986 claiming a \$130 million cost in 1985.²⁴⁸ It is noteworthy that other Appalachian regions with long-term relationships with the coal industry replicated the study and found similar results.²⁴⁹ Contrary to the industry's assertion and in spite of the direct and indirect injection of revenue to the state and local economies, the coal industry externalizes a greater cost to surrounding communities that remains unquantified and uncalculated.²⁵⁰

243. *Id.* at 9.

244. *Id.* at 14. The coal haul road system are the roads, bridges, and highways in Appalachia used to transport coal from the mine site. Because the trucks are loaded with tons of material, the damage to the road system is significant and costly to maintain. *Id.*

245. *See id.* at 11–16 (discussing a variety of tax exemptions and tax expenditures available to the mining industry that diminish state revenues). In 2006, coal's share of the "Energy and Energy Producing Fuels" tax expenditure (subsidy) was \$5.8 million. Transportation expenditures are also deductible; in 2006 "expenses incurred in transporting coal from the mine mouth or pit to a processing plant, tipple, loading dock, or customer is [also] deductible in computing gross value" resulted in a \$17.7 million tax expenditure. *Id.* at 12–13.

246. *See id.* at 18, 21 (indicating substantial revenue is used to provide educational and infrastructural needs, as well as other public services, such as schools, transportation, and roads).

247. *See id.* at 22–23 (noting the study did not include externalized costs of "healthcare, lost productivity resulting from injury and health impacts, water treatment, water infrastructure to replace damaged wells, environmental remediation . . . social spending associated with declines in coal employment").

248. *See id.* at 8 (projecting an impact of approximately \$57 million in 2000).

249. *See* RORY MCILMOIL, ET AL., DOWNSTREAM STRATEGIES, THE IMPACT OF COAL ON THE PENNSYLVANIA STATE BUDGET 53 (2012) (noting coal industry activity has generated over \$400,000 dollars from direct coal employment); RORY MCILMOIL, ET AL., THE IMPACT OF COAL ON THE VIRGINIA STATE BUDGET 46 (2012) (noting the total revenues contributed by the Virginia coal industry totaled over \$15 million dollars); RORY MCILMOIL ET AL., DOWNSTREAM STRATEGIES, THE IMPACT OF COAL ON THE WEST VIRGINIA STATE BUDGET 51 (2010) (noting revenues from coal-related employment generated about \$170 million dollars).

250. *See, e.g.,* RORY MCILMOIL ET AL., THE IMPACT OF COAL ON THE VIRGINIA STATE BUDGET 47 (2012) (emphasizing health costs, loss of property tax revenue to support public

The long-term harms of surface coal mining in Appalachia are significant and substantial including but not limited to property damage, environmental degradation, and personal injury from the decades of pollution accumulating in the local environment. Scientific evidence supports the assertion that surface mining in local Appalachian communities increases the risk of serious illnesses and death. Considering the environmental and human health costs of surface mining, the industry has an incentive to reduce the harm or pay the price of making citizens and communities whole.

VI. ABNORMALLY DANGEROUS ACTIVITIES

A. *From the First to the Third Restatement*

Under the First Restatement, an activity is ultra-hazardous if it “(a) necessarily involves a risk of serious harm to the person, land[,] or chattels of others which cannot be eliminated by the utmost care, and (b) is not a matter of common usage[.]”²⁵¹ The Second Restatement of Torts § 520 evaluates abnormally dangerous activities through a series of six factors.²⁵² One factor considers “the high degree of risk of some harm[,]” while another factor evaluates whether “the harm that results from [the activity is likely to] be great.”²⁵³ The predominant characteristic of strict liability for an abnormally dangerous activity is the finding of liability, even when the activity is conducted with the “utmost care.”²⁵⁴

The Third Restatement of Torts § 20 combines those six factors into a single element, questioning whether the activity involves a “highly

education, and disaster recovery in Appalachian communities are not included as costs in this and other similar reports, but should be investigated further by the state).

251. RESTATEMENT (FIRST) OF TORTS § 520(a) & (b) (AM. LAW INST. 1938).

252. RESTATEMENT (SECOND) OF TORTS: PHYSI. & EMOT. HARM § 520(a)–(f) (AM. LAW INST. 1977) (determining whether an activity is abnormally dangerous, the following factors are to be considered: (a) existence of a high degree of risk of some harm to the person, land[,] or chattels of others; (b) likelihood that the harm that results from it will be great; (c) inability to eliminate the risk by the exercise of reasonable care; (d) extent to which the activity is not a matter of common usage; (e) inappropriateness of the activity to the place where it is carried on; and (f) extent to which its value to the community is outweighed by its dangerous attributes”).

253. *Id.* § 520(a) & (b).

254. RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 Reporters’ Note cmt. h (AM. LAW INST. 2012).

significant risk of physical harm.”²⁵⁵ Thus, a harm may be “highly significant” if it has an “especially high likelihood of harm, *or* an especially great severity of harm.”²⁵⁶ The second element of an abnormally dangerous activity under the Third Restatement is that “the activity is not one of common usage.”²⁵⁷ When a court rules that an activity is abnormally dangerous as a matter of law, the defendant and those in the defendant’s position, have a strong incentive to make prudent decisions.²⁵⁸ Because the defendant is the actor, the defendant is in the best position to consider and implement those precautions to reduce the risk of harm.²⁵⁹ Strict liability holds the defendant responsible for choices that might escape the attention of the courts under negligence theories of liability.²⁶⁰ While negligence cases may never fully examine the “reasonableness” and “degree of activity” of the defendant’s choice, strict liability for abnormally dangerous activities under the Third Restatement assumes the activity’s value is irrelevant to the question of whether liability lies with the defendant.²⁶¹ A reasonable actor assumes the risks involved with the activity are worth the future value gained and, as a matter of fairness, should be liable for damages caused by the activity and incurred by others.²⁶²

B. *Elements of Analysis*

As noted above, the “risk of harm” may be highly significant for either the “high risk of harm” element or the “severity of the expected harm”

255. *Id.* § 20(b)(1).

256. *Id.* § 20 cmt. g (emphasis added).

257. *Id.* § 20(b)(2).

258. *Id.* § 20 Reporters’ Note cmt. b.

259. *Id.* § 20 cmt. e. Causation becomes crucial to a finding of strict liability. *Id.* § 20 cmt. h (AM. LAW INST. 2012). Courts hold the causation of harm normally rests at the intersection of multiple activities by both defendant and plaintiff. *Id.* A judge should make a finding of strict liability when the “defendant[’s] role is sufficiently exclusive as to render the imposition of strict liability appropriate.” *Id.*

260. *Id.* § 20 cmt. b.

261. *See id.* § 20 cmt. l & Reporters’ Note cmt. b (noting that under a negligence theory under § 3, an accounting of the benefits foregone by the defendant are weighed against abstaining from the activity). This is a highly manipulatable balancing test where benefits may be characterized as personal benefits, benefits to the local community, or benefits to society as a whole. *Id.* § 20 cmt. l. The greater the perceived benefits, the less likely the defendant’s choice to engage in those activities is negligent. *Id.*

262. *Id.* § 20 cmt. f.

element.²⁶³ Some activities conducted in the absence of negligence for long periods of time could be expected to bring about eventual injuries.²⁶⁴ Since the likelihood of these injuries may be minimized over time, a showing of serious injuries to a number of persons will be required to establish the type of severity that justifies a finding of a highly significant risk.²⁶⁵ The strict liability case is strengthened by showing the defendant had actual knowledge or should have known of the risks at the time of the conduct that resulted in the plaintiff's injuries.²⁶⁶ The reasonable care of all parties is irrelevant under § 20 of the Third Restatement as strict liability protects "the innocent person who suffers harm as a result of [an] unavoidable risk of harm that is inherent in the defendant's activity."²⁶⁷ Generally, courts have found an activity to be abnormally dangerous when risks cannot be eliminated by reasonable or even utmost care.²⁶⁸

Even though a court may find that an activity poses a highly significant risk despite reasonable care, the activity is not abnormally dangerous if it

263. *Id.* § 20 cmt. g.

264. *See id.* § 20 cmt. g (stating an absence of highly significant risks is one reason why courts are unwilling to impose strict liability due to prospective harm).

265. *Id.* § 20 Reporters' Notes cmt. g. In the case of surface mining in Appalachia, the risk of immediate harm from flooding and long-term serious health consequences coexists with impending serious health risks to passive communities. *See* Gregory Wallace, et al., *Interior Dept. Halts Study Into Appalachian Mining Technique's Likely Health Hazards*, CNN (Aug. 23, 2017), <http://www.cnn.com/2017/08/22/politics/appalachian-coal-mining-health-study/index.html> [<https://perma.cc/ZG3A-9P5Z>] (linking surface mining to increased lung and kidney disease rates, as well as higher death rates); Glynis Board, *The Flood Next Time: Warming Raises the Risk of Disaster*, OHIOVALLEYRESOURCE (July 22, 2016), <http://ohiovalleyresource.org/2016/07/22/flood-next-time-warming-raises-risk-disaster/> [<https://perma.cc/XHX6-2EU6>] (noting an increase in rainfall intensity in Appalachia).

266. *See* RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 cmt. i (AM. LAW INST. 2012) (stating a defendant disposing of toxic chemicals should know of their harmful quality, making a finding the activity is abnormally dangerous appropriate).

267. *Id.* § 20 cmt. h.

268. *See id.* § 20 Reporters' Notes cmt. h (listing a number of cases from different jurisdictions that have made their determination on the inability of minimizing risks with the exercise of reasonable care); *see also* Gerald W. Boston, *Strict Liability for Abnormally Dangerous Activity: The Negligence Barrier*, 36 SAN DIEGO L. REV. 597, 622 (1999) (noting that after a review of cases applying the Second Restatement's § 520 factors, courts treated the ineffectiveness of eliminating risks as "especially . . . indispensable" in an affirmative finding of abnormally dangerous activity). The Reporters of the Third Restatement found the same evidence to support this multi-jurisdictional assertion. RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 Reporters' Notes cmt. h (AM. LAW INST. 2012).

is of common usage.²⁶⁹ Common usage may turn on whether an activity is a non-natural use, a standard developed in *Rylands v. Fletcher*.²⁷⁰ An activity may be of common usage when carried on by a large portion of the community, thereby making the activity a natural use.²⁷¹ In some cases, a determination of common use may be found when only a limited number of actors conduct the activity, such as the transmission of electricity or gas pipelines.²⁷² The scope of common usage may be broadened if the activity is “common and familiar within the community.”²⁷³ However, the Third Restatement explains the concept of “common usage” should be particularly conscious of public attitudes regarding the activity.²⁷⁴

A finding that an activity was of common usage under the Second Restatement’s analysis was merely one of six factors that also included “inappropriateness of the activity to the place where it is carried on” and “extent to which its value to the community is outweighed by its dangerous attributes.”²⁷⁵ While § 520 vaguely separates common usage from other factors, an estimation of factors (e) and (f) reveals that they incoherently bleed into the concept of common usage.²⁷⁶ The social-value factor established in the Second Restatement is out of step with

269. RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20(b)(2) (AM. LAW INST. 2012).

270. *Rylands v. Fletcher*, 3 L.R.-E. & I. App. 330 (H.L.1868). RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 cmt. j (AM. LAW INST. 2012). Location can be an important distinguishing element in the determination of whether an activity is a non-natural use. *Id.* For example, a reservoir in an arid environment might be natural and necessary, whereas a reservoir on a hill looming above a city may not. *Id.* § 20 cmt. k. These findings are particularly fact dependent. *Id.* § 20 cmt. k.

271. *See id.* § 20 cmt. j (stating the idea of reciprocity often determines whether a perceptively dangerous activity, such as driving an automobile, is considered abnormally dangerous). If most members engage in the activity, then the risks are shared equally throughout the community. *Id.*

272. *Id.*

273. *Id.*

274. *See id.* § (stating “[w]hen an activity has moved beyond its initial stages and has become common and normal, [it] tends to allay concerns as to the acceptability of the activity itself”).

275. *See* RESTATEMENT (SECOND) OF TORTS: PHYSI. & EMOT. HARM § 520 (AM. LAW INST. 1977) (noting (d), (e), and (f) could be heavily weighted to excuse activities that were of economic importance to local communities).

276. RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 (AM. LAW INST. 2012).

strict liability.²⁷⁷ Prosser and Keeton's treatise on torts finds that the Second Restatement's view on abnormally dangerous activity is unsatisfactory.²⁷⁸ The Third Restatement's review of the cases came to a similar conclusion that the frequently mentioned "social-value factor" was not given as much weight as unavoidable danger and common usage.²⁷⁹ The Third Restatement provides a simpler analysis of abnormally dangerous activities by settling on common usage.²⁸⁰

C. *The Role of the Judge*

The court determines whether an activity is abnormally dangerous, not the jury.²⁸¹ The Third Restatement limits the number of factors considered in the court's determination.²⁸² However, an expanded comment *l* emphasizes that the court may rely on judicial notice to acquire information about the activity and that fact-finding may be

277. See Joseph H. King Jr., *A Goals-Oriented Approach to Strict Tort Liability for Abnormally Dangerous Activities*, 48 BAYLOR L. REV. 341, 371 (1996) ("The value-to-the-community factor has been criticized by some commentators who have regarded it as inconsistent with the conceptual separateness of strict liability . . ."); see RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 cmt. E (AM. LAW INST. 2012) ("The appeal of strict liability, it can be noted, does not depend on any notion that the defendant is in a better position than the plaintiff to allocate or distribute the risk of harm."); *But see* *Lamb v. Martin Marietta Energy Systems, Inc.*, 835 F. Supp. 959, 971 (W.D. Ky. 1993). In *Lamb*, the court found the enrichment of uranium to be an activity carried out as a matter of public necessity. *Id.* at 971 (indicating the enriched uranium was designated for reactors that were integral to domestic energy production and weapons production that played a significant role in national defense). A finding of public necessity (social-value) would have prevented application of strict liability under Kentucky law to defendant uranium enricher, had the case not been resolved on other grounds. *Id.*

278. See W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS 555 (5th ed. 1984) (recommending return to the First Restatement of Torts).

279. RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 cmt. e (AM. LAW INST. 2012).

280. *Id.* § 20 cmt. j.

281. RESTATEMENT (SECOND) OF TORTS § 520 cmt. 1 (AM. LAW INST. 1977). *But see* RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 cmt. 1 (AM. LAW INST. 2012) (noting two jurisdictions that have left the determination to the jury, citing *Harper v. Regency Dev. Co.*, 399 So.2d 248 (Ala. 1981) & *Zero Wholesale Gas Co. v. Stroud*, 571 S.W.2d (Ark. 1978)). Of note is *Koger v. Ferrin*, deciding that when the facts attributed to the activity are in dispute, the jury should decide the relevant factual findings. *Koger v. Ferrin*, 926 P.2d 680 (Kan. Ct. App. 1996). While the findings may rest with the jury, the final determination on the issue presumably lies with the court. *Id.*

282. RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 cmt. 1 (AM. LAW INST. 2012).

provided by expert testimony.²⁸³ “The facts in question concern an entire class of activities within society, rather than the conduct of the particular defendant.”²⁸⁴ It is the plaintiff’s obligation to provide compelling factual support to explain why strict liability should apply.²⁸⁵ The imposition of strict liability on any activity will undoubtedly have a broad societal impact, and therefore should be properly supported.²⁸⁶

VII. APPLYING § 20 OF THE THIRD RESTATEMENT

A. *Surface Mining in Appalachia*

Often, the location of the defendant’s conduct plays a significant role in evaluating the risk involved.²⁸⁷ Under the Second Restatement, the location’s appropriateness is an independent factor, but the Reporter’s Notes in the Third Restatement suggest it is a dependent variable.²⁸⁸ The Third Restatement proposes that a court may differentiate between appropriate and inappropriate locations based on whether an assumption of reciprocated risk existed within the community where the activity is

283. *Id.*

284. *Id.*

285. *See id.* § 20 cmt. e (rejecting plaintiff’s claim in *Ballard v. Buckley Powder Co.*, 60 F. Supp. 2d 1180 (D. Kan. 1999) for failure to introduce evidence establishing strict-liability factors); *see also id.* § 20 cmt. l (citing RESTATEMENT (SECOND) OF TORTS: PHYSI. & EMOT. HARM § 520 (AM. LAW INST. 1977)) (explaining these claims fail frequently because the plaintiff fails to meet this burden adequately).

286. *See id.* § 20 cmt. l (stating the advantages of the court’s decision gives parties notice, avoids differing outcomes by jurisdiction, and reduces litigation). Comment *l* notes the court’s decision implicates the concerns in § 7, Comment *i*, and § 8, Comment *c*. *Id.* Section 8, Comment *c* suggests that while “[t]ort law has thus accepted an ethics of particularism [that] tends to cast doubt on the viability of general rules of producing determinate results and requires that actual moral judgments be based on the circumstances of each individual situation.” *Id.* § 20 cmt. c. Settling the issue of whether surface mining in Appalachia is an abnormally dangerous activity is appropriate for the state’s highest court. *Ballard v. Buckley Powder Co.*, 60 F. Supp. 2d 1180 (D. Kan. 1999). However, the issue must be raised and litigated within the lower courts. *Id.* A strong factual record of the recognized societal harms and particularized injuries of the case at the trial level provide the strongest opportunity to prevail. *See id.* (clarifying plaintiff must have supporting facts of strict liability to prevail).

287. *See* RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 cmt. g (AM. LAW INST. 2012) (explaining blasting on an uninhabited mountain does not involve a major risk, unlike blasting in a residential area).

288. *See id.* § 20 Reporter’s Notes cmt. k (AM. LAW INST. 2012) (suggesting reservoirs for storing water in arid communities are not abnormally dangerous, whereas the storage of water in high rainfall areas could be found strictly liable for harm from storage failure).

occurring.²⁸⁹ This can hardly be the case in Appalachia considering the low employment rates in the coal industry and the correlating high unemployment rates in the community²⁹⁰ which illustrate the undue influence of a unilateral relationship.²⁹¹ The one-sided nature of the relationship is evidenced by the long-term effects of surface mining on local communities in a subsidized industry²⁹² that externalizes its costs,²⁹³ and often refuses legal and financial obligations under state and federal law.²⁹⁴ Furthermore, the Third Restatement asks the court to consider public attitudes within the community.²⁹⁵

Both the Second and Third Restatements describe a hypothetical where blasting on an uninhabited mountainside is not abnormally dangerous, but the same activity becomes abnormally dangerous in a populated area.²⁹⁶ Appalachia is not an abandoned mountainside, yet SMCRA allows blasting within 300 feet of a residence.²⁹⁷ Furthermore, surface mining in Appalachia increases the risk of flooding.²⁹⁸ This is not a new phenomenon; the reoccurring failure of sediment ponds is historically

289. *Id.* § 20 Reporter's Notes cmt. k.

290. *See* KONTY & BAILEY, *supra* note 40, at 17 (admitting the coal industry impacts employment on a county-scale, but contrasts that supposition by indicating coal-industry employment is relatively small).

291. 2010 *Statistical Abstract*, *supra* note 237.

292. KONTY & BAILEY, *supra* note 40, at 4.

293. *Id.* at 2.

294. Interview with Mary V. Cromer, *supra* note 98.

295. RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 cmt. j (AM. LAW INST. 2012).

296. RESTATEMENT (SECOND) OF TORTS: PHYSI. & EMOT. HARM § 520 cmt. j (AM. LAW INST. 1977); RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 cmt. k (AM. LAW INST. 2012).

297. 30 C.F.R. § 761.11 (e) (2016); *see* Ky. Stone Co. v. Gaddie, 396 S.W.2d 337, 340 (Ky. 1965) (holding that "[i]t is our view that blasting is such an inherently dangerous operation that a landowner . . . may not insulate himself from liability flowing from blasting on his premises merely entrusting the task to an independent contractor.").

298. *See* B.A. Bryan & J.D. Hewlett, *Effect of Surface Mining on Storm Flow and Peak Flow from Six Small Basins in Eastern Kentucky*, 17 WATER RESOURCES BULL. 290, 298 (1981) (concluding "minor increases in mean storm flow volumes and the apparent reduction in the larger storm flows, together, clearly imply no appreciable increase in flood water discharge from the surface mined basins"). *But see* *In re Flood Litig.*, 607 S.E.2d 863, 874 (W.Va. 2004) (holding coal mining was not abnormally dangerous and did not contribute to a higher risk of flash flooding in such a way that the risk could not be diminished by the exercise of due care).

well established.²⁹⁹ Surface mining substantially degrades water quality in surrounding areas affecting local drinking water.³⁰⁰ Reclamation's mitigating promises have proved unfounded in the long-term studies of communities near surface mining sites.³⁰¹ Studies show the pollution of private wells surrounding surface mine sites,³⁰² and the disproportionate health impacts lead to higher mortality rates regardless of the population's direct or indirect association with surface mining.³⁰³

Surface mining in Appalachia is a practice forced on the surrounding community, met by public outrage, and litigation for over fifty years.³⁰⁴ Not only has surface mining undermined the preference for conventional mining, it has directly and indirectly devastated Appalachia.³⁰⁵ The reciprocity that favors negligence theory over strict liability cannot be

299. See *Buffalo Creek*, W. VA. DIVISION OF CULTURE & HIST., <http://www.wvculture.org/history/buffcreek/buff1.html> [https://perma.cc/7HVF-2Q32] (last visited Oct. 11, 2017) (describing a previous flooding incident in Buffalo Creek); *Residents of Southern Appalachia Regard Coal Slurry Dams as Looming Threats*, FREE SPEECH RADIO NEWS (May 28, 2014), <https://fsrn.org/2014/05/residents-of-southern-appalachia-regard-coal-slurry-dams-as-looming-threats/> [https://perma.cc/UPR7-XDE5] [hereinafter *Residents of Southern Appalachia*] (reporting the Office of Surface Mining tested seven different impoundments and only 16 of 73 tests met minimum standards).

300. Hopkins II et al., *supra* note 11, at 87.

301. See Hendryx & Ahern, *supra* note 27, at 541 (concluding the “human cost of the Appalachian coal-mining economy outweighs its economic benefit”); Hopkins II et al., *supra* note 11, at 91–93 (reporting on the long-term impacts of surface mining).

302. Shiber, *supra* note 4, at 327; see MCAULEY & KOZAR, *supra* note 226, at 1 (stating sampled wells near reclaimed surface coal mines showed higher levels of aluminum, iron, and manganese compared to wells in unmined sites).

303. See *Mortality*, *supra* note 42, at 243 (concluding “higher chronic heart, respiratory[,] and kidney disease mortality in coal mining areas may partially reflect environmental exposure to particulate matter or toxic agents present in coal and released in its mining and processing”); see also Hendryx & Ahern, *supra* note 27, at 547 (identifying higher mortality rates in areas with higher mining).

304. See CAUDILL, *supra* note 26, at 65–66 (“[G]enerations of litigation between coal and timber companies and the mountaineers . . . eventually stripped away from the highlander much of the land which had supported his rugged independence for so long.”).

305. Hendryx & Ahern, *supra* note 27, at 547.

It is instantly apparent that this method of recovery is vastly cheaper than shaft or drift mining . . . When the strippers move on, once level meadows and cornfields have been converted to jumbled heaps of hardpan, barren clay from deep in the earth. This hellish landscape is slow to support vegetation and years elapse before the yellow waste turns green again. In the meantime immense quantities of dirt have crept into the sluggish.

CAUDILL, *supra* note 26, at 311.

stretched to include surface mining in Appalachia.³⁰⁶ If reciprocity between mining companies and local communities existed, Appalachia would be a thriving economic community, highly populated, highly educated, and self-sufficient. The economic data does not support that conclusion.³⁰⁷

B. *The Defense of Surface Mining*

Coal mining companies may claim SMCRA's main purpose was to balance economic and environmental issues while supporting an important national source of energy.³⁰⁸ In 1977, SMCRA was passed with very little regard to science, if any.³⁰⁹ Only after forty years of accumulating scientific data could a legislature reasonably consider the impacts of surface mining and reclamation on Appalachia's unique hydrological environment and surrounding communities.³¹⁰ SMCRA expressly values Appalachian communities and does not suggest

306. RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 cmt. k (AM. LAW INST. 2012). Society accepts the high likelihood and severity of risk associated with cars and airplanes as a matter of common usage. *Id.* But, should local communities in Appalachia disproportionately bare the harms of strip mining over the communities that burn the coal?

307. 2010 *Statistical Abstract*, *supra* note 237.

308. 30 U.S.C. § 1202(b) (2012). While the coal industry may continue to claim this, many coal fired power plants have transitioned to natural gas. Hal Harvey, *Economics are Transitioning America From Coal to Clean*, FORBES (Mar. 2, 2017, 8:00), <https://www.forbes.com/sites/energyinnovation/2017/03/02/economics-are-transitioning-america-from-coal-to-clean/#531a0fd452b3>. The continued advancement in alternative and cleaner energies is slowly cutting into the nation's reliance on coal. *Id.* A look into the identities of coal mining companies in Appalachia reveals that Indian, German, and other international coal mining companies are mining coal in Appalachia, much of which is exported. *Frequently Asked Questions Where does the United States Export the Most Coal?*, U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/tools/faqs/faq.php?id=66&t=2> [<https://perma.cc/Z9QV-UE6D>] (last updated Aug. 11, 2017). The claim is not as true as it was in 1977. *See U.S. Coal Exports on Record Pace in 2012, Fueled by Steam Coal Growth*, U.S. ENERGY INFO. ADMIN. (Oct. 23, 2012), <https://www.eia.gov/tools/faqs/faq.php?id=66&t=2> [<https://perma.cc/UHF5-GFD4>] (noting The Netherlands, Brazil, and India are among the top destinations of U.S. coal exports).

309. U.S. Department of Interior, *Chronology of Major SMCRA-Related Events*, OFF. OF SURFACE MINING RECLAMATION AND ENFORCEMENT, <https://www.osmre.gov/lrg/chronlisting.shtm> [<https://perma.cc/P26A-LMST>] (last updated Aug. 1, 2017). One bright spot, SMCRA did set up the framework for supporting research to evaluate the consequences and best practices as responsibilities subsumed by the CWA. *Id.*

310. *Id.* The provisions for reevaluation are clearly expressed in SMCRA, namely through its ability to declare a cessation order. *See id.* (overviewing the Surface Mining Reclamation and Enforcement act).

protecting a source of energy should come at the cost of the people where the source exists.³¹¹

It may be wise to consider Illustration 2 set forth in the Third Restatement.³¹² The hypothetical states a computer manufacturing company that is essential to the economy generates toxic chemicals during its manufacturing process.³¹³ The chemicals are stored using reasonable care and according to public regulations.³¹⁴ The nature of the chemicals makes it necessary for the barrels to be opened for periods of time.³¹⁵ The dispersion of the toxic chemicals into the air is likely, but not certain, to reach the company's neighbors.³¹⁶ When and if the company's neighbors become seriously ill, the company may be found liable for an abnormally dangerous activity.³¹⁷ While jurisdictions are split on whether extensive government regulations make a finding that an activity is abnormally dangerous more difficult, some jurisdictions state government regulations make it easier to find the activity abnormally dangerous.³¹⁸ An intermediate approach would propose that public regulations of the activity are irrelevant to the underlying issue of whether the activity is abnormally dangerous and whether the innocent, passive neighbor should bear the cost of injury.³¹⁹ Government regulations identify mandated precautions and notify industries and citizens of the potential for risk and harm.³²⁰ Adherence to regulations does not

311. 30 U.S.C. § 1201(d) (2012) (“The expansion of coal mining to meet the Nation’s energy needs makes even more urgent the establishment of appropriate standards to minimize damage to the environment and to productivity of the soil and to protect the health and safety of the public.”).

312. RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 illus. 2 (AM. LAW INST. 2012).

313. *Id.*

314. *Id.* § 20 cmt. k, illus. 2.

315. *Id.* § 20 illus. 2.

316. *Id.*

317. *Id.*

318. *Id.* § 20 Reporters’ Notes cmt. h.

319. *Id.*

320. See Eli Combs et. al., *When does Regulation Work?*, YALE INSIGHTS (Feb. 6, 2014), <http://insights.som.yale.edu/insights/when-does-regulation-work> [https://perma.cc/B6QZ-79HH] (describing regulation in the investing context and its effects in a macro sense).

guarantee that the risk is removed or impute absolute immunity to industries operating within regulatory guidelines.³²¹

Courts have found some harms are unforeseeable, thereby severing the causation between the activity and the harm.³²² Both the First and the Second Restatement agree that the defendant should recognize the risk of the activity.³²³ The American Law Institute suggests there should be “no liability if ‘the scientific state of knowledge at the time’ [of the defendant’s activity] gave no signal that the activity posed a substantial human health risk.”³²⁴ The spectrum of court decisions ranges from a showing of intentional exposure to the risk to actual knowledge of the risk.³²⁵ “[I]t is clear [that] strict liability will never be found unless the defendant is aware of the abnormally dangerous condition or activity. . . . Mere negligent failure to discover . . . is not enough”³²⁶ While the lack of scientific knowledge might have been a credible argument before 1977, the controversial nature of the activity, the polarized debates characterized by claims and counterclaims, and the duration of the debate cannot possibly provide the safety of ignorance to an actor in Appalachia’s coal industry.³²⁷ A coal company’s foreseeability of harm implies substantive speculation.³²⁸ However, the coal industry’s knowledge of the associated risks and harms of surface

321. RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 cmt. b (AM. LAW INST. 2012).

322. *Id.* § 20 cmt. i.

323. RESTATEMENT (SECOND) OF TORTS: PHYSI. & EMOT. HARM § 520 cmt. g (AM. LAW INST. 1977); *see* RESTATEMENT (FIRST) OF TORTS § 520 cmt. a (AM. LAW INST. 1938) (stating inherent risk cannot be regarded as so unreasonable as to make it negligent to carry it on).

324. RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 Reporters’ Note cmt. i (AM. LAW INST. 2012).

325. *Id.* Compare *McLane v. Nw. Natural Gas Co.*, 467 P.2d 635 (Or. 1970) (holding the basis for imposing strict liability was that defendants intentionally exposed the community to the risk) with *Bolivar v. R & H Oil & Gas Co.*, 789 F. Supp. 1374 (S.D. Miss. 1991) (holding strict liability requires defendant’s actual knowledge of the risk).

326. KEETON ET AL., *supra* note 278, at 559.

327. *See Lung Cancer*, *supra* note 37, at 4 (proclaiming that studies on the effects of coal-mining and of scientific evidence preclude any claim or denials about the dangerous nature of the activity).

328. RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 Reporters’ Note cmt. i at 255 (AM. LAW INST. 2012); *see Perez v. Southern Pacific Transportation Co.*, 883 P.2d 424, 426 (Ariz. Ct. App. 1993) (agreeing liability rests upon the intentional doing of that which a person knows may cause loss to another and if they present foreseeable and significant risks of harm).

mining could prove detrimental in front of an Appalachian judge who could objectively consider the actions of a reasonable actor.³²⁹

The Restatements are persuasive authority and non-binding on the courts.³³⁰ The purpose of the Restatements was to express the current state of the law.³³¹ The state of law may reflect continuity between jurisdictions or stark contrasts.³³² Most jurisdictions have concluded blasting is an abnormally dangerous activity under the Second Restatement.³³³ Furthermore, most jurisdictions in the United States, including Kentucky, endorse the Second Restatement of Torts § 520's analysis of strict liability for abnormally dangerous activities.³³⁴ A review of recent case law reveals that the District of Columbia, Maryland, Vermont, Nebraska, and Connecticut recognize the Third Restatement as part of their analysis of negligent infliction of emotional distress.³³⁵ The

329. *See, e.g.*, RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 Reporters' Note cmt. i at 255 (AM. LAW INST. 2012) ("According to *Perez v. Southern Pacific Transportation Co.*, 883 P.2d 424 (Ariz. Ct. App. 1993), the test concerns those dangers of which 'the person knows or should[,] in the exercise of ordinary care[,] know.'").

330. *See* BONITA K. ROBERTS & LINDA L. SCHLUETER, LEGAL RESEARCH GUIDE: PATTERNS AND PRACTICE 125 (Matthew Bender & Co. eds., 7th ed. 2015) (explaining the Restatements are persuasive, non-binding authority, because they lack legislative sanction).

331. *Id.*

332. *See id.* (indicating the Restatements provide thorough case analysis on both sides of an issue).

333. RESTATEMENT (THIRD) OF TORTS: PHYSI. & EMOT. HARM § 20 cmt. e (AM. LAW INST. 2012).

334. *See id.* § 20 cmt. h (indicating courts across the nation have adopted the Restatement Second's interpretation of "reasonable care," while utilizing the integrated approach under the First Restatement). Kentucky has failed to recognize the standard of strict liability, preferring the negligence standard. *See Spivey v. Sheeler*, 514 S.W.2d 667, 670–71 (Ky. 1974) (finding a father negligent after his juvenile son shot another juvenile by obtaining key from father's locked gun case); *Styles v. Eblen*, 436 S.W.2d 505–06 (Ky. 1969) (finding oil lessee was negligent for leaving electric lines connected to power after electrocution of landowners hogs); *Carr v. Ky. Utilities Co.*, 301 S.W.2d 894, 898–99 (Ky. 1957) (denying recovery under a theory of contributory negligence and supervening causation for electrocution injuries).

335. *See, e.g.*, *Hedgepeth v. Whitman Walker Clinic*, 22 A.3d 789, 802 (D.C. 2015) (applying the Third Restatement and rejecting the need for special rules, such as designating a zone of danger, to guard against unlimited liability); *Treibt v. On Tract Karting, Inc.*, No. DBDCV146015298S, 2015 WL 719633, at *2, *4–5 (Conn. Super. Ct. 2015) (declining to find strict liability under the Third Restatement when the injured voluntarily engaged in the activity); *Wilson v. Exxon Mobil Corp.*, No. 1524 Sept. Term 2014, 2015 WL 6549167, at *7 (Md. Ct. Spec. App. Aug. 13, 2015) (stating the Third Restatement requires proof that abnormally dangerous activity caused physical harm to recover under strict liability theory); *Vincent v. DeVries*, 72 A.3d 886 (Vt. 2013) (following the Third Restatement's modern trend allowing recovery for serious emotional distress absent physical injury when harm is of such a personal and emotional nature);

federal districts of Nevada and the Virgin Islands have also considered the Third Restatement's analysis for strict liability for abnormally dangerous activities.³³⁶ Slowly, the Third Restatement's views on strict liability are being considered by federal and state courts.

In *Roeder v. Atlantic Richfield Co.*,³³⁷ the U.S. District Court of Nevada applied the Third Restatement and denied a motion to dismiss after identifying a number of approaches to the abnormally dangerous activity of mining.³³⁸ In *Roeder*, the court determined the likelihood of harm flowing from open-pit copper mining to be substantial despite the activity's value to the community.³³⁹ In particular, the court identified potential harm in the form of serious health issues resulting from the seepage of stored chemicals and waste materials from the mining process into the groundwater or released into the air.³⁴⁰ Because this potential harm could not be eliminated, dismissal of a strict liability claim was not appropriate.³⁴¹ The U.S. District Court of Nevada refused summary judgment for the alleged seepage of toxic chemicals into the water supply, holding that strict liability was available in Nevada for mining that resulted in toxic chemicals entering the local water supply.³⁴²

Ginapp v. City of Bellevue, 809 N.W.2d 487, 492–93 (Neb. 2012) (holding the defendant used reasonable care and therefore, under the Third Restatement, was not liable for plaintiff's injuries).

336. *Frontani v. Marriot Ownership Resorts (St. Thomas), Inc.*, Civil No. 2015-22, 2016 WL 1092523, at 2 (V.I. 2016); *Roeder v. Atlantic Richfield Co.*, No. 3:11-cv-00105-RCJ-RAM, 2011 WL 4048515, at 8–9 (D. Nev. 2011).

337. *Roeder*, 2011 WL 4048515.

338. *Id.* at *5.

The Court will deny the motion to dismiss the strict liability claim. Strict liability is available in this case under either the factor-based approach of the Restatement (Second), which the Nevada Supreme Court currently approves, or under the element-based approach of the Restatement (Third), even assuming the Nevada Supreme Court would now adopt it.

Id.

339. *Id.*

340. *Id.*

341. *Id.*

342. *See id.*

The present case is most analogous to the *Ventron* case from New Jersey, and in fact a relevant treatise uses that case as an example of strict liability in the toxic tort context. *See* Am. Bar Ass'n, Section of Env't, Energy, & Res., *Toxic Tort Litigation* 31–32 (D. Alan Rudlin ed.2007). Professor Dobbs likewise notes that “[s]trict liability for accumulation, escape, percolation, or disposal of [toxic] wastes seems to be especially appropriate.” 2 Dobbs, *supra*, § 348, at 957. Open-pit copper mining likely had a great value to the community and was likely appropriate to the area of the Mine Site when it was ongoing, and open-pit copper mining may be common in Nevada (or may have been so during the relevant time period). However, it was not likely a common activity for “many

Lawyers in Appalachia should plead that the Second Restatement fails to properly balance the interests of industry and community citing to *Roeder* and other jurisdictions applying the Third Restatement § 20. Lawyers should pose well-founded and factually-sufficient pleadings for strict liability claims under the Second and Third Restatement for abnormally dangerous activities along with standard negligence and nuisance claims in an effort to preserve objections and build factually sufficient records for appellate challenges.

VIII. JURISPRUDENCE AND THE NECESSITY TO CHANGE COURSE

Precedents by their nature are subject to judicial discretion based on the facts judges choose to emphasize or ignore.³⁴³ Imprecise definitions of “environment,” which may be broad or narrow depending on the subjective interpretation, combined with a court’s findings of the accumulating scientific evidence of community harm should play a larger part in the transformation of the common law in Appalachia.

A. *History of American Common Law*

Undisputedly, America’s legal origins begin with the adoption of the English common law system, but from the very beginning adherence to *stare decisis* and deference to judicial precedent has been challenged throughout American legal history.³⁴⁴ Since the inception of the federal system, advocates questioned the common law’s ability to replace the legislative process that authorizes statutes expressing the will of the people.³⁴⁵ Early adherents to the English common law equating use and

people in the community.” Moreover, open pit mining likely involves the use of many chemicals and the storage of many waste materials that will inevitably seep into the ground when stored in outdoor piles, as Plaintiffs allege, creating a high degree of risk of harm to people and land via heavy metals contamination. The harm is likely to be great, causing serious health problems, such as cancer. Finally, under the Restatement (Third) and *Rylands*, the risk of such seepage cannot be eliminated through reasonable care. In order to be profitable, a mine must presumably create abnormally vast piles of waste that cannot reasonably be isolated from the surrounding air and soil. Whatever is in these waste piles will inevitably diffuse into the surrounding environment. The Court will not dismiss the strict liability claim.

343. See MORTON J. HOROWITZ, *THE TRANSFORMATION OF AMERICAN LAW, 1780–1860* at 8–9, 25 (Oxford Univ. Press 1992) (1977) (recognizing judges would use a “variety of legal principles” by which judges would use to make their own decision; implying discretion).

344. *Id.* at 8–9, 27.

345. See *id.* at 12–13 (stating that in *United States v. Worrall* (1798), Justice Chase explained, “the whole of the common law of England has been nowhere introduced . . . the common

custom with binding natural laws were disfavored by post-revolutionary concepts of popular sovereignty.³⁴⁶

American jurisprudence made many alterations, revisions, and announcements of independence from the common law during the 1800s that reflected not only America's burgeoning independence,³⁴⁷ but also the influence of the Industrial Age on legal theories.³⁴⁸ A recurring theme of nineteenth-century American jurisprudence is the accounting for the social utility of the actors as a countervailing factor in considering previously perceived absolutes in contract, property, and tort.³⁴⁹ The common law's strict duty of care was replaced by negligence, which theorized that injuries from socially useful conduct were not compensable unless the actor was careless.³⁵⁰ A property owner's right to prevent others from interfering with one's quiet enjoyment subsided to the Industrial Age's presumption that property ownership conferred a right

law of one State, is not the common law of another"). Therefore, there could be no general common law of America. *Id.* at 12. Horowitz further states, "judges were looking to the legislature for authority to impose common law standards in criminal cases." *Id.* at 13.

346. *See id.* at 25 (stating many questioned the deference to a judge's legislative function and characterized these decisions as arbitrary). Chief Justice Nathaniel Chipman insisted a balancing test should be observed when recognizing the authority of the common law:

Instead of entertaining a blind veneration for the ancient rules, maxims, and precedents, we [sh]ould learn to distinguish between those which are founded on the principles of human nature in society, which are permanent and universal, and those which are dictated by the circumstances, policy, manners, morals, and religion of the age.

Id.

347. *See* Oliver W. Holmes Jr., *The Path of the Law*, 10 HARV. L. REV. 457, 469 (1897) ("It is revolting to have no better reason for a rule of law than that so it was laid down in the time of Henry IV.>").

348. *See* HOROWITZ, *supra* note 343, at 71–78 (stating a general movement limiting the rights of property owners from receiving consequential damages for injuries caused by government was redefined in the age of the social state). While common law principles of just compensation could never be properly disposed, the courts stated "[w]e must have factories, machinery, dams, canals, and railroads." *Id.* American courts recognized a distinct difference between private and public nuisance claims, severely limiting the effectiveness of such claims against private actors involved in public works. *Id.* Courts weighed the social utility of the alleged venture, resulting in mitigated costs and, in some instances, silencing the claimant. *Id.*

349. *Id.* This shift not only reflects the influence of business interest and their access to the courts, but also an independence of American jurisprudential history that allows the common law to develop within the spectrum of prevailing norms. Stretching the boundaries when social utility requires or retracting when the course presents itself ill-advised.

350. *See id.* at 78–81 (describing shifts in policy conferring immunity from nuisance actions on private and government actors engaged in economic development).

to develop one's property regardless of potential injury to others.³⁵¹ The legal concept that a contract is an express recognition of a present agreement bound by adequate consideration was set aside due to the market economy's need for the contract to serve as the basis of future agreements and expected returns.³⁵² In some cases, local custom collided with contract law and commercial interests, leaving most American jurisdictions with precedents relying on nineteenth-century rules of construction for strict contract interpretation.³⁵³ It cannot be claimed with any sincerity that America's unbending subservience to *stare decisis* is unremitting. America's common law system is characterized by the ebb and flow of new ideas and old principles influenced by prevailing social norms.³⁵⁴

B. *Precedents: The Building Blocks of Stare Decisis*

A precedent is an authoritative legal principle created by a judicial decision and the reasoning supporting the decision which has the force of law.³⁵⁵ Common law's authority is not negated even if a court's final ruling is supported by questionable reasoning.³⁵⁶ A plain reading of SMCRA would suggest the conflicting interests between local communities and the coal mining industry are balanced equally, however, only jurisdictions that employ surface mining as a means of extraction will apply and interpret the law.³⁵⁷ Appalachian jurisdictions have balanced these interests showing a greater deference to coal mining's economic importance at the expense of environmental and community

351. *See id.* at 98–99 (describing the legal community's attempt to limit the scope of just compensation as a "phenomenon of industrialization").

352. *See id.* at 167 (stating eighteenth century contract law did not fulfill the expectations of the commercial classes, as it did not guarantee the merchant the express value of his bargain). The law only guaranteed, at most, specific performance. *Id.*

353. *See id.* at 201 (stating the triumph of contract and objective theory in the first half of the 1800s allowed parties to present commercial custom as the implied and agreed upon terms of "contract interpretation").

354. *Id.* at 12–14.

355. Arthur L. Goodhart, *Determining the Ratio Decidendi of a Case*, 40 YALE L.J. 161, 161 (1930) (citing SALMOND, JURISPRUDENCE 201 (7th ed. 1924)).

356. *Id.* at 164. For example, Goodhart suggests modern tort law is the result of poor arguments and property law following incorrect interpretation of history. Despite faults in the underlying reasoning of those doctrines of law, the law is nonetheless authoritative. *Id.* at 164.

357. 30 U.S.C. § 1202(f) (2012) (describing the necessary balance between providing a reliable source of energy and protecting the environment).

interests.³⁵⁸ Interpretation of legislation is an important power of the court.³⁵⁹ Judges engaged in legislative interpretation follow a checklist of considerations more so than any hard and fast rules, especially when both the purpose and language of the law are unclear.³⁶⁰ However, SMCRA's language is clear, obliging a judge to truly balance the competing interests.³⁶¹

When creating precedent, a judge may contour the scope of the holding by distinguishing material facts from immaterial facts.³⁶² Omitted facts and impliedly immaterial facts must be considered immaterial.³⁶³ A court may always avoid precedent by finding a material fact in a current matter that is distinguishable from the material facts that contoured the previous precedent.³⁶⁴ Applying this method of distinction, a judge's judicial notice or a finding of the health impacts in Appalachian communities as the result of surface mining would place a claim of strict liability in uncharted waters—free of controlling precedents that ignored community harm in balancing environmental and economic concerns.³⁶⁵

358. See e.g., *Ohio Valley Env'tl. Coalition v. Aracoma Coal Co.*, 556 F.3d 177 (4th Cir. 2009) (vacating and reversing the District Court's declaratory relief to OVEC holding Aracoma lacked authority to permit discharge into fills distinguished as "waters of the United States").

359. Richard A. Posner, *Legislation and its Interpretation: A Primer*, 68 NEB. L. REV. 431, 441 (1989).

360. See *id.* at 441–50 (describing the benefits and shortcomings of a number of approaches and canons governing statutory interpretation). Posner promotes a pragmatic approach to interpreting legislation when purposive interpretation fails. *Id.* at 449–50.

361. 30 U.S.C. § 1202(f) (2012). See Posner, *supra* note 359, at 449–50 (stating the purpose and motivation are difficult to distinguish for special interests and expressing that laws represent the decisions of many distinct representatives with conflicting or complicated reasons for passing the legislation).

362. See Goodhart, *supra* note 355, at 173 (indicating judges will include facts that are not essential to the judgment, "leaving it for future generations to determine whether . . . these facts constitute a part of the *ratio decidendi*.").

363. See *id.* at 169–75

Under these circumstances there are two possible explanations for the omission: (1) the fact was considered by the court but was found to be immaterial, or (2) the fact in the record was not considered by the court as it was not called to its attention by counsel or was for some other reason overlooked.

As a general rule, material facts do not escape the attention of the court. Goodhart notes the burden of showing a material fact is overlooked is a heavy one. *Id.* at 169.

364. *Id.* at 181–82 (describing a difference in material facts between *Rylands v. Fletcher* and *Nichols v. Marsland* that permitted the *Fletcher* court to avoid application of the principle established in *Rylands*).

365. 30 U.S.C. § 1202(f) (2012).

IX. CONCLUSION

America prospered on “cheap” coal, while Appalachia was abandoned to the wills of absentee interests.³⁶⁶ In-stream settlement ponds have been found to be necessary in Appalachia,³⁶⁷ but it is hard to believe this practice can be considered a “best technology.”³⁶⁸ Any child building an earthen dam on a street after a moderate rain comprehends this exercise in futility. The consequences of reclamation and settlement ponds are apparent in the flooding, polluted wells, and polluted streams, as well as the widespread health impacts which commonly characterize Appalachian communities.³⁶⁹ Rarely have the environmental costs of surface mining been framed as community health consequences.³⁷⁰

There are thousands of settlement ponds across Appalachia.³⁷¹ Some hold billions of gallons of toxic coal slurry.³⁷² Often, bankrupt coal companies abandon their performance bonds and any effort to reclaim the land.³⁷³ In some cases, bonds are insufficient to complete the reclamation of the mine site.³⁷⁴

366. See RASMUSSEN, *supra* note 38, at 1–4 (reporting the transition from farming to mining and timbering was due to speculators and absentees); CAUDILL, *supra* note 26, at 71–74 (stating mining companies flourished by cheaply purchasing mineral interests at the expense of surface owners); Tom D. Miller, *Route 99 Classic Example of Coal Firms’ Influence*, THE HERALD-ADVERTISER & THE HERALD-DISPATCH, *reprinted in* WHO OWNS WEST VIRGINIA?, *supra* note 5, at 2 (highlighting absentee landowners pay minimal property taxes while extracting rich mineral deposits).

367. See *Ohio Valley Env’tl. Coalition v. Aracoma Coal Co.*, 556 F.3d 177, 186, 216 (4th Cir. 2009) (describing the use of sediment ponds instill stability).

368. 30 U.S.C. § 1265(b)(10)(B)(i) (2012).

369. Hendryx & Ahern, *supra* note 27, at 547; MCAULEY & KOZAR, *supra* note 226, at 2, 11; Shiber, *supra* note 4, at 335–38.

370. See Hendryx & Ahern, *supra* note 27, at 547 (suggesting mortality in coal mining areas is caused in part by environmental degradation).

371. Juliet Eiperin & Steven Mufson, *Many Coal Sludge Impoundments Have Weak Walls, Federal Study Says*, WASH. POST (Apr. 24, 2013), https://www.washingtonpost.com/national/health-science/many-coal-sludge-impoundments-have-weak-walls-federal-study-says/2013/04/24/76c5be2a-acf9-11e2-a8b9-2a63d75b5459_story.html?utm_term=.b8cb307b0a8d [<https://perma.cc/56W7-8F4G>]. There are 596 toxic sludge ponds in 21 states, with 114 in West Virginia.

372. *Residents of Southern Appalachia*, *supra* note 299.

373. Interview with Mary V. Cromer, *supra* note 98.

374. *Id.*

Reclamation, as defined in SMCRA, has proven insufficient for its intended purpose.³⁷⁵ Enforcement and funding for state agencies have been historically and ubiquitously lacking.³⁷⁶ While Congress intended SMCRA and CWA to protect the environment through state and federal cooperation, underfunded state agencies fail to properly execute their mission.³⁷⁷ In some instances, coal companies provided fraudulent data for years on pollutants from settlement ponds entering the intermittent stream, and agencies charged with the task were not reviewing the collected data.³⁷⁸

Imposing strict liability on surface mining in Appalachia would provide relief for communities suffering from severe health consequences and justice for innocent bystanders.³⁷⁹ Furthermore, the threat of strict liability as a viable cause of action would encourage the coal mining industry to look soberly at its best practices. Something they have been unwilling or improperly encouraged to do. A decline in the permanent destruction of one of the most biologically diverse ecosystems in the world would allow other economic interests to develop in Appalachian communities, thereby expanding the choices of employment.³⁸⁰ A finding of strict liability against mining companies employing surface mining and harming Appalachia's surrounding communities will lead to more sustainable practices in conventional

375. *See id.* (stating the common practices of the mining industry have proven to be ineffective in meeting the standards of state regulations).

376. *See id.* (emphasizing that the Kentucky Legislature continues to cut the funding for inspectors and monitoring equipment at mine sites).

377. *See* Estep, *supra* note 23 (noting Kentucky has given up more than \$5.5 million in federal funding).

378. *See* Interview with Mary V. Cromer, *supra* note 98 (speaking of a case she was involved in where a mining company falsified reports over a number of years) A single report was copied and presented repeatedly as an original and true description of pollutants entering an intermittent stream. *Id.*

379. *See* RESTATEMENT (SECOND) OF TORTS: PHYSI. & EMOT. HARM § 519 (AM. LAW INST. 1977) (stating strict liability will be imposed from harm caused by abnormally dangerous activities).

380. Adele C. Morris, *Build a Better Future for Coal Workers and Their Communities*, ECON. STUDIES AT BROOKINGS, 7–8, 25 (2016). The health and economic consequences playing out in Central Appalachia could be dealt with and a diversified economy could take hold for the first time in Appalachia. *See id.* (explaining utilization of coal alternatives would be economically beneficial).

underground mining that would employ many more people and preserve the proud history of mining in Appalachia.³⁸¹

The CWA mandates that states apply their own environmental policies that meet EPA standards and enforce sound policy that protects communities near surface mining sites.³⁸² The Final Ruling on Definition of Waters of United States may be rolled back under the current administration,³⁸³ but the profound, substantive nexus analysis as applied to waters of the United States established in *Rapanos* and *Solid Waste Agency of Northern Cook County* remains.³⁸⁴ Courts may continue to encourage the vital understanding of the interdependence between waters, communities, and long-term economic sustainability by applying the nexus test.

The common law is not static. The continuing evolution of the common law, the limited scope of regional precedents based on undiscovered facts, and the recognition of special interest influence in legislation should inform and encourage judges at all levels in Appalachia to look deeper into surface mining's relationship to surrounding communities. Recent findings that coal companies and state regulators have been knowingly falsifying water analysis records³⁸⁵ should embolden judges to realize that the purposes of federal regulations have been thwarted by companies that seem to enjoy special privileges and, often, "immunity."³⁸⁶ A recognition of surface mining in Appalachia as an abnormally dangerous activity would force the actual facts of this epic story to be properly litigated, provide the incentive necessary to force substantive and necessary change in the coal mining industry, and simultaneously preserve the treasure of Appalachia for all Americans.

381. See 30 U.S.C. § 1201(b) (2012) ("it is, therefore, essential to the national interest to insure the existence of an expanding and economically healthy *underground* coal mining industry") (emphasis added).

382. See 22 U.S.C. § 1251(d) (2012) (naming the Environmental Protection Agency as the "Administrator" of the public participation in development, revision, and enforcement of any regulation).

383. H.R. 1105, 115th Cong. (2017).

384. *Rapanos v. United States*, 547 U.S. 715 (2006); *Solid Waste Agency of N. Cook Cty. v. U.S. Army Corps of Eng'rs*, 531 U.S. 159 (2001).

385. Interview with Mary V. Cromer, *supra* note 98.

386. See *id.* (stating that due to the lack of state oversight, companies feel emboldened to continue in practices that fail to meet state standards, unless they are caught in the act and held accountable).