

FINANCIAL ASSURANCE FOR HARDROCK MINING: EPA AND CERCLA

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INTRODUCTION

Precious metals mining, as well as the broader industry of hardrock mining, has changed greatly since Adam Smith posited:

Of all those expensive and uncertain projects, however, which bring bankruptcy upon the greater part of the people who engage in them, there is none perhaps more perfectly ruinous than the search after new silver and gold mines. . . . They are the projects, therefore, to which of all others a prudent lawgiver, who desired to increase the capital of his nation, would least choose to give any extraordinary encouragement, or to turn toward them a greater share of that capital than what would go to them of its own accord.¹

In short, hardrock mining has become one of the “basic building blocks of a modern society.”² The uses of hardrock minerals, including gold and silver, have expanded with industrialization: modern applications range from healthcare to transportation, electronics to defense. Concurrently, improvements in mining technology have greatly increased the efficiency of exploration and the yield of minerals.³ To accommodate the growth of the industry, the United States shirked the role of Smith’s “prudent lawgiver”; instead, it gave “extraordinary encouragement” to hardrock mining through the General Mining Act of 1872, a law that authorized hardrock mining on federal lands and enabled the acquisition of title to such lands while requiring no royalties and no reclamation, and a law that still governs nearly 150 years

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1 2 ADAM SMITH, *THE WEALTH OF NATIONS* bk. IV, at 306–07 (P.F. Collier & Son 1902) (1776). The first sentence of this quotation appears in DAVID GERARD, *THE MINING LAW OF 1872: DIGGING A LITTLE DEEPER* (1997).

2 U.S. ENVTL. PROT. AGENCY, *EPA’S NATIONAL HARDROCK MINING FRAMEWORK* 1 (1997).

3 See NAT’L RESEARCH COUNCIL, *HARDROCK MINING ON FEDERAL LANDS* 32 (1999).

later.⁴ But this accommodation aided in the settlement of the West and the development of an important sector of the economies of several states and the nation.⁵ In the past half century, however, accommodation has given way to a tightening regulatory atmosphere as a new body of laws has emerged to ensure greater environmental protection.

On the other hand, certain aspects of hardrock mining have remained the same. Capital expenditures continue to be significant, and the globalization of the hardrock minerals market⁶ has not been reversed.⁷ Both of these factors, as well as low profit margins, contribute to a volatile industry in which uncertainty persists; thus, bankruptcy is still brought upon operators with troubling frequency.⁸ These bankruptcies are particularly troubling because the search for hardrock minerals has proven “ruinous” in another sense—it results in environmental degradation and creates hazardous conditions—and when operators halt protective procedures and fail to perform reclamation, the exorbitant but necessary costs of mitigating the harm done must be borne by someone else.

Operators are required to perform reclamation activities, primarily as a matter of state law. To ensure funds will be available to perform reclamation in the event an operator defaults on its obligations and declares bankruptcy, financial assurance requirements have emerged. Apart from limited federal regulations (which govern only federal lands), state laws and regulations comprise the universe of financial assurance requirements. In several cases, existing requirements have proven grossly insufficient, and taxpayers have been forced to bear cleanup costs. Many congressional bills have emerged in the past three decades to establish comprehensive federal legislation for hardrock mining and explicitly authorize financial assurance requirements, but each has failed to become law. However, section 108(b) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) contains a provision mandating the promulgation of financial assurance requirements for “classes of facilities” involved in “the production, transpor-

4 See *infra* Section I.A.

5 See U.S. ENVTL. PROT. AGENCY, *supra* note 2, at 1.

6 See 1 SMITH, *supra* note 1, bk. 1, at 259 (“[The market for coarse and precious metals] is not confined to the countries in the neighborhood of the mine, but extends to the whole world. . . . [T]he productions of the most distant metallic mines frequently may [be], and in fact commonly are [brought into competition with one another]. The price, therefore, of the coarse, and still more that of the precious metals, at the most fertile mines in the world, must necessarily more or less affect their price at every other in it.”); see also *id.* at 78–79 (“The discovery of the abundant mines of America reduced, in the sixteenth century, the value of gold and silver in Europe to about a third of what it had been before. As it costs less labor to bring those metals from the mine to the market, so when they were brought thither they could purchase or command less labor; and this revolution in their value, though perhaps the greatest, is by no means the only one of which history gives some account.”).

7 See *infra* notes 13–14 and accompanying text.

8 See *infra* notes 103–19 and accompanying text.

tation, treatment, storage, or disposal of hazardous substances,”⁹ though the Environmental Protection Agency (EPA), which is responsible for doing so, has yet to issue regulations pursuant to this provision and recently declined to issue regulations it had proposed.¹⁰

This Note argues that section 108(b) imposes a mandatory duty on EPA to require financial assurances from hardrock mining operators and then seeks to outline the scope of that duty. Part I provides a brief overview of hardrock mining, the General Mining Act of 1872, and existing financial assurance requirements. Part II turns to section 108(b) of CERCLA and examines EPA’s inaction under that provision, as well as EPA’s recent decision not to adopt regulations it had proposed. Part III then examines the scope of EPA’s authority under section 108(b) and the federalism implications thereof.

I. HARDROCK MINING AND FINANCIAL ASSURANCE REQUIREMENTS

Hardrock mining, as defined by EPA, is “the extraction, beneficiation or processing of metals (e.g., copper, gold, iron, lead, magnesium, molybdenum, silver, uranium, and zinc) and nonmetallic, nonfuel minerals (e.g., asbestos, gypsum, phosphate rock, and sulfur).”¹¹ Because this list is expansive, it is helpful to note what hardrock mining does not include—among other things, coal and “leasable minerals” (e.g., oil and gas), which have received more comprehensive legal treatment.¹² Hardrock minerals are used in a multitude of industries, including transportation, electronics, construction, aerospace, agriculture, health care, and jewelry.¹³ Despite the wide range of uses of hardrock minerals, the mining industry itself is “notoriously volatile” because prices “fluctuate with world commodity prices” to a

9 42 U.S.C. § 9608(b) (2012).

10 See Financial Responsibility Requirements Under CERCLA Section 108(b) for Classes of Facilities in the Hardrock Mining Industry, 83 Fed. Reg. 7556, 7568 (Feb. 21, 2018) [hereinafter EPA’s Financial Assurance Final Decision].

11 Identification of Priority Classes of Facilities for Development of CERCLA Section 108(b) Financial Responsibility Requirements, 74 Fed. Reg. 37,213, 37,214 (July 28, 2009) [hereinafter EPA’s 2009 Priority Notice].

12 See 5 ROCKY MOUNTAIN MINERAL LAW FOUND., AMERICAN LAW OF MINING § 173.01 (2d ed., LexisNexis 2018).

13 See U.S. ENVTL. PROT. AGENCY, *supra* note 2, app. at A-1; U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-08-849R, HARDROCK MINING: INFORMATION ON STATE ROYALTIES AND TRENDS IN MINERAL IMPORTS AND EXPORTS 2 (2008).

great degree.¹⁴ Additionally, the industry is characterized by large capital expenditures and low profit margins.¹⁵

Hardrock mining is most common in twelve western states: Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Oregon, Washington, and Wyoming.¹⁶ Mining played a major role in the settlement of this region, as the promise of work and the prospect of riches drew millions to the West in the nineteenth century. To further spur this burgeoning industry, Congress passed the General Mining Act of 1872, which opened up federal lands, ninety-two percent of which are found in these twelve states,¹⁷ to mining.¹⁸ As such, many hardrock mines have been located, at least in part, on federal lands.¹⁹ Most of the federal lands are managed by the United States Forest Service (USFS) and the Bureau of Land Management (BLM).²⁰

The life cycle of activities at a given mine can be broadly divided into four phases: exploration, development, production, and reclamation.²¹ Exploration is the process by which prospectors seek to locate a mineral deposit.²² Once they find a deposit and obtain the necessary permits, they prepare the site for extraction in the development phase; this entails establishing infrastructure, marking locations for extracting ore and depositing wastes, and gaining access to the deposit through excavation and, for deep deposits, the construction of shafts.²³ Production is the phase during which

14 JARED DIAMOND, *COLLAPSE: HOW SOCIETIES CHOOSE TO FAIL OR SUCCEED* 459 (2005); see Financial Responsibility Requirements Under CERCLA § 108(b) for Classes of Facilities in the Hardrock Mining Industry, 82 Fed. Reg. 3388, 3433–34 (Jan. 11, 2017) [hereinafter EPA’s Financial Assurance Proposal] (noting the “frequent fluctuations in commodity prices within the hardrock mining industry” and the “close linkage between the hardrock mining industry and global commodity prices”).

15 See EPA’s Financial Assurance Proposal, *supra* note 14, at 3435; DIAMOND, *supra* note 14, at 459 (“[W]hile some mining companies are more profitable than other mining companies, the industry as a whole operates at such low profit margins that its average rate of return over the last 25 years hasn’t even met the cost of its capital.”).

16 See John F. Seymour, *Hardrock Mining and the Environment: Issues of Federal Enforcement and Liability*, 31 *ECOLOGY L.Q.* 795, 804, 804 n.31 (2004); OFFICE OF THE INSPECTOR GEN., U.S. DEP’T OF JUSTICE, *EPA CAN DO MORE TO HELP MINIMIZE HARDROCK MINING LIABILITIES* 1 (1997).

17 See CAROL HARDY VINCENT ET AL., CONG. RESEARCH SERV., R42346, *FEDERAL LAND OWNERSHIP: OVERVIEW AND DATA* 21 tbl.5 (2017).

18 See *infra* Section I.A.

19 See Seymour, *supra* note 16, at 804.

20 These two agencies account for over seventy percent of federal lands, and the twelve western states contain over ninety-nine percent of BLM lands and eighty-four percent of USFS lands. VINCENT ET AL., *supra* note 17, at 21 tbl.5.

21 U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-16-165, *HARDROCK MINING: BLM AND FOREST SERVICE HAVE TAKEN SOME ACTIONS TO EXPEDITE THE MINE PLAN REVIEW PROCESS BUT COULD DO MORE* 6 (2016); see also NAT’L RESEARCH COUNCIL, *supra* note 3, at 23 (dividing operations into “exploration, mine development, mining (extraction), mineral processing (beneficiation), and reclamation (for closure)”).

22 See NAT’L RESEARCH COUNCIL, *supra* note 3, at 23.

23 See *id.* at 25.

the valuable minerals are recovered and encompasses several activities, including extraction, beneficiation, and processing. Extraction, as its name suggests, is the process by which miners obtain the ores.²⁴ Because the extracted ores are impure (i.e., they contain materials in addition to the valuable mineral), it is necessary to concentrate the valuable mineral by separating waste minerals; this phase involves beneficiation and processing, two distinct but related processes.²⁵ Finally, once mining operations cease, the last step is to close the mine and prepare the land for future uses. Ideally, the owner or operator will engage in reclamation to repair the land, mitigate the environmental damage, and eliminate any health hazards.²⁶ But as we shall see, abandonment has been widespread, thereby shifting the burdensome costs of reclamation to another party—often the taxpayer.

Generally speaking, the greatest environmental issues arise during the production phase.²⁷ One issue relates to mine tailings, the waste minerals separated from the valuable minerals.²⁸ The harms associated with tailings first gained national attention in the nineteenth century with the advent of hydraulic mining.²⁹ Tailings may contain a variety of substances, such as metals, and are often stored in tailings ponds to avoid the contamination of groundwater and soil, though leaks in tailings ponds have necessitated response actions.³⁰ Another problem relates to the chemicals used in a particular beneficiation technique called leaching, which uses solvents to separate the valuable minerals.³¹ One common solvent is sodium cyanide, which can leach gold and silver from low-grade ores.³² While it is an effective

24 See EPA's 2009 Priority Notice, *supra* note 11, at 37,215; NAT'L RESEARCH COUNCIL, *supra* note 3, at 25.

25 Beneficiation involves separating the valuable mineral from the waste minerals, while processing involves extracting the valuable mineral from the concentrated solution. See EPA's 2009 Priority Notice, *supra* note 11, at 37,215; see also NAT'L RESEARCH COUNCIL, *supra* note 3, at 26.

26 See NAT'L RESEARCH COUNCIL, *supra* note 3, at 27.

27 See OFFICE OF THE INSPECTOR GEN., *supra* note 16, at 3–4; see also DIAMOND, *supra* note 14, at 452–53 (“The environmental problems caused by hardrock mining are of several types. One involves disturbance of land surface by digging it up [i.e., the development phase]. . . . Further environmental problems caused by hardrock mining involve water pollution by metals themselves, processing chemicals, acid drainage, and sediment. . . . The remaining environmental problem concerns where to dump all the dirt and wastes dug up in the course of mining . . .”).

28 See NAT'L RESEARCH COUNCIL, *supra* note 3, at 26; see also OFFICE OF THE INSPECTOR GEN., *supra* note 16, at 3.

29 For a detailed account of the rise of hydraulic mining and the controversy that ensued in California concerning mining debris, see ROBERT L. KELLEY, *GOLD VS. GRAIN: THE HYDRAULIC MINING CONTROVERSY IN CALIFORNIA'S SACRAMENTO VALLEY* (1959).

30 See EPA's Financial Assurance Proposal, *supra* note 14, at 3458, 3471.

31 See EPA's 2009 Priority Notice, *supra* note 11, at 37,215; DIAMOND, *supra* note 14, at 453; NAT'L RESEARCH COUNCIL, *supra* note 3, at 28.

32 See EPA's 2009 Priority Notice, *supra* note 11, at 37,215; NAT'L RESEARCH COUNCIL, *supra* note 3, at 26.

chemical, cyanide is a harmful contaminant,³³ and failures to contain it have required major environmental cleanups costing hundreds of millions of dollars.³⁴

There has never been a federal act comprehensively addressing hardrock mining and its impacts, but states, in response to environmental concerns, have filled this void to some extent by adopting regulatory schemes.³⁵ Beginning with Alaska in 1963, and followed by several other western states in the 1970s, states began to require reclamation plans prior to operations, regardless of land ownership.³⁶ These reclamation plans impose obligations on the operators in an effort to mitigate the environmental impacts of hardrock mining. With reclamation requirements came financial assurance requirements,³⁷ which seek to insure against the risk that a company will default on its obligation to perform reclamation and thereby shift the expense of reclamation to the public. The following Sections discuss the existing framework for hardrock mining activities with a focus on reclamation and financial assurance obligations.

A. *General Mining Act of 1872*

During the nineteenth century, the federal government acquired a vast area of land and subsequently sought to dispose of it.³⁸ The different mechanisms of disposal represented different goals—chiefly, encouraging development and providing money for the government. Congress opted for the former when it enacted the General Mining Act of 1872,³⁹ which aimed to promote mineral exploration and development and help settle the West.⁴⁰ The General Mining Act of 1872 declared mineral deposits on federal lands “free and open to exploration” and provided a mechanism by which parties could patent a claim (i.e., acquire title to the land).⁴¹

The law remains in effect, and its resilience, in the eyes of its critics, has been problematic. Environmentalists and fiscal conservatives alike have criticized the law for several reasons⁴² and urged reform thereto.⁴³ One funda-

33 See EPA’s Financial Assurance Proposal, *supra* note 14, at 3473.

34 See *infra* Part II.

35 See JOHN D. LESHY, *THE MINING LAW: A STUDY IN PERPETUAL MOTION* 213 (1987).

36 See JAMES R. KUIPERS, *NAT’L WILDLIFE FED’N, HARDROCK RECLAMATION BONDING PRACTICES IN THE WESTERN UNITED STATES*, at I-2 tbl.1.1.1, I-3 tbl.1.1.2 (2000).

37 See *id.*

38 In the Louisiana Purchase alone, the United States acquired about 530,000,000 acres. *Louisiana Purchase, 1803*, OFF. HISTORIAN, <https://history.state.gov/milestones/1801-1829/louisiana-purchase> (last visited Dec. 1, 2018).

39 General Mining Act of 1872, ch. 152, 17 Stat. 91 (codified as amended in scattered sections of 30 U.S.C.).

40 See MARC HUMPHRIES, *CONG. RESEARCH SERV., RL33908, MINING ON FEDERAL LANDS: HARDROCK MINERALS I* (2008).

41 30 U.S.C. § 22.

42 See, e.g., GERARD, *supra* note 1, at 1–3 (discussing criticisms such as “the low cost of acquiring title to land and the absence of royalties paid to the government” and that the “system subsidizes exploration, inappropriately limits the role of the government in

mental criticism is that the law lacks environmental protection provisions,⁴⁴ which is perhaps unsurprising given that it preceded the modern environmental movement by a century.⁴⁵ Since its enactment, the tide of public opinion has shifted dramatically toward protecting the environment, as well as preserving public lands (which, at a minimum, cuts against private disposition of federal lands). But for several reasons, the General Mining Act has remained largely intact⁴⁶ for nearly a century and a half despite calls for reform, leading one scholar to call it “one of the most durable perpetual motion machines ever assembled.”⁴⁷

Congress has shown interest in reforming the General Mining Act and establishing comprehensive hardrock mining legislation.⁴⁸ The 103rd Congress came the closest to enacting reform. The House passed a bill entitled the “Mineral Exploration and Development Act of 1993,” which found that “[e]xisting Federal law and regulations, as well as applicable State laws, have proven to be inadequate to ensure that active mining operations under the Mining Law of 1872 will not leave to future generations a new legacy of hazards associated with unreclaimed mined lands.”⁴⁹ The Senate passed a bill entitled the “Hardrock Mining Reform Act of 1993”; it had a markedly different tone,⁵⁰ which, along with certain provisions, led some to view it as a mining-industry approach to reform.⁵¹ Despite the differing interests and a few crucial provisions, the two bills had many similarities—notably, both would have required financial assurance to cover complete reclamation.⁵²

administering public land, and creates a breeding ground for speculators and opportunists”); HUMPHRIES, *supra* note 40, at summary (“Critics consider the claim-patent system a giveaway of publicly owned resources because of the small amounts paid to maintain a claim and to obtain a patent.”); *id.* at 7 (noting the lack of environmental protection in the law); John D. Leshy, *Mining Law Reform Redux, Once More*, 42 NAT. RESOURCES J. 461, 462 (2002) (noting the “modern environmental movement” and “opposition to the giveaway of public resources” both triggered reform efforts).

43 Reform proposals to strengthen the law have called for providing greater environmental protection, requiring royalties from operators, enabling greater administrative authority, establishing a leasing system, and ending patenting. *See, e.g.*, GERARD, *supra* note 1, at 3.

44 *See* HUMPHRIES, *supra* note 40, at 7.

45 *See* David W. Case, *The Lost Generation: Environmental Regulation Reform in the Era of Congressional Abdication*, 35 DUKE ENVTL. L. & POL’Y F. 49, 55 (2014) (tracing the emergence of the modern environmental movement).

46 One noteworthy amendment is discussed *infra* note 59 and accompanying text.

47 LESHY, *supra* note 35, at 2.

48 *See* ROCKY MOUNTAIN MINERAL LAW FOUND., *supra* note 12, § 173.01.

49 H.R. 322, 103d Cong. § 2(a)(8) (1993).

50 S. 775, 103d Cong. § 2(a)(8) (1993) (“[C]hanges in the general mining laws of the United States . . . are desirable, so long as the changes do not adversely affect employment in the mining industry or in industries that provide goods and services required for mining activities, interfere with a secure and reliable supply of minerals, or adversely affect the balance of trade of the United States.”).

51 *See* GORDON MORRIS BAKKEN, *THE MINING LAW OF 1872: PAST, POLITICS, AND PROSPECTS* 154 (2008).

52 *See* H.R. 322 § 206; S. 775 § 8(a).

Congress was unable to reconcile the differences, and the reform effort failed. Similar bills have been introduced in nearly every Congress since then,⁵³ the most recent bill being the Hardrock Mining and Reclamation Act of 2017, which would have required both reclamation⁵⁴ and financial assurance.⁵⁵ To date, none of these efforts have been successful. Thus, the forces of reform have been unable to prevail, and the General Mining Act continues its perpetual motion.

B. Federal Regulations

Despite the lack of comprehensive hardrock mining legislation, two pieces of legislation—the Federal Land Policy and Management Act of 1976 and the 1897 Organic Act—have enabled federal agencies to require reclamation and promulgate financial assurance regulations. It is important to keep in mind that these acts, administered by the BLM and the USFS, respectively, are limited to federal lands. Consequently, the federal agencies must release any financial assurances once a claim is patented.⁵⁶ But because a moratorium on new patents has limited this possibility,⁵⁷ and because many hardrock mining operations are located at least in part on federal lands,⁵⁸ the regulations made pursuant to these acts are important sources of law.

1. Bureau of Land Management

Pursuant to the Federal Land Policy and Management Act of 1976 (FLPMA), BLM promulgated regulations for hardrock mining that came to be known as the “3809 regulations.”⁵⁹ Interestingly, BLM drew on a provision in the FLPMA that expressly amended the General Mining Act of 1872 by directing the Secretary of the Interior to “take any action necessary to prevent unnecessary or undue degradation of the lands.”⁶⁰ The 3809 regulations created three levels of mining activities—“casual,” “notice,” and

53 See ROCKY MOUNTAIN MINERAL LAW FOUND., *supra* note 12, § 173.02.

54 Hardrock Mining and Reclamation Act of 2017, S. 1833, 115th Cong. § 306 (2017).

55 *Id.* § 304.

56 See 43 C.F.R. § 3809.594(a) (2018).

57 See Seymour, *supra* note 16, at 831 n.171 (citing Pub. L. No. 103-332, §§ 112–13, 108 Stat. 2499, 2519 (1994)).

58 See *id.* at 804. There are over 1000 notice- and plan-level operations on BLM lands. See U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-12-189R, *HARDROCK MINING: BLM NEEDS TO REVISE ITS SYSTEMS FOR ASSESSING THE ADEQUACY OF FINANCIAL ASSURANCES* 4 (2011).

59 Surface Management of Public Lands Under U.S. Mining Laws, 45 Fed. Reg. 78,902 (Nov. 26, 1980). The regulations take their name from their location in the Code of Federal Regulations: 43 C.F.R. § 3809. *Id.* at 78,909.

60 Federal Land Policy and Management Act (FLPMA) of 1976 § 302(b), 43 U.S.C. § 1732(b) (2012) (“Except as provided in [other sections] of this Act and in the last sentence of this paragraph, no provision . . . shall in any way amend the Mining Law of 1872 or impair the rights of any locators or claims under that Act In managing the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.”).

“plan”—that varied in terms of the extent of surface disturbance and required reclamation for each level of use.⁶¹ The “most controversial” part of the 3809 regulations were the bond “requirements,”⁶² though bonding was discretionary rather than mandatory.⁶³

There were several shortcomings with the regulations, such as the exemption of notice-level operations from advance approval, the fact that financial assurance was not truly required, and the lack of provisions imposing administrative penalties for violations.⁶⁴ New regulations came in 1997,⁶⁵ but they were struck down in a lawsuit shortly thereafter.⁶⁶ Congress mandated a study of the regulatory framework governing hardrock mining on federal lands,⁶⁷ and BLM successfully adopted new regulations in 2000 that implemented several recommendations contained in the report. These regulations required financial assurance for one hundred percent of the estimated reclamation costs for both notice- and plan-level operations.⁶⁸ Additionally, BLM decided to disallow corporate guarantees (i.e., self-bonding). BLM noted (1) the relative insecurity of corporate guarantees, partly because of fluctuating commodity prices; (2) several bankruptcies that had recently occurred; and (3) BLM’s lack of expertise in evaluating the guarantees.⁶⁹

BLM’s promulgation of financial assurance requirements was tortuous but represented a victory for advocates of more effective regulations. However, subsequent Government Accountability Office (GAO) reports reveal ongoing issues with the regulations and implementation thereof. In 2005, GAO found several inadequacies in the administration of the financial assurance requirements: (1) some operators did not even have financial assurances; (2) some financial assurances were less than the most recent reclamation cost estimates; and (3) some financial assurance providers went bankrupt.⁷⁰ In 2008, GAO found that fifty-two operations were insufficiently bonded by a total of about \$61 million.⁷¹ BLM reduced this amount by

61 Surface Management of Public Lands Under U.S. Mining Laws § 3809.1-1, 45 Fed. Reg. at 78,911.

62 *Id.* at 78,907.

63 *See id.*; *see also id.* § 3809.1-9 at 78,913, (requiring no bonds for casual- or notice-level uses and providing BLM with the “discretion” to require bonds for plan-level operations).

64 *See* Leshy, *supra* note 42, at 475–76.

65 *See* Mining Claims Under the General Mining Laws, 62 Fed. Reg. 9093 (Feb. 28, 1997).

66 *See* *Nw. Mining Ass’n v. Babbitt*, 5 F. Supp. 2d 9 (D.D.C. 1998).

67 *See* NAT’L RESEARCH COUNCIL, *supra* note 3, at 1.

68 43 C.F.R. § 3809.552(a) (2018). *See* §§ 3809.500–599 for the financial assurance requirements.

69 Mining Claims Under the General Mining Laws, 65 Fed. Reg. 69,998, 70,074 (Nov. 21, 2000).

70 *See* U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-05-377, *HARDROCK MINING: BLM NEEDS TO BETTER MANAGE FINANCIAL ASSURANCES TO GUARANTEE COVERAGE OF RECLAMATION COSTS* 6 (2005).

71 U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-08-574T, *HARDROCK MINING: INFORMATION ON ABANDONED MINES AND VALUE AND COVERAGE OF FINANCIAL ASSURANCES ON BLM LAND* (2008).

about \$37 million in the ensuing three years, but there remained an estimated \$24 million shortfall.⁷² Of the operations with inadequate financial assurances, Nevada contained nearly half, and it accounted for over ninety-eight percent of the estimated insufficiency.⁷³ Therefore, BLM has greatly reduced the risk of public liability in most states since the enactment of the FLPMA, but mining operations on federal lands in Nevada still present a significant risk.

2. United States Forest Service

The history of bonding requirements on USFS lands has been much more straightforward. In 1974, USFS promulgated its “228 regulations” pursuant to the 1897 Organic Act.⁷⁴ The regulations, similar to BLM regulations, create a distinction between notice-level operations and plan-level operations—they require a notice of intent to operate for “operations which might cause significant disturbance of surface resources”; then, if an authorized officer determines significant disturbance is likely, an approved plan of operations is required.⁷⁵ Reclamation is required for all operations,⁷⁶ but like the original 3809 regulations, bonding is limited to plan-level uses and it is discretionary.⁷⁷ The regulations have remained in place since 1974 and have not been substantially revised, despite one report suggesting a problematic lack of specificity and comprehensiveness.⁷⁸ However, these regulations play a much smaller role than the 3809 regulations: from 2010 to 2014, BLM approved sixty-six plan-level operations while USFS approved only two.⁷⁹

C. State Regulations

BLM and USFS promulgated their respective regulations against the backdrop of state regulations, which applied to both federal and state lands.⁸⁰ Historically, state regulations focused on the activities of miners vis-à-vis each other rather than environmental protection.⁸¹ But with the rise of the modern environmental movement came state legislation that required reclamation and financial assurance for hardrock mining operations. In 1963, Alaska became the first to do so, and several other western states fol-

72 U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-12-189R, *supra* note 58, at 4–5.

73 *Id.*

74 36 C.F.R. § 228 (2012).

75 *Id.* § 228.4.

76 *See id.* § 228.8(g).

77 *See id.* § 228.13.

78 *See* KUIPERS, *supra* note 36, at IV-108.

79 U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-16-165, *supra* note 21, at 13.

80 *See* KUIPERS, *supra* note 36, at I-7.

81 LESHY, *supra* note 35, at 213 (“Until recent years, state regulation was mostly concerned with the activities by the miners vis-à-vis each other, and did not consider environmental protection. . . . [R]esponding to the same forces that led Congress to enact numerous federal environmental regulatory schemes, the states have begun to adopt or apply more aggressively their own regulatory schemes for Mining Law operations.”).

lowed suit in the 1970s; by 1980, each of the twelve western states except for Nevada, New Mexico, and Arizona had reclamation and financial assurance requirements in place.⁸²

Although BLM and USFS could have preempted state laws with respect to federal lands, the relationships between the agencies and the states have been much more cooperative. For example, BLM's original 3809 regulations expressly provided that an operator could comply with the bond requirement by providing evidence of an existing bond pursuant to state law.⁸³ Additionally, there are often memoranda of understanding that formalize the relationships by delegating authority and responsibilities such as holding financial assurances, and they help avoid duplicative bonding requirements.⁸⁴

Unsurprisingly, the state regulations vary in detail and substance. One example of this is which financial assurance instruments states will accept. Commonly accepted forms include cash, certificates of deposit, letters of credit, and corporate sureties.⁸⁵ Some states also accept deeds of trust for real estate or liens on equipment,⁸⁶ and some states, especially those where mining industry influence is greatest, also accept self-bonding (or corporate guarantees).⁸⁷ Self-bonding is somewhat of a misnomer and is perhaps the most concerning form of financial assurance—it is a “corporate promise [] without separate surety or collateral.”⁸⁸ This form relies solely on financial statements, thereby eliminating the cost of procuring or posting another form of assurance, making them an industry favorite.⁸⁹ But if a company fails, the promise becomes enforceable only through bankruptcy proceedings,⁹⁰ so the government is likely to recover less than the complete financial

82 See KUIPERS, *supra* note 36, at I-2 tbl.1.1.1, I-3 tbl.1.1.2. While no date is listed in the report for Wyoming, its Environmental Quality Act was enacted in 1973. See Wyoming Environmental Quality Act of 1973, WYO. STAT. ANN. § 35-11-417 (2018) (requiring reclamation bonds). Additionally, New Mexico did not enact the New Mexico Mining Act until 1993. See New Mexico Mining Act of 1993, N.M. STAT. ANN. §§ 69-36-1 to -20 (2018). The confusion may come from the fact that the official statutory compilation of the state is the New Mexico Statutes Annotated 1978 (Conway Greene).

83 See Surface Management of Public Lands Under U.S. Mining Laws, 45 Fed. Reg. 78,902, 78,913 (Nov. 26, 1980).

84 See KUIPERS, *supra* note 36, at I-7.

85 See NAT'L RESEARCH COUNCIL, *supra* note 3, at 217.

86 See KUIPERS, *supra* note 36, at I-14.

87 See *id.*; DIAMOND, *supra* note 14, at 457 (“[T]he two states with the biggest taxpayer liabilities (Arizona and Nevada) accept[] company self-guarantees”); see also *id.* (“[F]requent breaking of such pledges has shown self-guarantees to be meaningless, and they are now no longer accepted for mines on federal land, but they still account for most assurance in Arizona and Nevada, the American states most friendly to the mining industry.”).

88 *Self-Bonding Facts*, OFF. SURFACE MINING RECLAMATION & ENFORCEMENT, <https://www.osmre.gov/resources/selfBonding.shtm> (last updated Apr. 24, 2017).

89 See KUIPERS, *supra* note 36, at I-13.

90 See *id.* at I-13 to I-14.

assurance.⁹¹ Moreover, self-bonding requires significant administrative oversight,⁹² and the relevant agencies arguably do not have the institutional capacity to perform the oversight. Nevada is one state that accepts self-bonding,⁹³ which is particularly important because it contains about one-fourth of the hardrock mines that could be regulated under section 108(b) of CERCLA, which will be discussed at length below.⁹⁴

Another way in which the state programs vary is their comprehensiveness. For example, Montana's Metal Mine Reclamation Act is highly detailed, though it became so only after the catastrophe at the Zortman-Landusky Mines, which will be discussed below.⁹⁵ Following that incident, Montana adopted several amendments that strengthened bonding requirements.⁹⁶ The result of the reforms, as well as better information concerning reclamation costs, has been a significant increase in bonding amounts: according to the Department of Environmental Quality, there were about \$198.7 million in bonds in 2004 and about \$347 million in bonds as of August 2017.⁹⁷ At the other end of the spectrum is Nevada, which has "perhaps the least comprehensive and detailed reclamation requirements of any western state."⁹⁸ While Nevada's statute is broad and lacks detail, the regulations promulgated pursuant thereto are quite detailed.⁹⁹ But regulations are much easier to change than statutes, so there exists a possibility of alleviating the regulatory burden, especially given the important role gold mining plays in the Nevada economy. In response to criticisms, Nevada maintains it has not had a case requiring public funding for mines that *began operations* after its rules were put in place in 1991,¹⁰⁰ though Nevada does not note how many mines that includes. Assuming this statement is technically true, it still

91 See CONG. BUDGET OFFICE, BONDING FOR RECLAIMING FEDERAL LANDS 14 (2003).

92 See *id.*

93 See NEV. ADMIN. CODE § 519A.350 (2016) (allowing the use of self-bonding for up to seventy-five percent of the required assurance). Other examples include Arizona and Colorado, although the Colorado House of Representatives recently passed a bill to ban self-bonding. See Tripp Baltz & Stephen Lee, *Hardrock Miners' Self-Bonding Ban Passes Colorado House*, BLOOMBERG ENV'T (Apr. 16, 2018), <https://news.bloombergenvironment.com/environment-and-energy/hardrock-miners-self-bonding-ban-passes-colorado-house>.

94 See EPA's Financial Assurance Final Decision, *supra* note 10, at 7568.

95 See *infra* notes 110–16 and accompanying text. For the current version of the Montana Metal Mine Reclamation Act, see MONT. CODE ANN. §§ 82-4-301 to -390 (West 2018).

96 See generally H.B. 69, 2001 Leg., 57th Reg. Sess. (Mont. 2001) (providing for the suspension of permits upon the failure to post an increased bond amount and adding a "bad actor" provision); H.B. 183, 1999 Leg., 56th Reg. Sess. (Mont. 1999) (removing caps on bonds, requiring the addition of state site management costs during the liquidation of the bond, and mandating annual bond overviews).

97 JOE KOLMAN, MONT. ENVTL. QUALITY COUNCIL, HARD ROCK MINING - UPDATE 9 (2017).

98 KUIPERS, *supra* note 36, at II-44.

99 See, e.g., ROCKY MOUNTAIN MINERAL LAW FOUND., *supra* note 12, § 173.03. Compare NEV. REV. STAT. §§ 519A.010–.290 (2018), with NEV. ADMIN. CODE §§ 519A.245–390 (2016).

100 Greg Lovato, Administrator, Nevada Division of Environmental Protection, Comment Letter on Proposed Rule on Financial Responsibility Requirements: CERCLA for

conveniently excludes at least one relevant occurrence: a copper mining company that used self-bonding declared bankruptcy in 1997 and subsequently abandoned operations, leaving less than the necessary reclamation costs.¹⁰¹ As noted above, Nevada accounts for over ninety-eight percent of the estimated insufficiency of financial assurances on BLM lands,¹⁰² so it may be only a matter of time before the risk of public liability is realized. And it is worth emphasizing that the risks of inadequate state programs are not confined to the respective states—if hazardous contaminants are released and financial assurance is insufficient, taxpayers around the country may bear the burden through the Superfund process.¹⁰³

II. CERCLA SECTION 108(b)

Because most states have enacted hardrock mining laws that include financial assurance requirements, and because federal regulations from BLM and USFS cover federal lands, the key question becomes: Do these regulations sufficiently minimize the risk of public liability? Montana's system may do so; however, its amendments came only after taxpayers became saddled with tens of millions of dollars in cleanup costs at two mines. The experience in Nevada has been at the other end of the spectrum: while it hasn't had a site require public funds for operations commenced after 1991, its regulations, which allow for self-bonding, have enabled a significant risk of taxpayer liability. At the federal level, BLM (which issues far more permits for plan-level operations than the USFS) has reduced but not eliminated the risk of public liability for operations on federal lands. Several reports suggest the answer to the question posed is no and have offered a solution: EPA should promulgate financial assurance requirements pursuant to section 108(b) of CERCLA.¹⁰⁴

Before considering section 108(b) of CERCLA, it is helpful to briefly examine a few cases where financial assurance requirements proved severely inadequate following bankruptcies of mine operators and owners, as these bankruptcies are often cited as evidence of the need for better financial

Classes of Facilities in the Harrock Mining Industry (July 11, 2017), <https://www.regulations.gov/document?D=EPA-HQ-SFUND-2015-0781-2651>.

101 CONG. BUDGET OFFICE, *supra* note 91, at 15.

102 See *supra* note 72 and accompanying text.

103 See OFFICE OF THE INSPECTOR GEN., *supra* note 16, at 10–11 (“Restrictions on states’ abilities to require reasonable levels of financial assurance could result in states’ inability to adequately respond to a catastrophic release of hazardous contaminants to the environment, such as occurred at the Summitville mine site in Colorado. If a state is unable to respond, EPA may have to assume responsibility under Superfund.”).

104 See *infra* notes 128–32 and accompanying text; cf. OFFICE OF THE INSPECTOR GEN., *supra* note 16, at v (“We found critical gaps in some federal and state statutory and regulatory authorities to require adequate financial assurances at hardrock mines. This lack of adequate financial assurances could result in EPA having to assume responsibility for cleaning up some hardrock mine sites in the future. EPA had not effectively implemented its existing statutory authorities or used non-regulatory tools . . . to . . . help federal and state agencies eliminate financial assurance gaps.”).

assurance requirements. While there have been many bankruptcies in the industry in recent decades,¹⁰⁵ three have been particularly devastating.

The Summitville mine in Colorado has been the costliest to taxpayers. Galactic Resources, the operator of the mine, received a permit in 1984 and, after only eight years, declared bankruptcy.¹⁰⁶ It provided less than a week's notice that it would be closing the mine, but more troubling was that it abandoned the mine, thereby halting environmental protective procedures.¹⁰⁷ When winter came a few months later, snowfall caused the heap leach system to overflow, ultimately "sterilizing an 18-mile stretch of the Alamosa River with cyanide."¹⁰⁸ In addition to the immediate environmental hazards created, Galactic's financial assurance was a mere \$4.5 million.¹⁰⁹ So far, the cost to taxpayers has exceeded \$250 million.¹¹⁰

Six years later, disaster struck in Montana. Pegasus Gold and its subsidiary operating company, Zortman Mining, began operating the Zortman and Landusky gold mines in Montana in 1979.¹¹¹ The mines were the first large-scale use of the open-pit cyanide heap leach process,¹¹² which, as its name suggests, involves the use of cyanide to extract precious metals from ore. In 1980, the price of gold had peaked at more than \$850 per ounce, but by 1997, prices had decreased to \$238 per ounce.¹¹³ Pegasus responded by closing some mines, but the company ultimately declared bankruptcy in 1998, leaving about eighty-five percent of the site unreclaimed.¹¹⁴ The reclamation bonds were well short of the necessary cleanup costs. The State alone has allocated an estimated \$32 million for reclamation, much of this to establish a trust fund for ongoing water treatment, which is expected to cost between \$2 million and \$2.5 million per year; and it is estimated BLM has contributed over \$17 million.¹¹⁵ In addition to the bankruptcy, the company came under fire because the board of directors had voted to give themselves

105 See, e.g., *Modern Mining*, EARTHWORKS (Aug. 30, 2007), https://earthworks.org/publications/modern_mining/ (cataloguing sixteen mines where the owners declared bankruptcy in the 1990s).

106 See DIAMOND, *supra* note 14, at 456.

107 See *id.*

108 *Id.*

109 *Id.* at 456–57.

110 Bruce Finley, *EPA Granting Colorado \$1 Million for Summitville Toxic Mine Cleanup, One of Many Still Not Complete*, DENVER POST (Feb. 28, 2017), <https://www.denverpost.com/2017/02/28/summitville-mine-cleanup-superfund-epa-grant/>.

111 See BUREAU LAND MGMT. & MONT. DEP'T ENVTL. QUALITY, FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR RECLAMATION OF THE ZORTMAN AND LANDUSKY MINES I-1 (2001).

112 See JIM KUIPERS, MINERAL POLICY CTR., MPC ISSUE PAPER NO. 4, PUTTING A PRICE ON POLLUTION: FINANCIAL ASSURANCE FOR MINE RECLAMATION AND CLOSURE 14 (2003).

113 Robert McLure, *Pegasus Gold—From Boom to Bankruptcy*, MONT. STANDARD (June 24, 2001), https://mtstandard.com/news/pegasus-gold—from-boom-to-bankruptcy/article_7a82e59e-9aec-5d6a-a376-bc4ecf492ac9.html.

114 DIAMOND, *supra* note 14, at 456; McLure, *supra* note 113.

115 See, e.g., Karl Puckett, *Fort Belknap Backs State in Bad Actor Case Over Zortman-Landusky Pollution*, GREAT FALLS TRIB. (Sept. 13, 2018), <https://www.greatfallstribune.com/story/>

bonuses exceeding \$5 million just before declaring bankruptcy.¹¹⁶ Perhaps more troubling was the board's decision to transfer the profitable assets from Pegasus to Apollo Gold, which they had created, prior to declaring bankruptcy.¹¹⁷

The final significant bankruptcy also occurred in the 1990s, involving Dakota Mining Co. Its subsidiary, Brohm Mining, operated the Gilt Edge Mine in South Dakota. The state had a reclamation bond of only \$6 million. Initially, it was estimated that cleanup would be between \$12 million and \$15 million;¹¹⁸ however, like the other sites, costs have far exceeded the estimate. When EPA listed the site on the National Priorities List (NPL), it estimated remediation costs of \$50.3 million, which did not "include water collection and treatment costs that will be handled under additional remediation plans. As of October 2007, EPA expenditures at this site exceeded \$56.1 million."¹¹⁹ Water treatment costs alone are estimated to be \$1.3 million per year.¹²⁰ Presently, the site is estimated to cost \$200 million to clean up, most of which will be funded through Superfund, though settlements have reduced the cost to taxpayers by about \$40 million.¹²¹

These bankruptcies offer a glimpse into the substantial costs that arise during reclamation and demonstrate the necessity of sufficient and robust financial assurance instruments to cover all reclamation costs, especially water treatment. Particularly relevant here is that in each of these cases, EPA has listed the site on the NPL, prompting the following criticism: by failing to exercise its authority to promulgate financial assurance requirements under CERCLA, EPA is contributing to the creation of new Superfund sites.¹²²

The following Sections examine section 108(b) of CERCLA, which expressly addresses financial assurance requirements; EPA's neglect of the provision in the decades following the enactment of CERCLA; calls for EPA to act; and the litigation and administrative actions surrounding the provision in the past decade.

news/2018/09/13/cleanup-costs-zortman-landsky-gold-mines-continue-mount-montana-bad-actor-superfund-acid/1292506002/.

116 DIAMOND, *supra* note 14, at 456; KUIPERS, *supra* note 111, at 14.

117 See DIAMOND, *supra* note 14, at 456; KUIPERS, *supra* note 111, at 14.

118 MINERAL POLICY CTR., MPC REPORT NO. 1, SIX MINES, SIX MISHAPS 10 (1999).

119 EPA's 2009 Priority Notice, *supra* note 11, at 37,218.

120 Bob Mercer, *Millions More to Be Spent Cleaning Up Gilt Edge Mine Near Lead*, RAPID CITY J. (May 19, 2017), https://rapidcityjournal.com/news/local/millions-more-to-be-spent-cleaning-up-gilt-edge-mt-standardmine/article_fd9041a9-0ee4-5f86-a2b8-079b3f581778.html.

121 News Release, Env'tl. Prot. Agency, EPA Recovers over \$10 Million for Past Costs at the Gilt Edge Mine Superfund Site in South Dakota (Apr. 15, 2016).

122 See Margaret Talbot, *Dirty Politics: Scott Pruitt's E.P.A. Is Giving Even Ostentatious Politicians a Reprieve*, NEW YORKER, Apr. 2, 2018, at 38, 50; see also OFFICE OF THE INSPECTOR GEN., *supra* note 16, at v-vi ("Federal and state land management agencies' authorities to require environmental performance standards and financial assurances at hardrock mines varied, leaving critical gaps in bonding requirements. . . . As a result, EPA may become liable for the considerable costs of cleaning up mines abandoned by the companies that operated them.").

A. *Section 108(b) of CERCLA and EPA Inaction*

As noted above, no comprehensive treatment of hardrock mining has emerged from Congress. This helps explain the lack of federal financial assurance requirements applicable to all hardrock mining operations. But it does not capture the full story.

CERCLA became law on December 11, 1980, after a hurried effort by Congress to enact hazardous waste cleanup legislation before President Reagan and a Republican majority in the Senate took office.¹²³ Congress had been working on similar bills to address hazardous wastes but had failed to reconcile differing versions in the House and Senate.¹²⁴ Faced with a now-or-never situation in the eyes of some,¹²⁵ a bipartisan group introduced and pushed the bill through the Senate, and the House passed it after very little debate.¹²⁶ As a result of this rapid process, there is very little legislative history on the bill that became law.¹²⁷ Nevertheless, the legislative process produced a provision—section 108(b)—expressly addressing financial assurance requirements:

(1) Beginning not earlier than five years after December 11, 1980, the [EPA] shall promulgate requirements . . . that classes of facilities establish and maintain evidence of financial responsibility consistent with the degree and duration of risk associated with the production, transportation, treatment, storage, or disposal of hazardous substances. . . .

(2) The level of financial responsibility shall be initially established, and, when necessary, adjusted to protect against the level of risk which the [EPA] in [its] discretion believes is appropriate based on the payment experience of the Fund, commercial insurers, courts settlements and judgments, and voluntary claims satisfaction.¹²⁸

Despite the timeframe the statute imposed, EPA had not established any financial assurance requirements when pressure began to build. In response to bankruptcies such as the ones described above, GAO issued reports calling attention to EPA's inaction with respect to section 108(b). In GAO's view, "EPA could better ensure that bankrupt and other financially distressed businesses carry out their cleanup responsibilities by making greater use of existing authorities," such as the "1980 statutory mandate under Superfund

123 See Frank P. Grad, *A Legislative History of the Comprehensive Environmental Response, Compensation and Liability ("Superfund") Act of 1980*, 8 COLUM. J. ENVTL. L. 1, 1 (1982); John Copeland Nagle, *CERCLA's Mistakes*, 38 WM. & MARY L. REV. 1405, 1407–08 (1997).

124 See Nagle, *supra* note 123, at 1407.

125 See J.B. RUHL ET AL., *THE PRACTICE AND POLICY OF ENVIRONMENTAL LAW* 379 (4th ed. 2016) ("[T]he concern is whether we are going to have legislation or whether we [are] not going to have legislation." (quoting 126 CONG. REC. 31,968–69 (1980) (statement of Rep. Florio))).

126 See Grad, *supra* note 123, at 1.

127 See *id.*

128 42 U.S.C. § 9608(b)(1)–(2) (2012). The first provision originally required the President, as opposed to the EPA, to promulgate the requirements, but President Reagan delegated the task to the EPA. See Exec. Order No. 12,580, 52 Fed. Reg. 2923, 2927 (Jan. 29, 1987); Exec. Order 12,316, 46 Fed. Reg. 42,237, 42,239 (August 14, 1981).

to require businesses handling hazardous substances to maintain financial assurances.”¹²⁹ “By its inaction on this mandate, EPA has continued to expose . . . the U.S. taxpayers[] to potentially enormous cleanup costs at facilities that currently are not required to have financial assurances for cleanup costs, such as many gold, lead, and other hardrock mining sites”¹³⁰ GAO suggested hardrock mining would be a good candidate for action under section 108(b) because of the significant risk of taxpayer liability it presents: it is generally excluded from the Resource Conservation and Recovery Act, there are no federal financial assurance requirements for hardrock mining on private lands, hardrock mining presents a serious risk of environmental damage, and the mining sites are often difficult and expensive to reclaim.¹³¹ Additionally, GAO noted gaps in existing federal and state requirements.¹³² GAO issued a report the following year, echoing its assessment and adding that financial assurance requirements would mitigate the risk of businesses reorganizing their assets to limit their responsibility for the costs of reclamation.¹³³

Around this time period, EPA performed studies relating to section 108(b),¹³⁴ and in 2009, it issued a notice that “hardrock mining facilities present the type of risk that . . . justifies designating such facilities as those for which EPA will first develop financial responsibility requirements.”¹³⁵ EPA cited many factors, including the quantities and types of wastes involved, the number of hardrock mining facilities, the number of sites in the CERCLA site inventory, the projected cleanup costs, and the corporate structure and bankruptcy potential of owners and operators.¹³⁶ However, despite this notice, EPA had not proposed any rules by 2014, prompting a collection of environmental groups to petition the D.C. Circuit for a writ of mandamus requiring EPA to promulgate financial assurance requirements.¹³⁷ During litigation, EPA and the petitioners made a joint motion for an order on consent establishing a schedule for rulemaking—EPA would begin the process by December 1, 2016, and publish its notice of final action one year later.¹³⁸

129 U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-05-658, ENVIRONMENTAL LIABILITIES: EPA SHOULD DO MORE TO ENSURE THAT LIABLE PARTIES MEET THEIR CLEANUP OBLIGATIONS 5 (2005).

130 *Id.*; *see id.* at 33.

131 *See id.* at 35–36.

132 *See id.* at 36 n.68.

133 *See* U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-06-884T, ENVIRONMENTAL LIABILITIES: HARDROCK MINING CLEANUP OBLIGATIONS 5 (2006).

134 *See generally* EPA’s Financial Assurance Final Decision, *supra* note 10, at 7559.

135 EPA’s 2009 Priority Notice, *supra* note 11, at 37,214. Although EPA had been studying the problem, EPA didn’t issue the notice until after a group sued in California. *See In re Idaho Conservation League*, 811 F.3d 502, 507 (D.C. Cir. 2016) (citing *Sierra Club v. Johnson*, No. C 08-01409, 2009 WL 482248, at *7–10 (N.D. Cal. Feb. 25, 2009)).

136 EPA’s 2009 Priority Notice, *supra* note 11, at 37,218.

137 *See In re Idaho Conservation League*, 811 F.3d at 506.

138 *See id.* at 507.

The D.C. Circuit granted the motion and issued an order.¹³⁹ Thus, a plan of action was now in place thirty-six years after CERCLA's enactment.

B. EPA in Action

1. Proposed Regulations

Consistent with the schedule, EPA proposed its regulations at the tail end of the Obama presidency,¹⁴⁰ and those regulations were published on January 11, 2017.¹⁴¹ The proposal is highly detailed, but a few aspects are particularly relevant here—(1) the means by which financial assurance amounts would be determined, (2) the range of acceptable instruments, and (3) the relationship of the proposed requirements to existing federal regulations and state laws.

In contrast to traditional approaches—which typically establish costs based upon prescribed reclamation standards—EPA proposed using a detailed formula untied to any reclamation requirements.¹⁴² There are three components to the formula, which are consistent with the types of CERCLA liabilities: response costs, natural resource damages, and health assessment costs.¹⁴³ The formula assigns values for various site characteristics, such as tailings ponds, heap leaching, etc., but it is decidedly not a site-specific approach.¹⁴⁴ Site-specificity may enable more precision, but EPA was willing to sacrifice precision for ease of administration, as a case-by-case, site-specific approach would pose a significant burden.¹⁴⁵ In EPA's view, the formula would sufficiently reflect the risks involved with hazardous substances at hardrock mining facilities, consistent with the command of section 108(b).¹⁴⁶

Once a financial assurance amount is established, the next question is which instruments are available to satisfy it. Section 108(b) authorizes a number of financial assurance instruments, including self-bonding.¹⁴⁷ Given this flexibility, EPA offered two proposals: in the first, third-party financial instruments would be the only acceptable forms of assurance, whereas in the

139 See *id.* at 515–16.

140 See *Superfund Financial Responsibility*, U.S. ENVTL. PROTECTION AGENCY, <https://www.epa.gov/superfund/superfund-financial-responsibility> (last visited Dec. 1, 2018).

141 EPA's Financial Assurance Proposal, *supra* note 14, at 3388.

142 See *id.* at 3400–02. For the formula, see *id.* at 3467.

143 See *id.* at 3461.

144 See *id.* at 3401.

145 See *id.*; see also *id.* at 3460 (noting that a site-specific approach would be the “most precise” but also “the most resource intensive to implement”); *cf.* EPA's Financial Assurance Final Decision, *supra* note 10, at 7568 (noting that the formula would underestimate at some sites and overestimate at others, and that the site-specific approaches of existing programs better reflect the actual costs).

146 See EPA's Financial Assurance Proposal, *supra* note 14, at 3461.

147 See 42 U.S.C. § 9608(b)(2) (2012) (authorizing several forms of financial assurance instruments, including insurance, guarantees, surety bonds, letters of credit, and self-bonding).

second, an owner or operator could pass a financial test and qualify for self-bonding.¹⁴⁸ Due to concerns with self-bonding, EPA recommended against allowing a financial test.¹⁴⁹ EPA estimated that the annual costs to industry of securing third-party financial assurance instruments under the two alternatives would be \$171 million and \$111 million, respectively.¹⁵⁰ Based on an estimated public liability of \$527 million over thirty-four years, the first alternative would eliminate this liability and the second would reduce it to \$16 million.¹⁵¹ Forcing the internalization of this liability would, in EPA's view, lead to better environmental practices and, consequently, fewer uses of Superfund resources.¹⁵²

Aside from the abovementioned features, a significant concern throughout the rulemaking process was the effect the proposed regulations would have on existing federal and state financial assurance programs. But EPA made one thing clear—it did not seek to supplant any regulations: “EPA has concluded that CERCLA § 108(b) requirements apply in addition to requirements under other Federal law. EPA also believes that preemption of state reclamation bonding programs is not intended by CERCLA, nor necessary or appropriate.”¹⁵³ Thus, the proposed regulations would “effectively complement, not duplicate or disrupt, those programs.”¹⁵⁴ Existing federal regulations such as those of BLM and USFS were, in EPA's view, geared toward reclamation, whereas it sought to address CERCLA liabilities.¹⁵⁵ Therefore, EPA found its proposed regulations appropriate and consistent with section 108(b), which called for financial assurance requirements “in addition to those under . . . other Federal law.”¹⁵⁶ As for state bonding programs, EPA concluded that the proposed regulations would not have federalism implications,¹⁵⁷ notwithstanding section 114(d),¹⁵⁸ which reads:

Except as provided in this subchapter, no owner or operator of a . . . facility who establishes and maintains evidence of financial responsibility in accordance with this subchapter shall be required under any State or local law, rule, or regulation to establish or maintain any other evidence of financial responsibility in connection with liability for the release of a hazardous substance from such . . . facility. Evidence of compliance with the financial responsibility requirements of this subchapter shall be accepted by a State in lieu of any other requirement of financial responsibility imposed by such

148 See EPA's Financial Assurance Proposal, *supra* note 14, at 3390, 3402.

149 See *id.* at 3433–36.

150 *Id.* at 3393.

151 *Id.* at 3395.

152 See *id.* at 3395–96.

153 *Id.* at 3402.

154 *Id.*

155 See *id.* at 3403.

156 42 U.S.C. § 9608(b)(1) (2012).

157 See EPA's Financial Assurance Proposal, *supra* note 14, at 3484.

158 *Id.* at 3403.

State in connection with liability for the release of a hazardous substance from such . . . facility.¹⁵⁹

EPA espoused four reasons for its conclusion. The first and third reasons were closely connected: section 108(b) is intended to address CERCLA liabilities, and, similar to its discussion of federal regulations, EPA found that many state requirements are not tailored to CERCLA liabilities but to reclamation; thus, “those state requirements should not be considered to be ‘in connection with liability for the release of hazardous substance[s].’”¹⁶⁰ The second reason was that EPA found section 114 generally to reflect a congressional intent to have limited preemptive effect.¹⁶¹ EPA derived this intent in part from section 114(a), which reads, “Nothing in this chapter shall be construed or interpreted as preempting any State from imposing any additional liability or requirements with respect to the release of hazardous substances within such State.”¹⁶² Further, EPA noted section 114(d) contains a qualification—“[e]xcept as provided”—which should be read in conjunction with the preemption limitations in section 114(a), the final result being the preservation of state programs as “‘additional requirements’ to the extent that they may also address the release of hazardous substances.”¹⁶³ In a footnote, EPA noted that while state programs would be considered additional requirements, CERCLA itself prevented duplication (i.e., companies would not have to double pay were the state and section 108(b) requirements to address the same costs).¹⁶⁴ EPA’s final reason for its interpretation was pragmatic: its formula necessarily could not accommodate the vastly differing reclamation requirements among the states, and moreover, addressing CERCLA liabilities and reclamation requirements are different goals that do not overlap perfectly, as noted above.¹⁶⁵

Despite its assertions that preemption of state bonding programs is “not intended by CERCLA, nor necessary or appropriate,”¹⁶⁶ certain language could be read to suggest there may be *some* preemption.¹⁶⁷ Moreover, EPA noted it was merely “providing its general views on the preemption issue,” and that it would be “courts that would make any final determinations” for

159 42 U.S.C. § 9614(d).

160 See EPA’s Financial Assurance Proposal, *supra* note 14, at 3403 (quoting 42 U.S.C. § 9614(d)).

161 See *id.*

162 42 U.S.C. § 9614(a).

163 EPA’s Financial Assurance Proposal, *supra* note 14, at 3403 (quoting 42 U.S.C. § 9614(d)).

164 See *id.* at 3404 n.47.

165 See *id.* at 3404.

166 *Id.* at 3402.

167 See *id.* at 3403 (“EPA does not intend its CERCLA § 108(b) regulations to result in *widespread* displacement of [state] programs” (emphasis added)); *id.* (“EPA does not believe that CERCLA § 114(d) gives a *broad* preemptive effect . . . over state reclamation bonding requirements *generally*.” (emphasis added) (footnote omitted)).

facilities on a case-by-case basis.¹⁶⁸ As we shall see, EPA's analysis did not ease states' fear of preemption.

2. Decision Not to Adopt the Proposed Regulations

After a change of administration, EPA decided not to issue financial assurance regulations.¹⁶⁹ Scott Pruitt, then-EPA Administrator, visited a mine in Nevada the month the decision was published in the Federal Register, assuring miners that EPA "would no longer be 'weaponized' against them."¹⁷⁰ According to the published decision, EPA determined the regulations were unnecessary "based on EPA's interpretation of the statute and analysis of its record developed for this rulemaking,"¹⁷¹ although EPA cited several other considerations in its decision.

EPA's interpretation expanded the scope of acceptable factors for determining the "degree and duration of risk" of classes of facilities potentially subject to section 108(b).¹⁷² The decision noted that while section 108(b)(2) articulates a list of considerations for formulating financial assurance requirements—"the payment experience of the Fund, commercial insurers, courts settlements and judgments, and voluntary claims satisfaction"¹⁷³—the "list is not exclusive."¹⁷⁴ This construction enabled it to make its key move: based upon legislative history and the implications of section 114(d), EPA posited that the statute authorized it to "consider . . . the existence of federal and state regulations" to avoid duplicative requirements.¹⁷⁵ Under this interpretation, EPA could consider the sufficiency of existing regulations *before* developing its own regulations;¹⁷⁶ by contrast, "[t]he proposed rule would have considered the risk reduction of existing regulations only as a means to reduce the amount of otherwise required financial responsibility and sought comment on several aspects of this approach."¹⁷⁷

Pursuant to this new interpretation, EPA reevaluated the administrative record and concluded that existing regulations "obviate the need for additional financial responsibility requirements under section 108(b) on the har-

168 *Id.* at 3403 n.46.

169 See News Release, Env'tl. Prot. Agency, EPA Determines Risks from Hardrock Mining Industry Minimal and No Need for Additional Federal Requirements (Dec. 1, 2017).

170 Talbot, *supra* note 122, at 50 (quoting Pruitt).

171 EPA's Financial Assurance Final Decision, *supra* note 10, at 7556.

172 *Id.* at 7561–63; see also *id.* at 7557 ("The statute . . . requires that the level of financial responsibility be established to protect against the level of risk the [EPA], in [its] discretion, believes is appropriate . . .").

173 42 U.S.C. § 9608(b)(2) (2012).

174 EPA's Financial Assurance Final Decision, *supra* note 10, at 7562.

175 *Id.*

176 See *id.*; see also *id.* at 7557 ("EPA now believes that it is appropriate to consider [federal and state regulatory] programs at the outset, when evaluating both the degree and duration of risk associated with the production, transportation, treatment, storage, or disposal of hazardous substances as well as when evaluating the risk of taxpayer financed response costs.").

177 *Id.* at 7567.

drock mining sector.”¹⁷⁸ This conclusion contradicts the reports noted above,¹⁷⁹ as well as the evidence in the 2017 proposal. However, the final decision implicitly acknowledges this tension when, later in the decision, it weighs the costs to industry with the expected decrease in public liability: “[T]he projected annualized costs to industry (\$111–\$171 million) are an order of magnitude higher than the avoided costs to the government (\$15–15.5 million) sought by the rule.”¹⁸⁰ Embedded within this statement is a normative view that the public should directly bear at least some of the externalities generated by hardrock mining (at least where the costs to industry far exceed the benefits to the public).

In addition to existing regulations, EPA distinguished modern mining practices from legacy practices, noting that practices have changed over the decades as a result of more stringent regulations.¹⁸¹ It noted that many of the sites that have required public funds for reclamation were permitted before the 1990s, and that Nevada, which contains about one-fourth of “hardrock mines in the potentially regulated universe of mines developed by EPA for purposes of analysis in the proposed rule, has not had a case involving taxpayer funded response action since 1991, when the state’s new rules were put in place”¹⁸² (though, as noted above, the persuasiveness of this proposition is questionable).¹⁸³ EPA dismissed the fact that hardrock mining facilities still contain many of the same hazardous substances as past facilities, noting that “[t]he mere presence of hazardous substances is not equivalent to risk.”¹⁸⁴ Therefore, it posited that the risks posed by facilities have decreased substantially.¹⁸⁵

Beyond its interpretation and the reevaluation of the administrative record, EPA concluded by noting “[o]bstacles to developing and implementing” financial assurance: the disruption of state mining programs due to section 114(d), the difficulty of determining the level of financial assurance, concerns regarding costs industry, and concerns regarding the availability of financial assurance requirements.¹⁸⁶

Environmental groups generally supported the proposed rule to mitigate the risk of taxpayers incurring reclamation costs and to ensure timely cleanup of hazardous materials, and a collection of such groups recently petitioned the D.C. Circuit for a review of EPA’s action.¹⁸⁷ Since then, several states (Alaska, Arkansas, Colorado, Louisiana, Michigan, Montana, Nevada, South Carolina, South Dakota, Utah, Wisconsin, and Wyoming) have inter-

178 *Id.*; *see also id.* at 7563–68.

179 *See supra* notes 132–36 and accompanying text.

180 EPA’s Financial Assurance Final Decision, *supra* note 10, at 7563.

181 *See id.* at 7570–83.

182 *Id.* at 7568.

183 *See supra* discussion accompanying notes 97–102.

184 EPA’s Financial Assurance Final Decision, *supra* note 10, at 7564.

185 *See id.* at 7564–65, 7567–68.

186 *Id.* at 7583–86.

187 *See* Petition for Review, *Idaho Conservation League v. Pruitt*, No. 18-1141 (D.C. Cir. May 16, 2018).

vened in opposition to the petitioners to express concerns over the potential duplicative and preemptive effects requirements under section 108(b) would have.¹⁸⁸

III. THE SCOPE OF EPA'S SECTION 108(b) AUTHORITY

The most recent lawsuit may frame and perhaps decide some issues relating to EPA's authority under section 108(b), but its central focus is necessarily on the EPA's final decision not to adopt the proposed regulations. By contrast, this Note seeks to define the scope of EPA's authority by focusing on the statute's import. Deciphering CERCLA is no easy task: the statute generally lacks clarity, legislative history, and discernible congressional intent.¹⁸⁹ Notwithstanding these difficulties, this Note forges ahead by considering the text in light of the relevant background outlined above.

The threshold determination is whether the statute creates a mandatory duty or discretionary authority, which involves two related questions: (1) Does section 108(b) create a statutory duty for the EPA to establish financial assurance requirements? And if so, (2) must EPA promulgate regulations *for hardrock mining*? If the answer to one or both of these questions is no, EPA's recent action is likely valid, but there would be ongoing risks of taxpayer liability and implications for section 108(b). If the answer to both is yes, it is worthwhile to explore the lower and upper limits of that authority.

A. *The Duty*

The first consideration in this inquiry must be the text of section 108(b) of CERCLA, which reads in relevant part: "[EPA] *shall promulgate requirements . . . that classes of facilities establish and maintain evidence of financial responsibility consistent with the degree and duration of risk associated with the production, transportation, treatment, storage, or disposal of hazardous substances.*"¹⁹⁰ The use of "shall" seems to answer the first question: EPA has a statutory duty to establish financial assurance requirements for at least some classes of facilities.¹⁹¹ That EPA has not done so in the thirty-eight years CERCLA has been law, despite the prescribed timetable, does not

188 See Motion to Intervene in Support of Respondents at 1, 5–6, *Idaho Conservation League*, No. 18-1141.

189 See Nagle, *supra* note 123, at 1406–07.

190 42 U.S.C. § 9608(b)(1) (2012) (emphasis added).

191 Of course, EPA has many obligations under various environmental statutes. It also has several goals within its broad mission of "protect[ing] human health and the environment." *Our Mission and What We Do*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/aboutepa/our-mission-and-what-we-do> (last visited Dec. 1, 2018). As such, it is a "multiple-goal agency," and there is necessarily a risk of underperformance across these goals due to resource constraints and differing incentives. See generally Eric Biber, *Too Many Things to Do: How to Deal with the Dysfunctions of Multiple-Goal Agencies*, 33 HARV. ENVTL. L. REV. 1 (2009). "But the problem of limited resources does not justify a broad rule immunizing inaction from judicial review." Cass R. Sunstein, *Reviewing Agency Inaction After Heckler v. Chaney*, 52 U. CHI. L. REV. 653, 675 (1985).

absolve EPA of this duty. Thus, we must turn to the more difficult of the threshold questions: whether EPA must promulgate requirements *for hardrock mining*.

The purely textual answer seems to be no because section 108(b) of CERCLA does not mention hardrock mining (as the respondents point out),¹⁹² or any specific industries for that matter. However, because EPA must establish requirements for at least some facilities, it would be paradoxical to enable EPA to take the purely textual argument to its logical extreme—whereby EPA must regulate some classes of facilities, but for any individual class of facilities it could choose not to regulate. Accordingly, a proper interpretation must take into account other considerations contained in the text. By its terms, section 108(b) targets facilities engaged in the “production, transportation, treatment, storage, or disposal of hazardous substances,” with priority for those that present the “highest level of risk of injury.”¹⁹³ Although section 108(b)(2) pertains to the level of financial responsibility and the acceptable instruments, it provides further considerations—financial assurance should “protect against the [appropriate] level of risk . . . based on the payment experience of the Fund, commercial insurers, courts settlements and judgments, and voluntary claims satisfaction.”¹⁹⁴

To begin with, hardrock mining facilities plainly involve hazardous substances. Moreover, as the bankruptcies and subsequent taxpayer-funded response actions highlight, there is an ongoing risk that financial responsibility will fall on taxpayers. But one point of tension related to the risks is when to consider existing regulations—when determining if requirements are necessary, or when determining the amount of financial assurance. Both the proposal and decision take existing regulations into account, even though the statute does not expressly call for consideration thereof; nonetheless,

The Fourth Circuit recently refused to compel EPA to carry out a nondiscretionary duty. *See Murray Energy Corp. v. Adm’r of EPA*, 861 F.3d 529 (4th Cir. 2017). Under section 321(a) of the Clean Air Act (CAA), EPA is to conduct continuing evaluations of the employment impact of the CAA. *See id.* at 532. A collection of energy companies brought suit, alleging EPA was failing to comply with the duty. *See id.* at 532–33. However, the court held that because EPA’s duty was not “specific and discrete” but was rather a “broad, open-ended statutory mandate,” it was not “amenable to . . . review.” *Id.* at 536. The court relied on three considerations: (1) that “evaluations” is an ambiguous term; (2) the evaluations duty would extend to an extensive class, all actions under the CAA; and “most importantly,” (3) the duty is ongoing rather than confined to a discrete time period. *Id.* The court also noted the lack of guidelines and “time-related instructions.” *Id.* But section 108(b) of CERCLA is much more specific and contains guidelines. Promulgating financial assurance requirements is a more discrete task than conducting evaluations. And the duty to promulgate requirements is confined to a discrete time period; moreover, Congress explicitly set a timeframe, though EPA did not comply.

192 *See* Response Brief for the Respondents at 17, *Idaho Conservation League*, No. 18-1141 (noting that CERCLA section 108(b) “does not discuss the hardrock mining industry”).

193 42 U.S.C. § 9608(b)(1) (2012).

194 *Id.* § 9608(b)(2).

existing regulations are relevant in assessing the risk of taxpayer liability. In any event, interpretations on this point are entitled to *Chevron* deference.¹⁹⁵

Regardless of when existing regulations are considered, the question posed at the beginning of Part II remains relevant: Do existing regulations sufficiently minimize the risk of public liability? The question is framed as “sufficiently minimize” because it is quite clear existing regulations have not eliminated the risk. Based on the foregoing discussion, the answer seems to be no, but this depends on one’s view of what an acceptable level of public liability is. EPA’s decision weighed the costs to the industry against the cost-savings to the public and concluded between \$511 million and \$527 million in public liability over thirty-four years (between \$15 million and \$15.5 million annually) did not justify an annual burden on industry of between \$111million and \$171 million.¹⁹⁶ This raises the normative question of whether the public should bear some of the externalities generated by hardrock mining. The industry is important to the economies of several states through royalties and taxes, and it contributes hundreds of millions in taxes to the federal government. Thus, one could conclude that imposing costly financial assurance requirements on an industry already highly vulnerable as a result of other regulations, a volatile economy, and massive capital expenditures would be prohibitively burdensome for many operators, thus counseling against new regulations. At the other end, one could conclude that regulations should seek to eliminate the estimated public liability, and if the industry cannot bear the costs, perhaps the industry is financially unsound and should not be subsidized—that is, the government should opt for the role of the “prudent lawgiver.”¹⁹⁷ Though, perhaps a subsidized mining industry is necessary because of the important uses of hardrock minerals (e.g., national defense). This Note does not propose an answer to the normative question, but it does posit that existing regulations are insufficient.

If EPA’s decision is upheld and the financial assurance requirements for hardrock mining are not mandatory, it seems that section 108(b) of CERCLA would be functionally repealed. Hardrock mining may be the industry presenting the greatest risk of public liability, as suggested by the GAO reports, the 2009 Priority Notice, and the proposal itself. Therefore, the paradoxical result arises: If not hardrock mining, for which classes of facilities must EPA promulgate financial assurance requirements pursuant to its duty to do so? Aside from being contrary to the separation of powers, a functional repeal would be problematic because several other industries may necessitate

195 See *Chevron U.S.A. Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 842–45 (1984).

196 It is quite possible the public liability figures are underestimated: James Kuipers, who conducted the comprehensive study of state hardrock bonding programs cited above, see KUIPERS, *supra* note 36, estimated the range for public liability to be somewhere between \$701 million and \$12.2 billion (though his analysis is now over fifteen years old). See KUIPERS, *supra* note 111, at 2.

197 See *supra* note 1 and accompanying text.

financial assurance requirements under this provision, as EPA has suggested.¹⁹⁸

Because the answers to the first two questions are, or should be, yes, it is now necessary to explore the scope of the duty to establish financial assurance requirements. Before doing so, it is important to acknowledge the potential that the above analysis is incorrect, and that the deference given to EPA's recent decision will make financial assurance for hardrock mining a discretionary power. However, as reflected by the decision itself, when the presidency passes from one political party to the other, changes in administrative priorities are likely to follow. Thus, if a future administration decides to use section 108(b) of CERCLA, the following considerations will remain relevant.

B. *The Scope*

The three most important issues relating to the scope of EPA's authority are (1) the means by which financial assurance amounts are determined, (2) the range of acceptable instruments, and (3) the relationship of the requirements to existing state bonding programs. First, section 108(b) provides little guidance as to how to establish the financial assurance amount, thus leaving EPA with significant discretion. EPA may opt for a formulaic approach, as it proposed, or a more traditional approach tied to a permit-based regulatory program, which it considered.¹⁹⁹ Once the amount is established, section 108(b)(2) provides that the level of financial responsibility "shall" be adjusted when necessary.²⁰⁰ Thus, EPA must review the amount, but it has discretion as to how often it does so.

Second, EPA may vary the scope of the acceptable instruments. To have the most limited impact on industry, EPA could allow the use of self-bonding for the entire assurance. Self-bonding is explicitly contemplated, though not required, by section 108(b)(2). While operators would have to maintain an adequate balance sheet, this would enable them to avoid paying premiums for a third-party instrument and setting aside funds for reclamation;²⁰¹ consequently, it allows "a lower barrier to entry for operators who already face significant upfront infrastructure spending."²⁰² However, self-bonding provides a less stable guarantee in the event of a bankruptcy, not to mention the administrative difficulties associated with overseeing companies' finances.²⁰³ Thus, EPA may find it prudent to limit or disallow self-bonding and opt for the other instruments in section 108(b)(2): insurance, guarantees, surety

198 See Identification of Additional Classes of Facilities for Development of Financial Responsibility Requirements Under CERCLA Section 108(b), 75 Fed. Reg. 816 (Jan. 6, 2010).

199 See EPA's Financial Assurance Proposal, *supra* note 14, at 3401.

200 42 U.S.C. § 9608(b)(2) (2012).

201 See CONG. BUDGET OFFICE, *supra* note 91, at 14.

202 Jason Malone & Tim Winslow, *Financial Assurance: Environmental Protection as a Cost of Doing Business*, 93 N.D. L. REV. 1, 17 (2018).

203 See CONG. BUDGET OFFICE, *supra* note 91, at 14.

bonds, and letters of credit.²⁰⁴ The recent decision noted concerns regarding the availability of these instruments,²⁰⁵ though the proposal suggested that allowing a diversity of instruments would ensure greater third-party market capacity to underwrite financial assurance requirements.²⁰⁶

Finally, and perhaps the most important consideration related to the scope of EPA's authority, is the extent to which it preempts state reclamation bonding programs. The preemptive effect does not actually constrain the scope of EPA's authority, but it is a highly relevant as to how EPA exercises its authority. For example, in its final decision, EPA viewed the preemptive effect as an "obstacle" to developing and implementing financial assurance requirements.²⁰⁷ The preemptive effect hinges on the interpretation of section 114(d). It is not clear that the interpretation advanced in the proposal—that section 108(b) requirements would not preempt state bonding programs whatsoever—is correct. Admittedly, it is difficult to reconcile section 114(d)²⁰⁸ with section 114(a), which provides, "[n]othing in this chapter shall be construed or interpreted as preempting any State from imposing any additional liability or requirements with respect to the release of hazardous substances within such State."²⁰⁹ At a minimum, it seems clear that state bonding requirements unrelated to hazardous wastes will survive any section 108(b) requirements. But the fate of state bonding requirements related to hazardous wastes is unclear. This Note does not seek to resolve this statutory issue but rather suggests that the scope of EPA's section 108(b) requirements will largely depend on the resolution of the issue: if state requirements are preempted with respect to CERCLA liabilities, section 108(b) requirements will need to be comprehensive; if, however, state requirements are not preempted, EPA might opt for more modest requirements.

CONCLUSION

During the time EPA has neglected its duty under section 108(b), several hardrock mining operators have abandoned mines following bankruptcies, thereby leaving substantial bills for taxpayers to pick up in order to cover necessary reclamation costs. Moreover, there are ongoing risks of public liability unaccounted for by existing state and federal financial assurance requirements. Public liability coupled with EPA's failure to act prompted several reports calling for action and a lawsuit that resulted in a consent decree requiring EPA to propose regulations. EPA demonstrated an intent to establish such regulations when it published its priority notice in 2009 and its proposed regulations in 2017. However, its recent decision not to issue

204 42 U.S.C. § 9608(b)(2).

205 See EPA's Financial Assurance Final Decision, *supra* note 10, at 7586.

206 See EPA's Financial Assurance Proposal, *supra* note 14, at 3399.

207 See *supra* note 186 and accompanying text.

208 See *supra* note 158 and accompanying text.

209 42 U.S.C. § 9614(a).

financial assurance requirements reflects disagreement as to the import of section 108(b).

This Note posits that section 108(b) places a duty on EPA to promulgate financial assurance requirements, and this duty extends to hardrock mining. EPA's duty comes with significant discretion as to how it establishes financial assurance amounts and which instruments it accepts. When exercising this discretion, EPA must be cognizant of the potential preemptive effect of section 114(d), the nature and economic role of the industry, and the normative question underlying financial assurance requirements: What is an acceptable level of risk of public liability? This task is complex to say the least, but one the prudent lawgiver of the twenty-first century must accomplish.