Joint Comments Submitted to the Interior Department on Draft List of Critical Minerals

March 19, 2018

As organizations and individuals who care about our waters, we write to comment on the Draft List of Critical Minerals published in the Federal Register, February 16, 2008 (83 Fed Reg. 7065 (2018)), pursuant to Executive Order 13817 (EO 13817) "A Federal Strategy To Ensure Secure and Reliable Supplies of Critical Minerals." (December 20, 2017) and Secretarial Order 3359 (SO 3359). We are very concerned this process will result in weakening public participation and our bedrock environmental laws, and harm to our western waters and wildlife in the name of promoting mining.

We understand that metals are important and used in the manufacture of items we use every day, including minerals needed to ensure a swift transition to renewable energy. However, needing a mineral does not mean we need mining. Instead, thanks to reuse and recycling, needing a mineral no longer means we need additional mining. This is particularly important given the harms and costs mining has on communities and the environment. Extracting these minerals from mines damages water quality, frequently forever. The specter of critical minerals should not be used as cover for a gift to the mining industry, further weakening community and environmental protections. Accordingly, proposing to remove, reduce, or otherwise minimize environmental review and disclosure of potential harms, and/or the applicability of environmental laws and regulations will exacerbate harms to communities and the environment from an industry that already has caused pollution in 40% of western U.S. headwaters.

Below are a number of concerns with the approach to establishing a list of draft critical minerals. These concerns include, but are not limited to, taxpayers carrying the financial burdens of mining pollution, the draft critical minerals list is arbitrary and capricious, and that the focus should be on investing in robust recycling programs to achieve mineral security, not stripping laws and regulations that protect communities and the environment.

I. The National Environmental Policy Act is Ensures Better Informed Decision Making by Disclosing Environmental Harms.

EO 13817's and SO 3359's purpose directly undermines the National Environmental Policy Act (NEPA), often referred to as the environmental "Magna Carta." NEPA requires federal agencies to assess and disclose the environmental impacts of their

actions. For nearly 50 years, NEPA has provided certainty and predictability through a transparent process well understood by federal regulators, permit applicants, and affected communities. NEPA ensures that Americans can take part in the review and development of projects affecting our social, economic, and environmental health. The NEPA process provides an opportunity for communities to learn about proposed federal actions and offers agencies a chance to receive valuable input from the public. Thus, although NEPA does not have substantive provisions, the procedure is important to ensure informed decision making and can lead to decisions that reflect community concerns and reduce environmental impacts.

The NEPA process works. According to the Government Accountability Office (GAO), the average time it takes the Bureau of Land Management (BLM) to permit a mine is two years. This period is competitive with most Western democracies with robust mining industries such as Australia, Canada, Chile, and Norway.

When a permit takes longer than average, often the reason is the low quality of information operators provided in their mine plans and the agencies' limited resources. Often delays occur for perfectly legitimate reasons like changes in market conditions.

Ultimately, NEPA is a source of strength and predictability. It helps lay the foundation for a mining company's social license to operate, which gives domestic mining a distinct competitive advantage. Other nations, like China, without this long-standing commitment to public input in mining decisions, remain relatively undesirable destinations for mining investment.

Any minerals policy derived from the EO must take into account these issues and the communities whose water and air has been polluted by irresponsible mineral development. Securing adequate minerals for economic growth and prosperity need not come at great cost to the environment and people in mineral-rich states.

II. Mining Laws and Rules Do Not Protect Water and Land

Mining companies already have a sweetheart deal in the United States, which has one of the most permissive regulatory regimes in the developed world. The 1872 Mining Law, which governs hardrock mineral development on public lands, does not provide Americans any other alternative than proceeding with industry proposals. The 1872 law does not contain any environmental provisions and loopholes in the Clean Water Act (CWA) and Resource Conservation and Recovery Act (RCRA) allow mines to dump their toxic waste directly into streams, rivers and lakes. According to the Environmental

Protection Agency's Toxic Release Inventory (TRI), the metals mining industry is the single largest source of toxic waste in the country. EPA estimates hardrock mining has caused pollution in 40% of the western U.S. headwaters..

Our supplies of declining fresh water are declining, yet, an increasing number of hardrock mining companies generate water pollution that will last for hundreds or thousands of years. With new projects on the horizon, perpetual water treatment for mines continues to rapidly escalate into a severe national dilemma as to fresh water sources and who ends up shouldering the perpetual cost of operation and maintenance. Analysis of government documents reveals these mines will generate an estimated 17 to 27 billion gallons of polluted water annually, in perpetuity. This equates to 2 trillion water bottles of pollution – enough to stretch from the earth to the moon and back 54 times.

III. Federal Tax and Royalty Treatment for Hardrock Minerals Leaves American Taxpayers Shouldering Enormous Financial Burdens.

Unlike other extractive industries like coal, oil and gas, under the 1872 Mining Law, mining companies pay no royalties for the minerals they claim. This approach has funneled more than $300 billion in public wealth into private hands, often foreign-owned companies, since 1872. In addition to free minerals, mining companies receive generous tax breaks for depleting our natural resources.

For instance, the Percentage Depletion Allowance (PDA) permits a company to deduct a fixed percentage from their gross income according to the mineral extracted, ranging from 22% for uranium to 15% for silver and other hardrock minerals. In some cases this deduction actually exceeds costs. This results in a situation where mining companies not only pay virtually nothing for the public's minerals, but they are also subsidized to mine publicly owned minerals they were freely given in the first place. Between FY 07 and FY 11, the PDA's expensing and reclamation deductions cost taxpayers approximately $360 million dollars annually.

American taxpayers shoulder an enormous financial burden from hardrock mining, our largest toxic polluter according to the Toxic Release Inventory. Hardrock mine sites dominate the Superfund National Priorities List, and it will cost an estimated $50 billion to clean up abandoned hardrock mines. Inadequate bonding at currently operating mines could drastically increase those costs.

IV. The Draft List of Critical Minerals is Arbitrary and Capricious

The Department of Interior fails to demonstrate how each mineral listed in the draft meets EO 13817's definition of a "critical mineral." Because of this, the selection of minerals listed as "critical" is arbitrary and capricious.[1] The short table provided in the Federal Register notice purporting the type of use for the mineral, top producers and suppliers, and an example of one or two of uses is insufficient for showing how the minerals satisfy EO 13817's definition.

As the Federal Register notice stands, there is no rational basis for how the identified minerals meet the definition of a critical mineral and no such rationale for classifying any of the listed minerals as "critical."[2] Furthermore, the "Summary of Methodology and Background"[3] accompanying the draft list also does not explain how the minerals included on the draft list meet EO's 13817's definition of a critical mineral. This leaves the public and ultimate decision maker guessing how any of the listed minerals satisfy the definition of "critical mineral." The Administrative Procedure Act requires more.

V. Byproducts on the Draft List Is Inappropriate

The Department of Interior must explain how each mineral included on the draft list meets the definition of a "critical mineral" under EO 13817. The draft list of critical minerals contains 12 byproducts of common minerals. This creates the potential for any mine to be deemed critical, even if the target metal is gold, sought primarily for jewelry.

USGS shares our skepticism toward including byproducts in the draft list.

Notably, several materials on the draft list are recovered only as byproducts of other more common mineral commodities. These ubiquitous materials may not meet the criteria to be included on the draft list. (pg 8 USGS methodology)

Some listed metals like arsenic, indium, zinc, and tellurium are often found in the waste rock and ores from large scale mining and smelting. Waste products cannot be critical. If they were, mining operators would collect and store them, as opposed to releasing them into waters or disposing on the mine site.

Since fuel minerals do not make the list, neither should minerals primarily for the oil and gas industry. The overwhelming use of barite is in oil and gas industry drilling mud. The oil and gas industry produces helium; the United States is a net helium exporter.

VI. Uranium Cannot Be Considered A Critical Mineral

Uranium cannot be designated as a “critical mineral” because it is neither a “non-fuel mineral” nor a “mineral material.”

EO 13817 defines the term “critical mineral” to mean either a “non-fuel mineral” or a “mineral material” that is essential to the economic and national security of the United States, and for which other criteria are met. The order does not define the terms “non-fuel mineral” and “mineral material.” However, those terms as used elsewhere in federal law and in common application do not include uranium.

The Mining and Minerals Policy Act of 1970, which established a national mining policy, explicitly describes uranium as a “mineral fuel.”[4] This categorization is consistent with how uranium has been uniformly described by the federal government and others.[5] Indeed, since 1977, the establishment of the U.S. Department of Energy’s Energy Information Administration (“EIA”), uranium has been grouped with coal, natural gas, and petroleum as an energy mineral.[6]

Uranium also is not a mineral material. The Material Sale Act of 1947, 61 Stat. 681, and Multiple Surface Use Act of 1955, 69 Stat. 367, are the fundamental laws governing mineral materials.[7] Together, those acts gave the Secretary of Interior authority to dispose of mineral materials and removed those materials from open location under the Mining Law of 1872. Those laws described mineral materials to include “common varieties” of sand, stone, gravel, pumice, pumicite, cinders, and clay.[8] Federal agencies do not treat uranium as a common variety, but rather as a mineral locatable under the 1872 Mining Law, 30 U.S.C. §§ 21-54.

In *Mineral Policy Ctr. v. Norton*, the government stated that “[h]ardrock minerals are minerals such as gold, silver, copper, and uranium.”[9] In 2012, former Secretary of Interior Ken Salazar signed a 20-year withdrawal of lands in the Grand Canyon region from the 1872 Mining Law to protect them from new uranium mining claims.[10] Additionally, in the 111th Congress, S.796, Hardrock Mining and Reclamation Act of 2009, was introduced that specifically called for an agency study that would make recommendations as to whether uranium on federally managed lands should be removed from the 1872 Mining Law.[11] Accordingly, uranium does not meet the EO definition of a “non-fuel mineral” nor “mineral material” and must be removed from the list of critical minerals.

VII. Securing Domestic Critical Mineral Supply Does Not Require More Domestic Mining or Removal of Bedrock Environmental Laws

The list also contains a number of metals for which the United States has a secure supply. Where the commodities markets allows supply to meet demand, that commodity is not critical. DOI should not list minerals as critical based upon mere speculation of any future supply disruption. Rather, DOI's report for EO 13817 should instead view potential supply constraints in light of China's recent attempt to corner the market on so-called rare earth minerals (discussed infra). This experience illustrates that the proper balance between the free market and fair trade works.

Our aluminum (bauxite) comes mainly from Jamaica. Our cesium, rubidium, magnesium, potash, and indium come from Canada. South Africa supplies us with chromium and platinum group metals (PGM). Mexico provides our fluorspar and Brazil provides our niobium.

We mine geranium domestically and send it to Canada or Belgium for processing. Rhenium also comes from the United States and has robust global recycling. One Utah mine produces 85% of global beryllium.

In 2010, when China restricted the export of certain minerals, markets and the international community responded precisely how they should. Savvy investors provided capital for new critical minerals projects. The Mountain Pass rare earth and molybdenum mine in California re-opened for business. Australia opened the Mount Weld mine. Critical mineral manufacturers diversified their supply chains, researched alternatives, and increased recycling.

In 2012, the United States, European Union, Brazil, Russia, India, Indonesia, Japan and other nations complained to the World Trade Organization (WTO). In 2014, we won. China dropped their tariffs, commodity prices plummeted, supply met demand, and the right blend of free market innovation and fair trade justice prevailed.

The report DOI produces for EO 13817 should consider the predominance of foreign-owned companies that extract our minerals from American lands. For example, a Chinese consortium purchased the Mountain Pass Mine in California in June 2017. Similarly, a South African company owns the Stillwater Mine in Montana - America's domestic source of PGM.

Despite our need for metals for things like renewable energy, attempting to increase domestic mining by weakening rules that protect communities and the environment will not help us achieve our goals. According to 2011 American Physical Society (APS) and Materials Research Society (MRS) report, it is not possible for any country to mine their way to minerals independence. Robert Jaffe, Morningstar Professor of Physics at Massachusetts Institute of Technology and co-chair of the APS-MRS study group, "No

country can mine its way to ECE independence. Instead, we need to develop an integrated approach to securing supplies of these key materials."

VIII. The Solution: Recycling, Research, and Substitution

Instead of increasing domestic mining at the potential cost to clean water, we should instead have a national minerals policy increasing research in recycling, reuse, and alternatives. The Department of Energy leads a Critical Materials Institute with a $120 million budget to research alternatives, reduce waste, and diversify production.

Conservation, recycling, and substitution will each do more to ensure available supply of the minerals we need than will gutting community input in mining decisions that affect their water and health. The United States should be embracing innovation, demanding best practices, and leading the world with a 21st-century mining law that protects our precious water resources. This leadership will only come when we have reformed the antiquated 1872 Mining Law and closed loopholes in our bedrock environmental laws that allow foreign mining corporations to take our minerals for nothing, leaving us only with perpetual waste.

Sincerely,

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[1] The definition is provided in the EO and was also re-iterated in the Federal Register notice announcing the comment period on the draft list. 83 Fed. Reg. 7066.
[2] 83 Fed. Reg. 7067-7068.
[3] U.S. Dept. of Interior and U.S. Geological Survey. "Draft Critical Mineral List—Summary of Methodology and Background Information—U.S. Geological Survey Technical Input Document in Response to Secretarial Order No. 3359." 2018.
[4] 30 U.S.C. § 21(a).
[5] *E.g.* USGS National Minerals Information Center, Commodity Statistics and Information Nonfuel Minerals, https://minerals.usgs.gov/minerals/pubs/commodity/ (last visited Mar. 13, 2018); WA/OR BLM, Non-renewable Energy, https://www.blm.gov/or/energy/nonrenewable.php (last visited Mar. 13, 2018) (listing oil and gas, coal, and uranium together as nonrenewable energy fuels); EIA, Nuclear & Uranium, https://www.eia.gov/nuclear/data.php#uranium (last visited Mar. 13, 2018) (uranium noted as a "nuclear fuel"); S.D. Codified Laws § 10-39-A-1.1 (South Dakota State law includes uranium as "Energy minerals").
[6] USGS National Minerals Information Center, Commodity Statistics and Information Nonfuel Minerals, https://minerals.usgs.gov/minerals/pubs/commodity/ (last visited Mar. 13, 2018).
[7] 30 U.S.C. § 601-604.
[8] *Id.*; *see also* 43 C.F.R. § 3601.5 (defining "[m]ineral materials" to mean, but not be limited to, "petrified wood and common varieties of sand, stone, gravel, pumice, pumicite, cinders, and clay").
[9] 292 F. Supp. 2d 30, 33 FN5 (D.D.C. 2003).
[10] *E.g.* 2012 Record of Decision, Northern Arizona Withdrawal, Mohave and Coconino Counties, Arizona (Jan. 9, 2012).
[11] S. 796, 111th Cong. § 505(c)(A) (2009).