

September 16, 2021

NOTICE OF PETITION AND PETITION FOR RULEMAKING
BRINGING HARDROCK MINING REGULATIONS AND POLICY
INTO THE 21ST CENTURY
TO PROTECT INDIGENOUS AND PUBLIC LANDS RESOURCES IN THE WEST

The Honorable Debra Haaland
Secretary of the Interior
Department of Interior
1849 C Street, NW
Washington, D.C. 20240

The Honorable Nada Wolff Culver
Deputy Director of Policy and Programs
Bureau of Land Management
1849 C Street, NW
Washington, D.C. 20240

Re: Petition to the U.S. Department of Interior and the U.S. Bureau of Land Management for Hardrock Mining Rulemakings and Policy Updates

Dear Secretary Haaland and Deputy Director Culver:

Pursuant to Federal Land Policy Management Act of 1976 (FLPMA), 43 U.S.C. §§ 1701 *et seq.*, and 5 U.S.C. § 553(e) of the Administrative Procedure Act (APA), the undersigned sovereign Indian tribes and nations and Indigenous organizations and conservation organizations hereby respectfully petition the U.S. Department of Interior (DOI), by and through the U.S. Bureau of Land Management (BLM), for a rulemaking to strengthen and modernize BLM’s regulations at 43 C.F.R. §§ 3800 *et seq.* (Hardrock Mining Rules).

It’s long past time to reform the nation’s hardrock mining rules, end generations of mining-inflicted injustice to Indigenous communities, and chart a new course for public lands stewardship toward a sustainable, clean energy economy. For far too long, mining companies have had free rein to decimate lands of cultural importance to tribes and public lands at enormous cost to people, wildlife, and these beautiful wild places of historic and cultural significance. The harm is undeniable, severe, and irreparable. Reforming these rules will prevent more damage, help us transition to green infrastructure, and leave a livable planet to future generations.

Petitioners greatly appreciate the Biden-Harris Administration’s Executive Memorandums and Executive Orders (EOs) on Tribal Consultation and Strengthening Nation-to-Nation Relationships,¹ Tackling the Climate Crisis at Home and Abroad,² Executive Order on

¹ “Tribal Consultation and Strengthening Nation-to-Nation Relationships: Memorandum for the Heads of Executive Departments and Agencies,” by the Executive Office of the President, 86 Federal Register 7941 (2021).

² “Executive Order 14008, Tackling the Climate Crisis at Home and Abroad,” by the Executive Office of the President, 86 Federal Register 7619 (2021). *See also* “National Environmental Policy Act (NEPA) Guidance on Consideration of Greenhouse Gas Emissions” by the Council on Environmental Quality, 86 Federal Register 10252 (2021).

Revocation of Certain Executive Orders Concerning Federal Regulation,³ and America’s Supply Chains.⁴ In particular, the White House’s report pursuant to the America’s Supply Chains EO directing DOI and the U.S. Department of Agriculture (USDA) to “strengthen the regulations governing mining on public lands.”⁵

Together, these EOs have committed this administration to the rapid, just, equitable, and fair transition to renewable energy. The need to end the obsolete system put in place by the Mining Law of 1872 is well-recognized. As Congress works toward legislative reform, 17 Members wrote on April 27, 2021, “the Biden Administration should take steps to reduce new mine waste, pollution, clean-up existing mine sites, protect public health, and close loopholes used by mining companies to evade their legal obligations.”⁶ This letter outlined essential regulatory reforms that are needed in the meantime, which are also reforms identified in the Attachments to this Petition.

These federal safeguard updates include, but are not limited to: meaningful Tribal consultation and Indigenous resource protections, clarifying federal land managers authority to decide whether to approve mining plan of operations and to reject proposals that may cause substantial irreparable harm, minimize and prohibit harm from tailings and waste piles, and require mining companies plan for climate change.⁷

As the Administration develops policies to build back better clean energy infrastructure, the DOI must also transition minerals policies to a modern framework that will prevent unnecessary or undue degradation and promote more responsible sourcing. While this transition will require more of certain types of metals, the current hardrock mining rules are no means to facilitate it and would be counterproductive. This century’s mining rush must not repeat the tragic mistakes of the 19th century rush for precious metals and the 20th century rush for uranium. Those mining rushes killed and displaced untold numbers of Indigenous and other marginalized peoples, destroyed sacred and cultural resources, stole lands, scarred landscapes, and polluted water and climate.

Building a sustainable economy based on clean energy gives us an historic opportunity to confront the legacy of injustice to Indigenous communities and damage to the public lands held in trust for all Americans. Seizing that opportunity requires policies that prioritize metals recycling and reuse over new mining. Where new mining is acceptable, the mining industry must

³ “Executive Order 13992, Revocation of Certain Executive Orders Concerning Federal Regulation” by the Executive Office of the President, 86 Federal Register 7049 (2021).

⁴ “Executive Order 14017, America’s Supply Chains,” by the Executive Office of the President, 86 Federal Register 11849 (2021).

⁵ *Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth, 100-Day Reviews under Executive Order 14017*, page 141, by The White House (2021), available at <https://www.whitehouse.gov/wp-content/uploads/2021/06/100-day-supply-chain-review-report.pdf>. Since DOI is the primary mining agency, it makes sense for USDA’s new hardrock mining rule updates to closely follow during DOI’s rulemaking process.

⁶ “Letter to Interior Secretary Haaland and Agriculture Secretary Vilsack from Chair Grijalva et al.,” by Chair Grijalva et al. (2021), available at <https://naturalresources.house.gov/imo/media/doc/Grijalva%20Lowenthal%20Letter%20to%20Biden%20Admin%20on%20Mining%20Reform%20April%2027%202021.pdf>.

⁷ *Id.*

undertake the most responsible methods. And for DOI, this means promulgating and finalizing new hardrock mining rules.

Justice and Equity Demands New Hardrock Mining Rules

Our public lands agencies manage more than 700 million acres, including many of the most treasured places in the country. These agencies also bear a special responsibility to federally-recognized tribes whose land and resources they hold in Trust. The Federal Government’s Trust responsibilities stem from their promises made in exchange for taking the vast majority of Tribal ancestral lands. Tribes retain sovereignty and other rights to use and occupy their ancestral lands, in addition to rights conferred by treaty.⁸

Between 1778-1871, the United States signed more than 380 Tribal treaties. In 1871, Congress ended new treaty making with tribes inside the United States.⁹ The following year, Congress passed, and President Ulysses S. Grant signed, the Mining Law of 1872.

The Mining Law of 1872 is a glaring example of explicitly settler-colonial public land policy.¹⁰ Its basic terms have not changed since it was enacted, although Congress has narrowed its reach over the years. Today, it governs mining of metals such as gold, silver, copper, lithium, and uranium, as well as “uncommon varieties” of common substances, like stone, on much of the U.S. Forest Service (USFS) and BLM land throughout the western United States. It allows companies to extract these publicly-owned minerals entirely for free, perhaps the last place on the planet where that is possible.

BLM’s hardrock mining rules have not been significantly revised for decades, the USFS’s regulations not for nearly a half-century.¹¹ The Trump administration initiated, but did not complete, hardrock mining rules at both BLM and USFS.¹² Continuing the processes for these unfinished hardrock mining rules provides a pathway for the Biden-Harris administration to put in place badly needed improvements to this regulatory framework. These rules must establish meaningful Tribal consultation, Indigenous resource protections, and seek to achieve the free, prior, and informed consent from impacted communities.

New Hardrock Mining Rules Need to Prevent Unnecessary or Undue Degradation

⁸ Three early Supreme Court decisions, known as the Marshall trilogy, established the Trust doctrine. *Johnson v. M’Intosh*, 21 U.S. 543 (1823), *Cherokee Nation v. Georgia*, 30 U.S. 1 (1823), and *Worcester v. Georgia* 31 U.S. 515 (1832).

⁹ *Improving Tribal Consultation and Tribal Involvement in Federal Infrastructure Decisions*, page 5, by the Departments of Interior, Army, and Justice (2017).

¹⁰ 30 U.S.C. § 22 et seq. (1872).

¹¹ The Interior Department did briefly finalize new hardrock mining rules in the waning days of the Clinton Administration (65 Fed. Reg. 69,998 (Nov. 21, 2000)). Those rules were largely scrapped by the following Administration, with a few exceptions (e.g., rules on bonding and exploration notices) (66 Fed. Reg. 54,834 (Oct. 30, 2001)). Except for some minor revisions, the USFS’ 36 CFR Part 228A hardrock mining rules have remained the same since they were initially promulgated in 1974.

¹² The Forest Service locatable minerals are 36 C.F.R. 228 and the BLM regulations are 43 C.F.R. 3800.

BLM's current hardrock mining rules govern operations occurring on an ever-more massive scale. Today, such operations literally reduce mountains to massive open pits, waste rock dumps, and tailings piles that extend over thousands of acres of land. Most of these open pits—some over a mile wide and deep—must constantly dewater by pumping, a process that severely disrupts hydrology over hundreds of thousands of acres.

Mine operations excavate and crush millions of tons of rock, then treat the ore with large quantities of toxic cyanide and sulfuric acid chemicals. Slurried mine tailings are deposited in giant piles that can pose safety threats to downstream resources and communities. Operators mine ever-lower grades of ore, producing waste rock and tailings measured in tons, in order to obtain quantities of metal measured in ounces.¹³ Thus, the metals mining industry is the nation's single largest source of toxic waste.¹⁴ According to the Environmental Protection Agency's (EPA) 2019 Toxic Release Inventory, the metal mining sector accounted for 41 percent of the 3.4 billion pounds of toxic substances released into the environment that year, even though the sector only manages five percent of all the toxic waste produced by American industries.¹⁵

Many mines generate pollution that persists for hundreds if not thousands of years, requiring costly, perpetual water treatment and long-term financial and environmental liability.¹⁶ EPA estimates hardrock mines contaminated 40 percent of the Western watersheds.¹⁷ Despite the promulgation of the current hardrock mining rules, modern mines have degraded water quality resulting from various spills, tailings failures, and water collection and treatment failures.¹⁸ According to one study, more than three-quarters of modern mines fail to meet water quality standards, despite predicting otherwise when proposed.¹⁹

EPA also administers the Resource Conservation and Recovery Act (RCRA), the federal law that governs waste management. EPA's laws apply on and off public lands. Subtitle C of RCRA covers the management of waste deemed hazardous. Despite their high toxicity, a special

¹³ "How the 20 tons of mine waste per gold ring figure was calculated," Earthworks (2004), available at https://41p14t2a856b1gs8ii2wv4k4-wpengine.netdna-ssl.com/assets/uploads/archive/files/publications/20TonsMemo_FINAL.pdf.

¹⁴ "Toxics Release Inventory (TRI) National Analysis" Environmental Protection Agency (2019).

¹⁵ "2019 TRI Factsheet: Industry sector: Metal Mining, 2122," Environmental Protection Agency (2020), available at <https://enviro.epa.gov/triexplorer/industry.html?pYear=2019&pLoc=2122&pParent=TRI&pDataSet=TRIQ1>.

¹⁶ *Polluting the Future: How mining companies are polluting our nation's waters in perpetuity* by Bonnie Gestring and Lisa Sumi, Earthworks (2013), available at <https://41p14t2a856b1gs8ii2wv4k4-wpengine.netdna-ssl.com/assets/uploads/archive/files/publications/PollutingTheFuture-FINAL.pdf>.

¹⁷ *Americans Pay for Dirty Water*, Environmental Protection Agency (2000), available at <https://nepis.epa.gov/Exe/ZyPDF.cgi/20004GRW.PDF?Dockkey=20004GRW.PDF>.

¹⁸ *U.S. Copper Porphyry Mines: The track record of water quality impacts resulting from pipeline spills, tailings failures and water collection and treatment failures* by Bonnie Gestring, Earthworks (2012, revised 2012), available at https://41p14t2a856b1gs8ii2wv4k4-wpengine.netdna-ssl.com/assets/uploads/2012/08/Porphyry_Copper_Mines_Track_Record_-_8-2012.pdf; "U.S. Operating Copper Mines: Failure to capture & treat wastewater" by Bonnie Gestring, Earthworks (2019), available at https://41p14t2a856b1gs8ii2wv4k4-wpengine.netdna-ssl.com/assets/uploads/2019/05/FS_Pebble-FAILURE-TO-CAPTURE-AND-TREAT-WASTEWATER.pdf.

¹⁹ *Predicted Versus Actual Water Quality at Hardrock Mine Sites: Effect of Inherent Geochemical and Hydrologic Characteristics* by Ann Maest, James Kuipers, Kim MacHardy, and Gregory Lawson, American Society of Mining and Reclamation (2006), available at <https://www.asrs.us/Portals/0/Documents/Conference-Proceedings/2006/1122-Maest.pdf>.

loophole—created after BLM’s current hardrock mining rules—categorically exempts mine waste from the hazardous waste provisions of RCRA. Consequently, no hardrock mining wastes are subject to this federal hazardous waste statute.²⁰

EPA’s Clean Water Act (CWA) contains another loophole that allows mining companies to pollute clean water sources with impunity. In 2002, the George W. Bush administration weakened CWA rules specifically allowing mine operators to dump their tailings directly into waterways. The law requires these same toxic materials from all other industries to be kept out of U.S. waters.²¹

There are no truly safe options for mine waste disposal. Most waste storage occurs in enormous containment structures vulnerable to failure and that often require water capture and/or treatment indefinitely. One of the primary causes of perpetual pollution from mines—acid mine drainage—is well understood. Yet, no modern hardrock mine operations have demonstrated they can stop acid mine drainage once it occurs on a large scale.²² Instead, accidents and unintended seepage are commonplace:

- A 2012 review of currently operating United States copper porphyry mines, accounting for over 90 percent of domestic copper production, found that 82 percent resulted in water quality impacts from failure to capture and control mine-affected water.²³
- A 2017 report of currently operating United States gold mines found that 20 out of 27 mines (74 percent) failed to capture and treat contaminated mine water, resulting in water quality impacts.²⁴
- A 2018 review of all Montana’s major operating hardrock mines, under current hardrock mining rules, found that water quality predictions made during the permitting process were consistently underestimated, with significant impacts resulting from repeated spills of cyanide and uncontrolled acid mine drainage among others.²⁵

²⁰ 42 U.S.C. § 6921(b)(3)(A)(ii).

²¹ “Final Revisions to the Clean Water Act Regulatory Definitions of ‘Fill Material’ and ‘Discharge of Fill Material,’” U.S. Army Corps of Engineers, 67 Federal Register 31129 (2002).

²² *Polluting the Future: How mining companies are polluting our nation’s waters in perpetuity* by Bonnie Gestring and Lisa Sumi, Earthworks (2013), available at <https://41p14t2a856b1gs8ii2wv4k4-wpengine.netdna-ssl.com/assets/uploads/archive/files/publications/PollutingTheFuture-FINAL.pdf>.

²³ *U.S. Copper Porphyry Mines: The track record of water quality impacts resulting from pipeline spills, tailings failures and water collection and treatment failures* by Bonnie Gestring, Earthworks (2012, revised 2012), available at https://41p14t2a856b1gs8ii2wv4k4-wpengine.netdna-ssl.com/assets/uploads/2012/08/Porphyry_Copper_Mines_Track_Record_-_8-2012.pdf.

²⁴ *U.S. Gold Mines Spills & Failure Report: The Track Record of Environmental Impacts Resulting from Pipeline Spills, Accidental Releases and Failure to Capture and Treat Mine Impacted Water* by Bonnie Gestring and John Hadder, Earthworks (2017), available at <https://earthworks.org/assets/uploads/archive/files/publications/USGoldFailureReport2017.pdf>.

²⁵ *Track Record: Montana Modern Hardrock Mining Water Quality Impacts and Reclamation Bonding*, by Laura Zanolli, Montana Trout Unlimited and Earthworks (2018), available at <https://41p14t2a856b1gs8ii2wv4k4-wpengine.netdna-ssl.com/assets/uploads/2018/09/Montana-Predictions-Report.pdf>.

- A 2020 report on Alaska’s major hardrock mines found that 80 percent failed to capture or control contaminated mine water, resulting in water quality violations that often occurred over an extended period of time.²⁶

In addition to these severe and permanent environmental effects, industrial mining has resulted in, and continues to disproportionately impact, Indigenous communities across the West and Alaska. The decades of pollution and destruction of cultural and environmental values at the Zortman-Landusky open pit cyanide leach gold mine adjacent to the Ft. Belknap Reservation in Montana is just one example of the woeful shortcomings of the current federal regulations.²⁷ The devastation from open pit gold mining in Nevada and the Great Basin has been particularly egregious on Western Shoshone communities.²⁸

Large-scale mining currently threatens the land base, Sacred Sites, Treaty rights, and invaluable cultural resources of Indigenous communities in every western state, including from uranium mining in New Mexico, Arizona, Utah, and Colorado, gold and uranium in the Black Hills, gold and copper in Alaska and Montana, copper in Arizona, multiple metals in Idaho, gold and lithium in Nevada and California, and gold and other metals in and along the streams and rivers of the Pacific Northwest—to name just a few.

BLM’s existing hardrock mining rules perpetuate inequities while failing to adequately protect tribal resources and other natural resources. Modernizing BLM’s hardrock mining rules would help correct these unacceptable risks and burdens that the current rules all too often permit.

Climate Change Risks and Tailings Dams Disasters Require New Hardrock Mining Rules

BLM’s current hardrock mining rules went into effect long before global scientific consensus formed around the risks of tailings dam failures and the impending climate emergency. As of this date, humanity has roughly 30 years to cap global temperature rise at 1.5 degrees Celsius to avoid the most catastrophic climate impacts. According to the United Nations Environmental Programme (UNEP), mining and mineral processing accounts for 10 percent of global climate change impacts.²⁹ Mitigating mining’s climate risks is necessary to protect global and local impacted communities.

Climate change exacerbates the risks and uncertainties associated with hardrock mining. The increasing frequency of extreme weather events, changing temperatures, and precipitation

²⁶ *Alaska Metal Mines: The track record of impacts to land and water from the failure to capture and treat mine pollution* by Bonnie Gestring, Earthworks (2020), available at <https://41p14t2a856b1gs8ji2wv4k4-wpengine.netdna-ssl.com/assets/uploads/2020/03/AK-MINE-POLLUTION-REPORT-2020.pdf>.

²⁷ “*Tribes and Hardrock Mining*,” National Wildlife Federation, available at https://www.nwf.org/~media/PDFs/Wildlife/Mining-Loopholes/Tribal_v4.ashx.

²⁸ *Digging Holes in the Spirit, Gold Mining and the Survival of the Western Shoshone Nation*, Western Shoshone Defense Project (1999).

²⁹ “Global Resources Outlook 2019 Fact Sheet: Natural Resources for the Future We Want,” United Nations Environmental Program (2019), available at <https://www.resourcepanel.org/reports/global-resources-outlook>.

patterns affect the safety and stability of mining operations and infrastructure.³⁰ Mine-specific examples of these types of impacts include major spills resulting from large storm events³¹ and damage to mine waste cover systems from unexpected wildfires.³² These climate risks pose particularly acute problems in Alaska, where disruptions to mining operations have occurred from permafrost thaws caused by temperatures warming much faster than the national rate.³³ Climate changing temperatures and precipitation patterns also affect the structural integrity of tailings dams.³⁴

Disastrous waste containment failures are a tragic and continuous problem around the world, as shown at Brazil's Brumadinho,³⁵ British Columbia's Mount Polley,³⁶ and Florida's Piney Point.³⁷ Tailings dams on public lands could also fail. A 2019 report identified an increasing trend in the number of catastrophic tailings failures globally, including in the United States.³⁸ The report attributes this, in part, to more mining of lower grade ore deposits facilitated by new technology.³⁹

³⁰ *Adapting to Climate Change: A Guide for the Mining Industry* by Ryan Schuchard and Julia Nelson, BSR (2011), available at https://www.bsr.org/reports/BSR_Climate_Adaptation_Issue_Brief_Mining.pdf.

³¹ "Climate Change – Extreme Conditions: Do Plans of Operations Need to Include an Ark?" by R. David Williams, Mine Design, Operations & Closure Conference (2012), available at https://www.mtech.edu/mwtp/presentations/2012_presentations/Dave%20Williams.pdf.

³² "July Wildfire: Zortman Landusky Mine" by Bill Maehl, Mine Design Operations and Closure Conference (2018), available at https://www.mtech.edu/mwtp/presentations/2018_presentations/wednesday/Bill-Maehl.pdf.

³³ "As Arctic warming accelerates, permafrost thaw hits Red Dog mine with \$20 million bill" by Nathaniel Herz, Alaska Public Radio (2020), available at <https://www.alaskapublic.org/2020/09/01/as-arctic-warming-accelerates-permafrost-thaw-hits-red-dog-mine-with-20-million-bill/#:~:text=Alaska%20Public%20Media-.As%20Arctic%20warming%20accelerates%2C%20permafrost%20thaw%20hits%20Red.mine%20with%20%2420%20million%20bill&text=The%20multinational%20company%20that%20operates.its%20water%20storage%20and%20discharge.>

³⁴ *Safety First: Guidelines for Responsible Mine Tailings Management* by Jamie Kneen, Ugo LaPointe, Jan Morrill, Payal Sampat, Earthworks (2020), available at <https://41p14t2a856b1gs8ii2wv4k4-wpengine.netdna-ssl.com/assets/uploads/2020/06/REPORT-Safety-First-Requirements-for-Safe-Tailings-Management-FINAL.pdf>.

³⁵ "Brumadinho Dam Collapse: A Tidal Wave of Mud" by Shasta Darlington, James Glanz, Manuela Andreoni, Matthew Bloch, Sergio Peçanha, Anjali Singhvi, and Troy Griggs, *The New York Times* (2019), available at <https://www.nytimes.com/interactive/2019/02/09/world/americas/brazil-dam-collapse.html>.

³⁶ *Report on Mount Polley Tailings Storage Facility Breach* by the Independent Expert Engineering Investigation and Review Panel, Province of British Columbia (2015), available at <https://www.mountpolleyreviewpanel.ca/sites/default/files/report/ReportonMountPolleyTailingsStorageFacilityBreach.pdf>.

³⁷ "Letter to the Chairs of the House of Representatives Committees on Energy and Commerce and Oversight and Reform" by the Center for Biological Diversity et al., Center for Biological Diversity (2021), available at https://www.biologicaldiversity.org/campaigns/phosphate_mining/pdfs/2021_04_12_Piney_Point_letter_Congress.pdf.

³⁸ *The Increasing Number of Tailings Facility Failures: Navigating the Decade 2020-2029* by Dr. Dave M. Chambers, Canadian Dam Association Annual Conference (2019), available at <http://www.csp2.org/files/reports/Increasing%20Number%20of%20Tailings%20Facility%20Failures%20-%20Chambers%20Oct19.pdf>.

³⁹ *The Risk, Public Liability, and Economics of Tailings Storage Facility Failures* by Lindsay Newland Bowker and David M. Chambers, Earthworks (2015), available at <https://files.dnr.state.mn.us/input/environmentalreview/polymet/request/exhibit3.pdf>.

Every mine and mine location is unique, posing technical challenges that better performance standards and robust climate analysis in new hardrock mining rules would help solve. Mine sites vary in hydrology, which affects how much excess water they will need to discharge and where accidental releases are likely to migrate. Geology varies, dictating what kinds of storage facilities the land can support and how much waste the mine will produce. Seismology varies, affecting the potential for waste storage failures and seepage. The ecological setting, the cultural and historical resources, and the communities near mines vary as well.

Updated performance standards in new hardrock mining rules could also help account for recent advances in extraction technologies. Mines use different processes for mineral extraction, and different excavation approaches to develop the ore deposits. They vary in footprint and throughput volume. Typically, a mine operates for many decades, constantly expanding its footprint and increasing its waste storage, with ever-increasing risk of new toxic releases and other impacts.

All this suggests we need more rigorous hardrock mining rules to reduce the damage and public costs imposed by mining.

Specific Regulatory Revisions

In order to successfully meet these challenges and implement the required reforms, this petition proposes revisions to the following provisions, with current and proposed language identified:

43 C.F.R. § 3800.6 (fees);

43 C.F.R. § 3830.12 (locatable vs. common variety minerals), with attached legal and policy analysis;

43 C.F.R. § 3832.32 (millsites), with attached legal and policy analysis;

43 C.F.R. §§ 3809.00 *et seq.* (Surface Management Regulations for locatable minerals).

In support of these proposed changes, this petition includes detailed legal and policy analysis, embedded with the proposed language revisions and/or as separate documents.

Attachment 1: Executive summary

Attachment 2: 43 C.F.R. Part 3809 line-by-line and analysis

Attachment 3: The definition and standards to “Prevent Unnecessary or Undue Degradation” under FLPMA must be strengthened to adequately protect public lands and important environmental, tribal, cultural, scientific, historical, and other valuable public resources (unnecessary or undue degradation line-by-line and analysis)

Attachment 4: Millsite proposed changes and supporting analysis

Attachment 5: The proper scope of BLM regulation of mineral operations is dependent on the extent of rights under the Mining Laws (BLM

discretion, ancillary uses, fees, and related issues line-by-line and analysis)

Attachment 6: Elimination of notice level operations to ensure that public lands and important environmental, tribal, cultural, scientific, historical, and other valuable public resources are protected

Attachment 7: A Plan of Operations must not remain valid in perpetuity; unanticipated events or conditions must require a Plan of Operations to be modified in a transparent and public process with government-to-government consultation

Attachment 8: 43 C.F.R. 3800 fees analysis

Attachment 9: 43 C.F.R. 3830 minerals used for common variety purposes/uses are not locatable minerals

This petition also requests that Department Opinions, Memoranda, Handbooks, and Manuals be revised accordingly to support and implement the revised regulations.

Conclusion

We can work together to help meet the twin challenges of climate and equity posed by sourcing the materials we need for the clean energy transition. Yet, DOI must first update the regulatory regime for public lands mining that remains outdated, inadequate, and structurally inequitable. The solutions begin with reform to the hardrock mining rules. We respectfully submit this Petition for your prompt consideration and response.

Sincerely,

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NOTICE OF PETITION AND PETITION FOR RULEMAKING
BRINGING HARDROCK MINING REGULATIONS AND POLICY
INTO THE 21ST CENTURY
TO PROTECT INDIGENOUS AND PUBLIC LANDS AND RESOURCES IN THE WEST

Appendix of Printed Materials

List of Cited Documents

- a. “2019 TRI Factsheet: Industry sector: Metal Mining, 2122,” Environmental Protection Agency (2020).
- b. *Adapting to Climate Change: A Guide for the Mining Industry* by Ryan Schuchard and Julia Nelson, BSR (2011).
- c. *Alaska Metal Mines: The track record of impacts to land and water from the failure to capture and treat mine pollution* by Bonnie Gestring, Earthworks (2020).
- d. *Americans Pay for Dirty Water*, Environmental Protection Agency (2000).
- e. “As Arctic warming accelerates, permafrost thaw hits Red Dog mine with \$20 million bill” by Nathaniel Herz, Alaska Public Radio (2020).
- f. “Brumadinho Dam Collapse: A Tidal Wave of Mud” by Shasta Darlington, James Glanz, Manuela Andreoni, Matthew Bloch, Sergio Peçanha, Anjali Singhvi and Troy Griggs, The New York Times (2019).
- g. “Climate Change–Extreme Conditions: Do Plans of Operations Need to Include an Ark?” by R. David Williams, Mine Design, Operations & Closure Conference (2012).
- h. “Global Resources Outlook 2019 Fact Sheet: Natural Resources for the Future We Want,” United Nations Environmental Program (2019).
- i. “How the 20 tons of mine waste per gold ring figure was calculated,” Earthworks (2004).
- j. “July Wildfire: Zortman Landusky Mine” by Bill Maehl, Mine Design Operations and Closure Conference (2018).
- k. “Letter to Interior Secretary Haaland and Agriculture Secretary Vilsack from Chair Grijalva et al.,” by Chair Grijalva et al. (2021).
- l. “Letter to the Chairs of the House of Representatives Committees on Energy and Commerce and Oversight and Reform” by the Center for Biological Diversity et al., Center for Biological Diversity (2021).
- m. *Polluting the Future: How mining companies are polluting our nation’s waters in perpetuity* by Bonnie Gestring and Lisa Sumi, Earthworks (2013).
- n. *Predicted Versus Actual Water Quality at Hardrock Mine Sites: Effect of Inherent Geochemical and Hydrologic Characteristics* by Ann Maest, James Kuipers, Kim MacHardy, and Gregory Lawson, American Society of Mining and Reclamation (2006).
- o. *Report on Mount Polley Tailings Storage Facility Breach* by the Independent Expert Engineering Investigation and Review Panel, Province of British Columbia (2015).
- p. *Safety First: Guidelines for Responsible Mine Tailings Management* by Jamie Kneen, Ugo LaPointe, Jan Morrill, Payal Sampat, Earthworks (2020).
- q. *The Increasing Number of Tailings Facility Failures: Navigating the Decade 2020-2029* by Dr. Dave M. Chambers, Canadian Dam Association Annual Conference (2019).
- r. *The Risk, Public Liability, and Economics of Tailings Storage Facility Failures* by Lindsay Newland Bowker and David M. Chambers, Earthworks (2015).

- s. *Track Record: Montana Modern Hardrock Mining Water Quality Impacts and Reclamation Bonding* by Laura Zanolli, Montana Trout Unlimited and Earthworks (2018).
- t. “Tribes and Hardrock Mining,” National Wildlife Federation.
- u. *U.S. Copper Porphyry Mines: The track record of water quality impacts resulting from pipeline spills, tailings failures and water collection and treatment failures* by Bonnie Gestring, Earthworks (2012, revised 2012).
- v. *U.S. Gold Mines Spills & Failure Report: The Track Record of Environmental Impacts Resulting from Pipeline Spills, Accidental Releases and Failure to Capture and Treat Mine Impacted Water* by Bonnie Gestring and John Hadder, Earthworks (2017).
- w. “U.S. Operating Copper Mines: Failure to capture & treat wastewater” by Bonnie Gestring, Earthworks (2019).

List of Petition Attachments

1. Executive Summary
2. 43 C.F.R. Part 3809 line-by-line and analysis
3. The definition and standards to “Prevent Unnecessary or Undue Degradation” under FLPMA must be strengthened to adequately protect public lands and important environmental, tribal, cultural, scientific, historical, and other valuable public resources
4. Millsite proposed changes and supporting analysis
5. The proper scope of BLM regulation of mineral operations is dependent on the extent of rights under the Mining Laws
6. Elimination of notice level operations to ensure that public lands and important environmental, tribal, cultural, scientific, historical, and other valuable public resources are protected
7. A Plan of Operations must not remain valid in perpetuity; unanticipated events or conditions must require a Plan of Operations to be modified in a transparent and public process with government-to-government consultation
8. 43 C.F.R. 3800 fees analysis
9. 43 C.F.R. 3830 minerals used for common variety purposes/uses are not locatable minerals