U.S. SMALL BUSINESS ADMINISTRATION
OFFICE OF ADVOCACY
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VIA REGULATIONS.GOV

The Honorable Gina McCarthy
Administrator
U.S. Environmental Protection Agency

**Re: Financial Responsibility Requirements for the Hardrock Mining Industry (Docket ID: EPA-HQ-SFUND-2015-0781)**

Dear Administrator McCarthy:

The U.S. Small Business Administration's (SBA) Office of Advocacy (Advocacy) submits the following comments in response to the Environmental Protection Agency's (EPA) proposed rule, "**Financial Responsibility Requirements for the Hardrock Mining Industry.**"[1] The proposed rule would impose costly requirements on hardrock mines owned by small firms, without evidence that a problem exists warranting intervention. The proposal requires mines to acquire financial assurance coverage (i.e. insurance) to cover potential liabilities for releases of hazardous substances from a mine. However, these small mines are already highly regulated by robust state and Federal programs. New Federal standards risk damaging these programs which have, in recent years, effectively addressed the same issues at modern small mines. Further, EPA missed the opportunity to receive important feedback from small businesses through the Small Business Regulatory Enforcement Fairness Act (SBREFA) panel process and did not consider less costly regulatory alternatives as required by the Regulatory Flexibility Act (RFA).

Advocacy strongly recommends that EPA withdraw this ill-advised proposal. At a minimum, EPA should examine the relevant state and Federal programs and identify any "gaps" in their coverage, so that these regulators can move to improve their programs. EPA can then act to address these gaps in a separate proposal, if deemed necessary.

## The Office of Advocacy

Congress established Advocacy under Pub. L. 94-305 to represent the views of small entities before Federal agencies and Congress. Advocacy is an independent office within the U.S. Small Business Administration (SBA); as such the views expressed by Advocacy do not necessarily

[1] 82 Fed. Reg. 3388 (January 11, 2017).

reflect the views of the SBA or the Administration. The Regulatory Flexibility Act (RFA),[2] as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA),[3] gives small entities a voice in the rulemaking process. For all rules that are expected to have a significant economic impact on a substantial number of small entities, federal agencies are required by the RFA to assess the impact of the proposed rule on small entities and to consider less burdensome alternatives.[4]

The Small Business Jobs Act of 2010 requires agencies to give every appropriate consideration to comments provided by Advocacy.[5] The agency must include, in any explanation or discussion accompanying the final rule's publication in the Federal Register, the agency's response to these written comments submitted by Advocacy on the proposed rule, unless the agency certifies that the public interest is not served by doing so.[6]

## Background

Section 108(b) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 directs the agency to develop requirements for classes of facilities to 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. In a July 2009 Federal Register notice, EPA determined that the agency would first consider financial responsibility requirements under CERCLA section 108(b) for classes of facilities within the hardrock mining industry.[7] The agency supported its determination by citing the billions of dollars that EPA expended historically under CERCLA to address legacy mines. This notice was published without any public input. The National Mining Association wrote to EPA explaining that modern mines under current state and Federal regulations, which are the subject of this rule, do not pose a significant financial risk to taxpayers, and thus no regulation was required by this statute. The EPA determination was strongly opposed by the mining community, mining regulators, and the States, generally finding that current regulation of modern mines, including financial requirements were working and that no Federal rule was required.

In the July 2009 notice, EPA defined hardrock mining to include classes of facilities that extract, beneficiate or process metals (e.g., copper, gold iron, lead, magnesium, molybdenum, silver, uranium, and zinc) and non-metallic, non-fuel minerals (e.g., asbestos, phosphate rock, and sulfur). Certain non-fuel hardrock mining sectors (e.g., construction sand and gravel) were not included among those hardrock mining facilities identified in the notice.

Thirty-six percent of hardrock mining businesses are small businesses, and EPA estimates that these firms will face significant costs under this proposal.[8] The agency estimates that the

[2] 5 U.S.C. §601 et seq.
[3] Pub. L. 104-121, Title II, 110 Stat. 857 (1996) (codified in various sections of 5 U.S.C. §601 et seq.).
[4] 5 U.S.C. §609(b).
[5] Small Business Jobs Act of 2010 (PL. 111-240) §1601.
[6] *Id*.
[7] "Identification of Priority Classes of Facilities for Development of CERCLA Section 108(b) Financial Responsibility Requirements," 74 Fed. Reg. 37213 (July 27, 2009).
[8] See RIA, pp. 2-8 and 8-2.

proposal would impose costs in excess of three percent of revenue for many small mines, a very significant economic burden. On August 24, 2016, EPA convened a panel, in accordance with SBREFA requirements (hereinafter, "SBREFA panel" or "panel"), but the panel did not complete the panel report during the required 60-day time frame. The panel report was completed on December 1, 2016, the day EPA signed the proposed rule for publication, long after EPA had submitted a draft proposal for review to the Office of Management and Budget under Executive Order 12866.[9]

On January 11, 2017, EPA issued the proposal.[10] The proposed rule requires an amount of money, called financial responsibility, that mines must have available to cover the costs associated with potential releases of hazardous substances. The rule requires hardrock mining owners and operators to identify a financial responsibility amount for their facility, to demonstrate evidence of financial responsibility for thirteen response categories, and to maintain the required amount of financial responsibility until released from the requirements by EPA. The rulemaking would allow for financial responsibility requirements to be met by a number of instruments, including surety bonds, letters of credit, insurance, and trust funds. The rulemaking specifically proposed two options. Under Option 1, EPA would not allow the use of a financial test or corporate guarantee mechanism to meet financial responsibility requirements. Under Option 2, a financial test based on a credit rating and a corporate guarantee mechanism would be available to owners and operators to meet these requirements.

## Advocacy's Comments

The Office of Advocacy urges EPA to withdraw this proposed rule. There is no statutory need for this regulation, nor are there any significant environmental benefits demonstrated by EPA. Instead, EPA is proposing a rule that would cost the industry $171 million annually for an annual savings to the government of $15.5 million by its own estimate, to address risks that are already addressed by state and Federal agencies. The agency has conspicuously failed to articulate a cohesive response to the argument that state and Federal rules address the same risks comprehensively. By its own analysis, many small mines would face annual costs of some unknown amount in excess of three percent of revenue – an extremely high cost.

The lack of environmental benefits has been amply established by the comments received in the SBREFA panel proceeding, and comments authored by the Western Governors, individual states, mining companies and the association of mining regulators.[11] While EPA is unsure that certain response categories[12] are not governed by existing authorities, Advocacy believes, along with the

[9] Under Executive Order 12866, federal agencies submit draft proposed and draft final regulations of economic or policy significance for review by the OMB Administrator of the Office of Information and Regulatory Affairs and affected federal agencies.
[10] 82 Fed. Reg. 3388 (January 11, 2017).
[11] The Panel report contains the comments of small mining companies and AE&MA; March 29, 2016, Western Governors letter to McCarthy, August 17, 2016 Arizona DEP letter to Krueger, ORCR, EPA; August 19 Florida DEP letter to Barr, ORCR, EPA; August 16, 2016 Interstate Mining Compact Commission letter to Sasseville, ORCR, EPA.
[12] EPA has developed 13 response categories to represent the universe of different remedial actions that are performed at mining sites. Financial assurance amounts are developed for each response category.

U.S. Bureau of Land Management (BLM) and the U.S. Forest Service (USFS),[13] that all response categories are likely covered. Advocacy is concerned that EPA may not have correctly analyzed the relevant documentation. The office is further concerned that EPA is replacing expert site-based analysis of financial assurance, which is the basis for existing federal and state financial assurance requirements, with a simplified formula approach that has been tried and rejected by those states and Federal mining regulators.

### *1. The EPA Proposal Would Duplicate Existing Federal and State Regulatory Requirements*

EPA believes that the hardrock mining industry warrants regulation to address the "degree and duration of risk associated with the production, transportation, treatment, storage, or disposal of hazardous substances."[14] Advocacy agrees with many others that believe that numerous state and federal regulations already address these risks, and that the industry record for modern mining operations (post-1990) show there is no need for additional Federal regulation. The U.S. Bureau of Land Management (BLM) and USFS both reported zero National Priority List (NPL or Superfund)[15] listings for the thousands of modern mines for which plans have been approved post-1990. As stated by the American Exploration & Mining Association: "The fact that no hardrock mining or beneficiation plan of operation approved by the BLM or USFS since 1990 has been added to the CERCLA NPL demonstrates that the 'degree and duration of risk' for hardrock mining is too small to regulate."[16]

In Nevada, where more than 50 percent of the mines subject to this rule are located, the state has called few bonds since 1990. Even these were relatively small mines and small bonds – of up to $500,000. All or most of these were bonded earlier in the Nevada program, and the bonding requirements have been more recently upgraded, in part, because of the experience gained from administering these mine bankruptcies in the early 1990's.[17]

In sum, there is little evidence of a need for the proposed CERCLA 108(b) bonding program which EPA estimates to involve tens of billions of dollars. EPA's scheme would only potentially be justified if modern mines were facing the same type of remedial costs as previous legacy sites that did generate billions of dollars of costs. This rulemaking is not required by statute because the risk is minimal.

It is important to place EPA's proposed CERCLA § 108(b) hardrock mining rule in historical context. When Congress enacted CERCLA in 1980, there were few financial assurance requirements in either state or Federal regulations, and what requirements existed were largely

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[13] Discussion of Federal and state presentations found in AE&MA SBREFA comments dated September 16, 2016, p. 3.
[14] 82 Fed. Reg. 3388, 3486 (January 11, 2017); proposed 40 CFR 320.1(b) finding.
[15] The Superfund National Priority List contains the list of facilities that are eligible for funding from the Superfund.
[16] July 7, 2016 SBREFA Panel comment letter from American Exploration & Mining Association, pp. 9-10.
[17] See The Evolution of Federal and Nevada State Reclamation Bonding Requirements for Hardrock Exploration and Mining Projects, Jeffrey Parshley, Debra W. Struhsacker, Reno, Nevada ( January 2009). http://www.srkexploration.com/sites/default/files/file/JParshley_ReclamationBondingRequirementsNevada_2009.pdf.

untested. For example, BLM's surface management regulations for locatable minerals were not yet in effect.[18] In 1980, most state regulations had very limited – if any – financial assurance requirements; Nevada's reclamation regulations only became effective in 1990. There existed a clear regulatory void with respect to a lack of financial assurance requirements for hardrock mines at the time that CERCLA was enacted.

However, in 2017, federal and state mining regulatory and financial assurance requirements are now mature and robust. Both BLM and USFS have effective and comprehensive financial assurance requirements that extend far beyond reclamation (i.e., earthworks and revegetation) and can include long-term financial assurance for sites where warranted. Similarly Nevada, Utah, New Mexico, and South Dakota have robust financial assurance programs established through one or more state regulatory programs in each state. The Federal Land Management Agencies (FLMA) and state agencies have existing comprehensive bonding and regulatory requirements that would be duplicated by every response requirement that EPA intends to address under CERCLA § 108(b).[19]

The regulatory authorities that oversee hardrock mining have decades of experience in evaluating mining operations, determining levels of financial assurance, compelling reclamation and decommissioning, and ensuring that releases of hazardous substances do not occur. As noted in SER comments supplied by Wyo-Ben, Inc.: "…presentations made it abundantly clear that these programs were not narrowly focused on reclamation (recontouring and revegetation) but also included provisions to deal with releases of contaminants meeting the CERCLA definition of hazardous substances from operating and closed mine sites."[20] SER comments noted that existing federal and state programs have been strengthened by a close working relationship between those agencies and the industry that spans decades.

Although EPA states that these mining regulations are "distinct" from the CERCLA 108(b) requirements, this does not mean that the Federal and state mining requirements do not address the same response categories using other legal authorities and different language. An entirely duplicative CERCLA § 108(b) financial responsibility program would be inconsistent with the "degree and duration" of risk associated with potential releases from current highly regulated and fully bonded hardrock mines. EPA is proposing an additive regulatory scheme in the absence of a clearly articulated need as to why these existing programs are deficient or require additional financial assurance.

Pershing Gold Corporation in comments supplied during the SBREFA Panel process stated:

> *EPA's CERCLA 108(b) rulemaking for hardrock mining and beneficiation is a classic "solution in search of a problem;" a problem that clearly does not exist. The hardrock mining states and the federal land management agencies have comprehensive, robust regulatory programs in place that address financial assurance requirements associated with mining and beneficiation, reclamation,*

[18] The 43 C.F.R 3809 BLM requirements became effective on January 1, 1981.
[19] Discussion of Federal and state presentations found in AE&MA SBREFA comments dated September 16, 2016, p. 3.
[20] July 7, 2007 SBREFA Panel comment letter from Wyo-Ben, Inc., p. 3.

*closure and post-closure issues. These programs substantially reduce, if not eliminate, the risk that a mine will have a release of hazardous substances. The states and FLMAs have the expertise and staff to calculate the appropriate amount of financial assurance based on the unique circumstances and features, including geochemistry of the rock, for each mining operation and to adjust financial assurance as required over the life of the operation, including post-closure.*

*The FLMA's and state's comprehensive, robust regulatory programs are designed to prevent the release of hazardous substances and assure sufficient financial assurance is in place to protect the taxpayer in the event of bankruptcy or an event that requires corrective action.*

*EPA appears to hold the position that somehow the existing federal and state financial assurance programs deal solely with traditional reclamation and mine closure activities (e.g., recontouring and revegetating disturbed areas). This position is incorrect. The existing regulatory requirements for hardrock mining go far beyond reclamation and closure and include many provisions designed to protect the environment. Consequently, they include measures to prevent releases of contaminants from operating and closed mines that would come under the CERCLA 107 hazardous substances definition.*[21]

These regulations minimize the potential for releases and provide effective monitoring requirements to detect potential releases before they occur. The existing state and Federal regulatory schemes provide cradle-to-grave regulatory authority and financial assurance that are the functional equivalent to CERCLA 108(b) requirements. Adaptive management requirements require pre-emptive actions to avoid releases into the environment. As a result of the currently required monitoring, reporting and periodic inspections, regulators are able to respond to potential and actual releases. The report of the National Research Council (NRC) in 1999 concluded that the modern regulatory controls adopted by Federal and state agencies would effectively address the environmental releases.[22]

Most significantly, Pershing Gold provided a table of the financial assurance requirements for the BLM and Nevada detailing how these financial assurance requirements cover each of the 13 response categories targeted in the proposal. An analogous table can also be produced for the U.S. Forest Service. EPA is proposing to eliminate requirements on a category-by-category basis for all 13 response categories, and yet has failed to explain whether it finds any "gaps" in this coverage.[23] Since BLM, USFS and Nevada, according to the best information available to

[21] July 7, 2016 SBREFA Panel comment letter from Pershing Gold Corporation, pp. 6-7.
[22] Hardrock Mining on Federal Lands, National Research Council, National Academy of Sciences (1999), https://www.nap.edu/catalog/9682/hardrock-mining-on-federal-lands.
[23] In the panel report, EPA states that CERCLA "fills the gap" where regulations "fail to prevent releases or threatened releases of hazardous substances, and it addresses environmental problems as they are identified." Report at 9. EPA provides no analysis or justification to explain how the comprehensive programs in the states and the Federal Land Management Agencies do not address the same situations. The agency appears to believe that making a statement is enough to establish its validity.

us, provide comprehensive coverage in 13 response categories, there is no justification for further Federal intervention in these apparently successful programs.

### *2. EPA Preamble Discussion of Current Releases from Modern Mines Does Not Support Need for New Rule – Current Federal and State Programs Are Working To Address Current Releases*

EPA includes a discussion in the preamble about currently operating mines and current and future remedial actions.[24] This discussion (and the underlying background document prepared for the record)[25] is being used by EPA to support the need for the 108(b) rule to address problems at these or other similar sites. The background document discusses sources of releases at approximately thirty recently or currently operating mines and mineral processing facilities that had no previous significant legacy mining issues. EPA states: "These releases to the environment from mining and mineral processing activities, including tailings impoundments, waste rock piles, open pits, and leach pads were subsequently mitigated using CERCLA or CERCLA like actions under Federal and/or state statutory authority. Mines that have predicted future discharges to the environment and have proposed either preventative actions or CERCLA like mitigations also are discussed."[26] Yet, EPA does not provide any evidence in the record about whether the current regulatory system is handling the releases effectively, or whether there is a need for supplemental EPA expenditures to address recent hazardous substance releases at currently operating/non-NPL hardrock mines. As described above, EPA simply describes evidence of recent releases, while not addressing the fact that the responses to these releases are potentially being handled effectively under the existing regulations. If other Federal and state programs adequately handle these releases, this would undermine, rather than support the foundation for this proposal.

In Advocacy's review of several mining sites identified by EPA in the preamble as having relatively recent releases of hazardous substances, each firm appeared to be addressing releases from current revenues. Furthermore, each mining regulatory authority also had a financial assurance instrument in place to address potential costs associated with mine closure. In none of the releases that Advocacy reviewed did the mining authority need to make use of the existing bonds. In each case, the mining firm was paying for the remediation, reinforcing the view that this proposal is not necessary. [27]

For example, in the case of the Pole Canyon ODA, there is an ongoing removal and remedial action to address elevated selenium and other contaminants.[28] However, the mine owner, J.R. Simplot Company, is performing the work under the oversight of the USFS at its own expense - a cost of about $7 million. No USFS bond is being used. This is an illustration of the current system working, not the need for a supplemental EPA rule. Remedial actions at currently operating mines do not, alone, provide support for the need for this rule.[29]

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[24] 82 Fed. Reg. 3388, 3471 (January 11, 2017).
[25] See U.S. EPA, Office of Land and Emergency Management, Memorandum to the Record: Releases from Hardrock Mining Facilities, November 2016; 82 Fed. Reg. 3471 (January 11, 2017) n. 190.
[26] 82 Fed. Reg. 3388, 3471 (January 11, 2017).
[27] SC&A memo to Advocacy, dated January 18, 2017 (available from Advocacy).
[28] Id.
[29] Id.

Contrary to the EPA assertions of the need for CERCLA 108(b) to address response actions from modern mine releases, Advocacy's more targeted review of some of these mines points clearly to the opposite conclusion. If EPA wants to proceed further in this rulemaking, the agency should perform a complete examination of the entire mining sample to determine if the current regulatory system is working. EPA's analysis instead addresses the strawman issue of whether releases occur, and not whether additional financial assurance should be imposed.

### *3. EPA's Method to Determine Financial Responsibility Is Not Sound; A New Approach Should Be Developed Subject to Peer Review Before Proposal*

EPA's proposed rule employs a formulaic method using multiple subformulas and one to three site-specific variables to determine a mine's financial assurance amount. These subformulas were derived from performing thirteen separate regression analyses using data from currently operating or proposed mines reclamation and closure plans.[30] The small entity representatives universally rejected this uniform national approach in favor of the expert-driven site-specific engineering approach adopted by Federal and state regulators developed over the last few decades. For example, the Nevada Standardized Reclamation Cost Estimator (SRCE) software is a site-specific methodology used to calculate reclamation and closure costs. The State of Nevada, other states, Bureau of Land Management, and the U.S. Forest Service use the SRCE. The site specific approach is used by the mining community and these regulators because it has been found to be much more accurate than simplified schemes, such as the EPA methodology. EPA adopted its simplified approach so that it could reduce its own regulatory implementation burden, [31] without any apparent effort to address the concern that such an approach would be substantially inaccurate for many mines.

The SERs asserted that the operation of a modern hard rock mine varies dramatically between sites due in part to different climates, deposit types, and varying permit requirements.[32] As a result, Advocacy believes that the current regression analysis in the proposed rule cannot capture these differences adequately, and cannot replace the site-specific expert-driven methodology almost universally adopted across the country. The end result of EPA's approach provides a formula that predicts the average cost, dependent on acres and few other variables, across all facilities. This overarching approach will, by design, over-predict the costs of small responses and potentially under-predict costs of very large responses. Such an approach is particularly harsh on small mines that would be required to post large, unneeded financial assurance. The

[30] EPA developed 13 different subformulas to develop financial assurance amounts for the 13 response categories; EPA Formula Background, Chapter 4, Response Component Regression Analysis.
[31] 82 Fed. Reg. 3388, 3401 (January 11, 2017).
[32] "This benchmarking approach is an extremely simplistic approach for creating a cost estimate and cannot account for numerous site specific/project specific conditions that can have profound impacts on the costs. In other words, using the acreage of a tailings impoundment multiplied by some one-size-fits-all cost/acre to determine the cost of a "response activity" for any tailings impoundment will either underestimate the cost, or overestimate the cost." AE&MA September 16, 2016 Letter, p.7; "The SRCE costs are based on equipment type, size, capacity, and the manufacturer's productivity factor for each specific piece of equipment. This analysis illustrates the type of detailed, site-specific information required to provide realistic estimates of reclamation and closure costs that stands in marked contrast to EPA's simplistic and one-size-fits FR Model." September 16, 2016 Pershing Gold Letter, p. 6.

proposed approach would be more appropriate for an insurance-type system where money may be pooled, but not when individual mines must obtain bonding independently.

### *A. The Formula Depends on Small Samples with Data Quality and Data Interpretation Issues*

The formula is derived from an analysis of the reclamation and closure plans of 63 currently operating or proposed facilities. However, the proposed formula uses thirteen subformulas derived from regression analysis where sample sizes are often much smaller than 63. The majority of the regressions have samples with 50 percent or fewer of these 63 mines. For many regressions, a key variable is based upon less than 6 mines. Small sample sizes in general harm the robustness of regression analyses. Specifically, in this instance, small sample sizes create two large concerns: potential influence points (i.e. outliers) and the effect of data quality issues.

First, Advocacy is concerned about potential outliers or influence points within the data that may hurt the validity of the formula. Peer reviewers have also highlighted this issue.[33] In its response, EPA identified potential influence points in almost every subformula. These influence points may be unduly altering the formula causing a much higher, or lower, financial assurance value. With so many influence points, it is difficult to have confidence in the internal validity of the formula.

For example, in the case of the open pit cost category, the cost of the Historic Phoenix mine is a strong outlier. The Historic Phoenix mine open pit cost is $153,000/acre, which is far higher than the median cost in this category of only $1,600/acre.[34] EPA's test to identify influence points confirmed this mine's dramatic effect on the Open Pit's final subformula. One reviewer cited this example stating that Phoenix had "huge" response costs - $223 million was due to the company's mine closure plan that includes backfilling the pit.[35] The reviewer suggested that EPA include an additional variable in the regression analysis for sites where expensive backfilling measures are not a requirement or part of the closure plan. EPA's failure to separately account for this factor in the regression greatly inflated this category, which accounts for one of the three largest response costs of the thirteen categories. Similar anomalies are found in the two other costly categories – the waste rock and heap dump response categories.[36]

Second, due to the small sample size, issues with data quality would also be magnified. Errors in data interpretation or transcription could create a large deviation in the predicted costs. One peer reviewer evaluated a limited sample of data from four mines and could not replicate the proposal's cost/acre allocations from the reclamation and closure plans.[37] EPA in its response

[33] Response to Peer Review Comments: CERCLA 108(b) Financial Responsibility Formula for Hardrock Mining Facilities Background Document December 2016; Chapter 4 Response Component Regression Analysis.
[34] Formula Background Document, Table G.1, Open Pit Data.
[35] Reviewer #4, p. 5.
[36] Response to Peer Review Comments: CERCLA 108(b) Financial Responsibility Formula for Hardrock Mining Facilities Background Document December 2016; Chapter 4 Response Component Regression Analysis
[37] Reviewer #4, pp. 4-5.

agreed with the reviewer in some instances and promised to alter their allocations in the final analysis.[38]

However, this peer reviewer only evaluated four mines and only a few response categories of these mines. Based on these observations, the reviewer and Advocacy believe that a full review of every mine would uncover many more errors.[39] Even without errors, due to the complexity of these plans and unique site features, significant professional judgment must be used. Therefore, different experts most likely would allocate the reclamation and closure plan costs differently. EPA needs to take additional care when using professional judgment.

The data quality issue can introduce more problematic modeling errors due to the small sample sizes of these regressions. A few mines whose cost allocations or source control tags[40] are incorrect or disputed can cause the final regressions to change dramatically. This would result in very different financial assurance amounts for mines from what are currently proposed.

### *B. Resulting Financial Assurance Values are not Verified for Reasonable Accuracy*

The proposed formula creates financial assurance amounts for individual mines that were not checked or tested for reasonableness. The predictions must provide reasonable accuracy in order to achieve the statutory purpose of protecting the environment. EPA established a data quality control target for the response cost estimate derived from their formula, revealed only to the peer reviewers, which was no more than double and no less than half of the expected values.[41] However, this data quality standard was not used in the supporting documentation to this rule.[42]

Before applying the proposal's source control reductions, almost half of the mines identified by EPA would require over $250 million in financial assurance from only the response aspect of the formula.[43] A few mines would calculate their potential financial assurance as over $1 billion.[44] These figures are far higher than the response costs found in the reclamation and closure plans used by EPA to develop the formula. While the cost of a CERCLA response may be higher than the costs for a conventional closure, EPA does not evaluate whether its formula creates an appropriate estimate**.** EPA needs to apply the data quality standard it has established for the methodology.

[38] Response to Peer Review Comments: CERCLA 108(b) Financial Responsibility Formula for Hardrock Mining Facilities Background Document December 2016; Chapter 6
[39] Reviewer #4, pp. 4, 5 and 9.
[40] Source control tags means describing the engineering measures taken to limit potentially harmful releases of hazardous substances.
[41]Reviewer #4, pp. 1 and 7.
[42] Id.
[43] Regulatory Impact Analysis, Appendix B. The response costs addressing remedial actions alone are separate from the two other cost categories included in the EPA rule: Natural Resources Damages and Health Assessment costs.
[44] Id.

### *C. Costs of Financial Assurance Are Too High for Small Mines*

As demonstrated by the six examples in Table I in the Appendix, the EPA formula creates vastly higher response costs than the estimated reclamation and closure costs, often by one or two orders of magnitude.[45] This can be devastating to small mines. As an example, the Hycroft Mine is owned by a small business that just emerged from a Chapter 11 reorganization last year. Raising its financial assurance requirements from under $20 million to over $500 million would be very problematic. Further, based on input from the SERs and state programs, Advocacy has much greater confidence in the accuracy of the expert driven site-specific financial assurance amounts than the estimates derived from EPA simplified nationwide formula.

While the model tries to appropriately estimate the proper financial responsibility for mines, Advocacy is concerned that it is a blunt instrument that will result in very large and unreasonable figures for smaller mines. Based on EPA's own analysis in the Regulatory Impact Analysis (RIA), with costs of many small mines exceeding three percent of sales, these costs could well undermine the viability of these small firms, and impede the development of future mine projects. This is especially troubling, given the minimal justification for requiring any financial assurance for these modern mines.

### *D. The Peer Review Had Significant Flaws and Did Not Precede Development of the Proposal*

EPA began a peer review of their formula methodology in conjunction with this rulemaking, but completed it barely before the proposal was signed. The agency's nonpublic peer review consisted of four individuals with variable experience in hardrock mining and statistics. This peer review appears to have significant flaws. In their comments, three of the peer reviewers expressed confusion about what EPA was attempting to do, the data used in the regression analysis and the purpose of other data included in the peer review record. They also appeared uncertain about the final result of the formula and its significance. Only one of the four peer reviewers managed to provide detailed comments on the formula, and this reviewer was highly critical of the approach.[46] As discussed further below, the peer review material was incomplete, and should have been the subject of a public, not private, peer review. Most importantly, due to the ill-timing of the review, EPA was unable to take the opportunity to improve the methodology as a result of the peer review comments that it did receive.

First, and critically, EPA failed to provide the final results of the model to the peer reviewers to compare with the associated reclamation and closure costs (see Appendix J of the Background Document), which was the source of great confusion for most of the reviewers. Instead, EPA only presented the reviewers with the figures for the initial calculations, before two very large adjustment factors were applied, which vastly inflated the costs.[47] One peer reviewer (number

[45] The mines selected were presented to the SERs during the Panel Process. "Reported" values were obtained from the source document without inflation or regional adjustment. "Formula" values were obtained from the slides presented to the SERs. Advocacy calculated the net present value of the Reported O&M and Water Treatment costs using the methodology EPA describes in the Formula Background Document pages 4-18 to 4-21.

[46] Peer review comments found in Hardrock Mining Peer Review – Combined Documents; Reviewer #4, pp. 4-9.

[47] Adjustments were made by using a "smearing factor" and a "source control assumption." See details in the Formula Background Document, sections 4.1, 4.2 and 4.4.

3), stated "I got lost several times, despite the fact that I was taking notes while reading the report, and in some places I just cannot follow the logic of the Agency." More troubling the same peer reviewer stated, "Which dataset was used to run the regressions? I thought it was the one in 2) the first time I read the report, 5) the second time, and I had literally no idea the third time around. Help!" Another reviewer noted that "when looking at the formula, given the logs and powers of 10, it is hard to get an idea of how big the financial responsibility bond will eventually be. After listing the formula, it would be interesting to see what the amount required would be for the average facility." This reviewer couldn't comment on the accuracy of the approach.[48]

Second, because the peer review was done late in the rulemaking process, EPA was unable to incorporate any changes to its approach in the proposed rule as a result of the peer review comments. In several passages of the Response to Peer Review Comments, EPA promised to make conforming changes in the final formula documentation when it publishes the final rule.[49]

Third, given that this formula methodology was "highly influential" to this rulemaking, the peer review should have been a public peer review, not a private review by four individuals, of whom only one was able to fully understand the documents.[50] Public peer reviewers could have performed a much more thorough review, and the results of that peer review could have been incorporated into the proposal.

As a result, EPA should (1) reverify its underlying data, (2) rerun the regressions and (3) obtain a peer review in a public review permitting public comment. Based on the problematic peer review alone, Advocacy believes that the agency should reconsider this approach and the need for this rule, as discussed elsewhere.

### *E. EPA Did Not Comply with the SBREFA Panel Requirements to Provide Key Information about the Formula Methodology to Small Entity Representatives*

As discussed briefly above, key information was not made available to the SERs in this panel process. If the SERs had been given the critical information underlying the formula methodology, the problems presented by EPA's methodology would have been identified, and possibly cured.

Below are excerpts from the SBREFA panel report, explaining this problem in more detail.

> *Many of the SERs commented on their perceptions of the adequacy of the SBREFA panel process, and expressed frustration about not being provided a draft version of EPA's financial responsibility formula. SERs expressed concerns with the regulatory approach, particularly regarding the potential costs of complying with requirements for financial assurance for closure and reclamation as well as CERCLA 108(b) financial responsibility. SERs were not able to provide*

[48] Peer review comments found in Hardrock Mining Peer Review – Combined Documents.
[49] Response to Peer Review Comments: CERCLA 108(b) Financial Responsibility Formula for Hardrock Mining Facilities Background Document, December 2016.
[50] See discussion of "highly influential" products in Section 3.2, EPA Peer Review Handbook, Edition #4 (October 2015).

*information to the Panel about how significant those potential costs would have been for their specific facilities.*

*….*

*Advocacy shares the concerns raised by the SERs. Advocacy believes SERs were not provided the selection criteria for choosing the input mines, the input data used to develop the formula, nor the key elements of the formula. SERs could not estimate the costs of such an approach on their own facilities. Advocacy needed to evaluate these highly technical data and statistical analysis with the aid of the mining experts who had considerable knowledge in this area. In Advocacy's view, the Panel did not get the full opportunity to receive valuable advice and was handicapped in developing the Panel recommendations. Advocacy regrets that the Panel is not able to make more specific recommendations for flexibilities to minimize the impacts on small entities, and particularly on the formula used to calculate financial assurance amounts. In the view of Advocacy, SERs on other panels received more robust information, and those Panel reports reflect more informed advice.*

Panel Report, p. 26.

Given the lack of information available to them, SERs were not able to provide specific comments to the Panel about how significant those potential costs would have been for their facilities. Based on the limited information provided to them, the SERs could only conclude that the formula was vastly overpredicting the costs, and that they had no idea why this would occur or be needed. Thus, the SERs could not use their expertise to help EPA fix the formula, which resulted in the highly flawed product contained in the proposal. The statutory purpose of providing informed advice to the agency was frustrated by this nondisclosure of the formula details.

### 4. *EPA Should Allow Credit Reductions for Existing Requirements, Delete Supplemental Engineering Requirements, and Retain the General Performance Standard*

EPA properly recognizes that it should provide financial assurance credit for the 13 response categories for mines that already incorporate adequate financial assurance and good engineering plans. The agency proposes to require compliance with 14 pages of engineering standards and compliance with a general performance standard as a condition for receiving financial assurance credit**.** EPA is now proposing specific numeric requirements such as planning for a 200-year storm event, and reducing net precipitation by 95 percent. These conditions override the site-specific judgment and flexibility employed by the mines, and approved by state and Federal regulators.

These engineering provisions require EPA to employ expert judgment about the mine facilities, and would require second-guessing of the Federal and state mining agency site-specific determinations. Indeed, the agency states elsewhere that it has "policy concerns about overseeing other federal and state programs' financial responsibility requirements for adequacy,

given other authorities' expertise with mining regulations."[51] The very premise of using the simplistic formula approach is the avoidance of expert judgment and second-guessing other mining agencies.

In its approach, EPA has overlooked the fact that not all response categories are needed for all mines. These include response categories such as Long Term Operation & Maintenance (O&M) and water treatment. If the mine already meets water quality standards, for example, further water treatment may not be required. EPA needs to provide for full credit for these elements where the mining agency has determined that the financial assurance response category is either not needed at this time, or not needed at all, provided that the agency performs periodic reviews of these determinations. If EPA does not do so, it will be unnecessarily raising the costs on the mining facility. EPA needs to explicitly preserve this flexibility in any final rule.

The mining agencies have their own requirements, their own guidance, and states have their own specific requirements which could easily conflict with the one size fits all requirements. In sum, EPA should make the following changes. The agency should delete these supplemental engineering requirements. The agency, instead, should retain the proposed general performance standard to require practices that would minimize the "degree and duration" of releases of hazardous substances in its place. Finally, EPA should provide flexibility for the deletion of unnecessary response categories.

### *5. EPA Failed to Comply with the RFA in Failing to Consider Significant Small Business Alternatives Suggested by the SERs; The One EPA Regulatory Alternative Provides No Direct Relief for Affected Small Firms*

The Regulatory Flexibility Act (RFA) requires agencies to consider small business regulatory alternatives that address small business impacts for the rules significantly affecting small firms. Those alternatives considered by the agency become part of the Initial Regulatory Flexibility Analysis (IRFA).[52] However, EPA failed to do so. Instead, the proposed rule includes a regulatory alternative that does not address the significant small entity impacts anticipated by EPA. Under this regulatory alternative, the mine owner/operator could meet EPA's financial assurance responsibility requirement if it is able to pass a proposed financial test. Under this scenario, EPA would allow the owner/operator to self-insure or use a corporate guarantee. Owners or operators unable to qualify for the Option 2 financial test would be required to acquire a third-party instrument or have a trust fund to comply with the rule's financial assurance requirement.

Given their financial standing, small entities did not view this as a viable option for their mines. Without a credit rating, the financial test is unavailable to small firms.[53] In fact, SERs noted that most small entities do not have credit ratings, so they will often have to use cash or significant amounts of collateral.[54] Similarly, other SER commenters noted difficulties that small entities

[51] 82 Fed. Reg. 3388 , 3401 (January 11, 2017).
[52] 5 U.S.C. 603.
[53] Proposed 320.43(a)(1)(i) require at least one-long term credit rating of AAA, AA+, AA, AA-, A+, A, or A- to qualify. No small firm can meet this requirement.
[54] September 16, 2016 AE&MA letter, p. 12.

experience in obtaining financial assurance instruments, and believe that the costs for 108(b) instruments will be prohibitive for these entities.[55]

Advocacy is concerned that EPA's regulatory alternative will serve to create a competitive advantage for large businesses. Having a financial test available as a compliance option would result in a higher proportion of large businesses than small businesses qualifying to self-insure. This scenario will create a significant cost advantage for large firms relative to small firms, which results in the opposite outcome from that intended by the RFA, which is designed to provide regulatory relief to small businesses.

EPA has failed to include in the Initial Regulatory Flexibility Analysis (IRFA) any small business alternatives that minimize small business impacts. This is very disappointing given that the panel proceedings identified several alternatives that would achieve the statutory purpose, including the option of no regulation, or regulating mines that fall within identified regulatory "gaps." These alternatives are fully discussed in the panel report, and were all but ignored by the agency.[56] Thus, EPA did not comply with the RFA requirement to identify small business alternatives in the IRFA. The agency should cure this violation by either withdrawing the proposal, or including true regulatory alternatives in any future rulemaking activities.

### *6. EPA Overestimates Regulatory Benefits; Rule Costs Exceed Benefits*

On page ES-14 of the RIA, EPA states the following: "EPA could not monetize all of the rule's benefits due to data limitations. This RIA, however, estimates that the proposed rule would lead to $511 million to $527 million in reduced cost to government over 34 years (the period of analysis) by increasing the likelihood that responsible parties would have access to the necessary funds for their CERCLA liabilities."

EPA explains that the $527 million estimate is based on multiplying EPA's total financial assurance responsibility estimate of $7,064 million by an assumed firm exit rate (7.5 percent).[57] The agency also acknowledges that assuming that all bankrupt firms are left with all unpaid CERCLA costs is a high-end estimate, because only a fraction of such firms will have remedial costs, and another portion of those will be paid for in the bankruptcy proceeding.

This approach leads to a vastly overstated estimate of benefits of the proposed rule because of these three major EPA assumptions, all of which inflate the benefits individually:

1. All mines for every firm that goes bankrupt will require response actions to address releases;

[55] September 16, 2016 Pershing Gold letter, pp. 10-11.

[56] EPA did not address these regulatory alternatives in the preamble, but did address the "deferral" option. In the rule preamble, EPA discussed several elements of an approach that would defer to robust state and Federal programs under certain conditions. Unfortunately, this discussion is absent in the RFA section of the proposal, and there is little evidence that EPA seriously considered this very important option.

[57] Exhibit ES-3; "In the baseline, the government is burdened with the CERCLA cost if a responsible party defaults, as no third-party instruments will be in place. For the baseline, the government burden rate is estimated using the firm exit rate derived from the Census Bureau's Business Dynamics Statistics (BDS). This represents a high-end estimate that assumes exiting firms fail to meet any of their CERCLA obligations."

2. All mines that require response actions to address releases will require every one of the actions for which EPA modeled costs in their baseline financial assurance responsibility estimate; and
3. Costs for all modeled response actions will be paid under the CERCLA program (i.e., there will be no other entity, including the firm that had been operating the mine, nor the Federal/state mining authorities directly regulating the mine, that will fund any portion of response costs).

Although EPA did partially acknowledge the high-end bias of the third item above, the agency does not address the concerns in either of the first two. To more realistically estimate the benefits of the proposed rule, EPA needs to incorporate estimates into their analyses that reflect the fact that each of these activities will occur with less than 100 percent frequency. Although information is not readily available to develop estimates of the frequency of occurrence for each of the above activities, Advocacy believes that the following conservative estimates (i.e., actual values are likely to be lower) are more realistic:

1. Proportion of firms that go bankrupt that require at least one response action: 50 percent;
2. Of the above firms, the proportion of EPA's total response cost estimate that will actually be incurred: 50 percent; and
3. Of the above total incurred response action cost, the proportion that is paid via the CERCLA 108(b) program: 10 percent.[58]

Based on these conservative estimates, the estimated benefits of Option 1 of EPA's proposed rule in terms of reduced Government Costs would drop from EPA's $527 million estimate to $13.2 million. When compared to 34 years of EPA's estimate of Option 1 annual financial assurance responsibility expenditures ($171 million/year), the cost/benefit ratio demonstrates the huge inefficiency of EPA's regulatory approach. This comparison is displayed below. This comparison is just another way to appreciate the inappropriateness of this proposal, even if one ignores the flaws in the formula methodology. The EPA scheme, in effect, is a huge transfer between mining firms and the financial assurance industry with comparatively small benefits to the public.[59]

| **34-Year Costs (millions of 2015$)** | **34-Year Benefits* (millions of 2015$)** | | **Costs/Benefits*** ** | |
|---|---|---|---|---|
| **EPA** | **EPA** | **Adjusted** | **EPA** | **Adjusted** |
| 5,814** | 527 | 13 | 11 | 447 |

* EPA lists the following as non-quantified benefits of the proposed rule: improved efficiency in capital markets due to increased transparency of environmental liabilities; decrease in human and ecosystem exposure to harmful contaminants due to more expeditious site cleanups; and decrease in human and ecosystem exposure to harmful contaminants due to incentivized actions by mining industry to improve environmental performance.
**EPA annual estimate of $171 million/year x 34 years
***Costs/Benefits calculated using EPA method and adjusted method using conservative values

[58] These figures were derived from the SC&A Task 4 memo, draft dated January 12, 2017, based on professional engineering judgment.
[59] In Table ES-4 of the RIA, EPA estimates that the majority of the costs ($127 of $171 million) is a transfer between the mining industry and the financial industry.

**Conclusion**

EPA is proposing a rule that would cost $171 million annually by its own estimate, to address risks that are already addressed by state and Federal agencies. Given the minimal remaining risks, the statute does not require any regulation under CERCLA 108(b) to address the hardrock mining industry. EPA also greatly overstates the benefits of this rulemaking by failing to incorporate valid estimates of the incremental impact of the proposed rule. When properly evaluated, the costs of the proposed action far outweigh the benefits.

The historical record does not support a determination of risk levels requiring new Federal involvement, especially when EPA has not refuted the assertion that certain regulatory programs provide coverage of the same response actions that EPA plans to cover (e.g., state and Federal mining regulations). Given the lack of evidence for substantial risks, a more reasonable approach is for EPA to focus on reducing any identified residual risks within the current regulatory framework rather than promulgating a new set of EPA-specific financial assurance requirements.

Advocacy urges EPA to give full consideration to the above issues and recommendations. Advocacy is prepared to work with EPA on these issues and would welcome the opportunity to engage in broader consultations on these issues.

If you have any questions or require additional information please contact me or Assistant Chief Counsel Kevin Bromberg (202) 205-6964 or by email at kevin.bromberg@sba.gov.

Sincerely,

/s/

The Honorable Darryl L. DePriest
Chief Counsel
Office of Advocacy
U.S. Small Business Administration

Copy to: The Honorable Howard Shelanski
Administrator
Office of Information and Regulatory Affairs
Office of Management and Budget

APPENDIX:

## Table I: Six Mines - Actual Costs from Source Documents vs Modeled Costs from Formula

| Mine 5 Nixon Fork Alaska | | |
|---|---|---|
| **Category** | **Reported** | **Formula** |
| Waste Rock | 100,000 | 1,320,000 |
| Tailings | 420,000 | 1,690,000 |
| Underground Mine | 56,000 | 200,000 |
| Drainage | Missing | 130,000 |
| Interim O&M | 4,355,000 | 19,540,000 |
| Water Treatment | Missing | 67,000 |
| Short Term O&M | 64,000 | 500,000 |
| Long Term O&M | Missing | 46,000 |

| Mine 60 Lisbon Valley Utah | | |
|---|---|---|
| **Category** | **Reported** | **Formula** |
| Open Pit | 156,000 | 12,610,000 |
| Waste Rock | 1,130,000 | 26,080,000 |
| Drainage | 21,000 | 1,040,000 |
| Interim O&M | 4,605,000 | 44,600,000 |
| Water Treatment | Missing | 2,700,000 |
| Short Term O&M | 749,000 | 1,970,000 |
| Long Term O&M | missing | 3,840,000 |

| Mine 12 Johnson Camp Arizona | | |
|---|---|---|
| **Category** | **Reported** | **Formula** |
| Open Pit | 30,000 | 18,830,000 |
| Waste Rock | 339,000 | 13,100,000 |
| Heap Dump Leach | 812,000 | 31,570,000 |
| Drainage | missing | 1,020,000 |
| Interim O&M | missing | 24,630,000 |
| Water Treatment | missing | 2,690,000 |
| Short Term O&M | missing | 1,940,000 |
| Long Term O&M | missing | 3,740,000 |

| Mine 27 Idaho Cobalt | | |
|---|---|---|
| **Category** | **Reported** | **Formula** |
| Process Pond | 235,000 | 240,000 |
| Tailings | 5,400,000 | 4,030,000 |
| Drainage | Missing | 210,000 |
| Interim O&M | 23,389,000 | 11,380,000 |
| Water Treatment | 632,000 | 130,000 |
| Short Term O&M | 2,744,000 | 680,000 |
| Long Term O&M | missing | 750,000 |

| Mine 42 Hycroft Nevada | | |
|---|---|---|
| **Category** | **Reported** | **Formula** |
| Open Pit | 77,000 | 197,900,000 |
| Waste Rock | 3,567,000 | 76,790,000 |
| Heap Dump Leach | 4,128,000 | 118,200,000 |
| Process Pond | 1,000,000 | 1,890,000 |
| Drainage | 331,000 | 2,900,000 |
| Interim O&M | 95,640,000 | 69,130,000 |
| Water Treatment | Missing | 14,050,000 |
| Short Term O&M | 2,385,0000 | 3,930,000 |
| Long Term O&M | missing | 11,050,000 |

| Mine 53 Standard Mine Nevada | | |
|---|---|---|
| **Category** | **Reported** | **Formula** |
| Open Pit | 27,000 | 4,440,000 |
| Waste Rock | 524,000 | 12,390,000 |
| Heap Dump Leach | 2800,000 | 11,180,000 |
| Process Pond | 228,000 | 170,000 |
| Drainage | 3,000 | 670,000 |
| Interim O&M | 16,600,000 | 35,790,000 |
| Water Treatment | Missing | 1,090,000 |
| Short Term O&M | 722,000 | 1,460,000 |
| Long Term O&M | Missing | 2,420,000 |