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April 24, 2026

The Honorable Bruce Westerman
Chairman
House Natural Resources Committee
1324 Longworth House Office Building
Washington, D.C. 20515

The Honorable Jared Huffman
Ranking Member
House Natural Resources Committee
1329 Longworth House Office Building
Washington, D.C. 20515

The Honorable Pete Stauber
Chairman
House Natural Resources Subcommittee on
Energy and Mineral Resources
1324 Longworth House Office Building
Washington, D.C. 20515

The Honorable Yassamin Ansari
Ranking Member
House Natural Resources Subcommittee on
Energy and Mineral Resources
1329 Longworth House Office Building
Washington, D.C. 20515

Re: AEMA Statement for the Record for the April 29, 2026 Oversight Hearing for the Energy and Mineral Resources Subcommittee of the House Committee on Natural Resources on “Powering the 21st Century with American Copper”

Dear Chairman Westerman, Ranking Member Huffman, Chairman Stauber and Ranking Member Ansari,

The American Exploration & Mining Association (AEMA) appreciates the opportunity to provide the following statement for the record for the April 29, 2026 oversight hearing titled “Powering the 21st Century with American Copper.”

Introduction

Minerals are fundamental to everything in our modern world, from wiring in homes, to energy technologies and infrastructure, medical technologies, transportation, defense capabilities, smartphones and laptops, and more. Simply put, minerals are vital for a safe, secure and prosperous America. Unfortunately, China and other adversarial nations dominate the globe in mineral production and processing, while U.S. dependence on foreign sources for these materials has recently reached an all-time high.

Despite domestic production, the U.S. copper supply chain is constrained by lack of smelting and refining capacity. Today, the United States can only meet just over half of domestic demand for refined copper cathode, leaving the remainder dependent on imports from dozens of smelters abroad. Smelters are also essential for critical mineral production, as they enable recovery of critical mineral co-products from domestic mining operations.

Our comments today focus on the need to incentivize domestic mining and processing, and we urge Congress to continue working with industry leaders to support policies that expand domestic production and refining capacity.

Copper demand is expected to rise sharply in the coming years due to its indispensable role in national defense systems, advanced manufacturing, electric vehicles, energy infrastructure, data centers, grid modernization, and next-generation technologies. S&P Global's comprehensive January 2026 study – *Copper in the Age of AI: Challenges of Electrification* - identifies a transformative trajectory for copper demand, projecting a surge from 28 million metric tons in 2025 to 42 million metric tons by 2040 – a 50 percent increase that underscores the metal's pivotal role in multiple technological and economic domains. The study projects a potential 10 million metric ton copper shortfall by 2040 without meaningful supply expansion.

By 2030, the International Energy Agency (IEA) predicts that the total copper production from existing mines and mines under construction will only meet 80 percent of the world's copper needs. The United States will be a key component of this future demand growth. Failure to produce enough copper to meet America's future needs will hamper many of the Trump administration's key policy objectives, including achieving AI and energy dominance and reshoring manufacturing. Looking ahead, demand from data centers illustrates the scale of the challenge: a single large facility can require more than 2,000 tons of copper to build, and global copper use in data centers is forecast to quadruple in the coming decades.

Copper's importance cannot be overstated. The sufficient, reliable, and affordable domestic production of copper will be vital for national and economic security, and AEMA welcomed the U.S. Geological Survey's 2025 decision to include copper in their updated criticality criteria, which better reflects today's supply chain vulnerabilities and future demand outlook.

Interest of Commenters

AEMA is a 131-year-old, 1,800-member national trade association representing the minerals industry with members residing in 46 U.S. states. We are the recognized national voice for exploration, the junior mining sector, and maintaining access to public lands, and represents the entire mining life cycle, from exploration to reclamation and closure. More than 80 percent of our members are small businesses or individuals who work for small businesses.

AEMA members have extensive first-hand experience with exploring for mineral deposits, finding and developing mineral deposits, permitting exploration and mining projects, operating mines, reclaiming mine sites, and ensuring that exploration and mining projects comply with all applicable federal and state environmental laws and regulations. We are proud of our members' contributions across the communities and regions where they operate, many of which are rural areas facing significant economic and social development challenges.

Notably, the U.S. mining industry is the safest, most environmentally responsible mining industry in the world. AEMA members have repeatedly demonstrated that mining and protecting the environment are compatible, as mineral producers make possible the development of society's basic needs and consistently minimize modern society's impacts on the environment. Americans and the environment lose when we offshore our mining and mineral requirements. It

makes no sense to create mining jobs elsewhere, and to import minerals from countries with inferior environmental protection and worker health and safety standards.

We Need a Reliable Domestic Mineral Supply Chain

The pandemic and geopolitical events have exposed the United States' supply chain vulnerabilities, highlighting the importance of an abundant and affordable supply of domestic minerals, including copper, for America's future.

Mineral demand continues to increase rapidly, year after year. Whether these minerals are required for various sources of energy, artificial intelligence (AI) or quantum computing, or weapons systems to bolster our national security, world leaders increasingly understand the importance of secure mineral supply chains.

Unfortunately, a lack of access to economically viable mineral deposits and a lengthy, inefficient federal permitting system have resulted in our unsustainable dependence on foreign countries for more than 50 essential minerals and has empowered our adversaries to strategically weaponize mineral supply chains against us. Although we may need to obtain some minerals from our allies, we must responsibly utilize our own resources whenever possible. The surging global demand for minerals and raw materials means other countries will be competing for the same limited supplies, which will challenge our ability to obtain minerals from abroad. These supply chain concerns have led to bipartisan acknowledgement of the need for more domestic mineral production.

We simply are not moving projects forward in a timeframe that will allow our Nation to achieve its energy objectives or reduce our reliance on China and other adversaries for critical and essential minerals. The bottom line is that permitting delays directly threaten our national security and economic growth.

It's time that we, as a Nation, recognize this vulnerability and the vital importance of minerals to our national security, our economy, and our everyday lives. We have heard a lot over the years about the importance of energy independence, but it is equally as important, if not more so, that we are minerals independent.

If we are to secure our supply chains by increasing domestic mineral production, we need to incentivize mineral exploration, the lifeblood of the minerals industry. We must ensure federal land access to explore for and develop mineral resources, we must permit mining projects in a timely manner, and we must develop the skilled workforce necessary to carry out these objectives.

In September 2016, the Government Accountability Office (GAO) published a report titled *"Strengthened Federal Approach Needed to Help Identify and Mitigate Supply Risks for Critical Raw Materials."* This report evaluated "certain metals, minerals, and other "critical" raw materials [that] play an important role in the production of advanced technologies across a range of industrial sectors and defense applications." The GAO report found several limitations in the scope of federal critical mineral programs that are inconsistent with the directives in the National Materials and Minerals Policy, Research and Development Act of 1980. (30 U.S.C. §§ 1602 – 1605), hereinafter referred to as the 1980 Act.

In the 1980 Act, Congress found:

“the United States lacks a coherent national materials policy and a coordinated program to assure the availability of materials critical for national economic well-being, national defense, and industrial production, including interstate commerce and foreign trade.” (30 U.S.C. § 1601(7)).

In response to this finding, Congress declared:

“...it is the continuing policy of the United States to promote an adequate and stable supply of materials necessary to maintain national security, economic well-being and industrial production with appropriate attention to a long-term balance between resource production, energy use, a healthy environment, natural resource conservation, and social needs.” (30 U.S.C. § 1602)

Relying on adversaries and allies for the minerals needed for U.S. manufacturing has created our currently unsustainable dependence on foreign countries for minerals. The most recent USGS *Mineral Commodity Summaries* published in February 2026 indicates that the U.S. is now more than fifty percent import-dependent for 54 different metals and minerals, and 100 percent import-dependent for 16 of those. Stated differently, the U.S. now imports the majority of 54 different minerals, nearly half of the naturally occurring elements on the Periodic Table, most of which can be mined in the U.S., and we possess an abundance of copper resources.

Made in America must include “mined in America” and sourcing minerals from U.S. mines that use state-of-the-art environmental protection measures, put a premium on worker health and safety, and have financial assurances that guarantee reclamation when mining is complete.

Background on Hardrock Mining

AEMA’s members operate their respective exploration and mining activities in a responsible manner through a wide range of social and environmental conditions across the United States. Their operations are subject to extensive federal, state and local permitting processes providing ample opportunity to ensure resource protection. To meet our imminent metal and mineral needs, Congress and the administration should be focusing on how to expand areas that should be open to potential mining and exploration activities, instead of looking for ways to restrict regions from exploration.

The challenge of finding and developing mineral resources in the United States, or anywhere in the world, is very difficult because mineral deposits are geologically rare and hard to discover, with most deposits buried by tens to hundreds of feet of soil and rocks. Exploration and mining projects must undergo multiple lengthy stages of development.

First, there is the initial identification of deposits that hold potentially developable mineral reserves. To this point, the United States has only explored and mapped the mineral potential on approximately 12 percent of our country’s lands. Recent testimony in this committee suggests that the USGS’ Earth Mapping Resource Initiative (Earth MRI) has increased that figure to 25 percent, which is excellent progress for which we are grateful. However, it demonstrates that the United States is still “under mapped” and underexplored. The USGS estimates that it would take

more than 10 years just to find and map all domestic resources. Importantly, mining companies often do most of this exploration work themselves and cover all the investments needed to advance a potential mineral deposit towards an operating mine. No taxpayer monies are used to discover mineral deposits and develop them into mines that produce the raw materials needed to build and maintain our society, that employ people at high-paying jobs, and that pay local, state, and federal taxes.

After a potential deposit is identified, which often takes years of exploration-level permitting to ascertain, mining companies must determine a path to confirm the nature and scale of any developable resources. They must identify the amount of additional exploration necessary to properly define the mineral deposit, gain approvals to conduct further studies, and then explore and report on the exploration results. Defining the deposit generally requires multiple years of drilling to establish the extent and quality of any valuable mineralization. This process can take up to several decades for large and complex orebodies. Exploration drilling and associated activities require significant investment, especially since they are often undertaken in geographically remote and challenging areas where access and infrastructure are limited. It's noteworthy that a single deposit is rarely confined to one tenure type—that is, it may consist of a combination of federal tenure, private tenure or even State lands where any successful operation could, for example, provide a revenue stream to the school children of that State.

In the event a mineable resource is defined, the work continues for mining companies to determine whether there is an economically feasible mine development scenario. This generally involves preparation of a Feasibility Study, sometimes preceded by a Pre-Feasibility Study, and requires several additional years to produce information sufficient to support a mine investment decision. Multiple years of baseline data collection and analysis are often undertaken to provide information for the feasibility work as well as for future permitting. While mining companies may start their pre-permitting work early, including at the exploration stage through Feasibility Study preparation, they often do not submit formal applications until a developable project is identified through the Feasibility Study.

Thus, while it is easy to focus on a single part of the mineral development process, it is important to recognize all of the crucial stages involved with development of an operating mine. When projects require two or three decades to take a potential mineral resource to the point of mine construction, any government action that could lengthen this process or create disincentives, or create risk to the security of tenure, should be carefully weighed in terms of its ramifications.

Moreover, even when a project has matured through the permitting process, litigation and other actions that jeopardize or delay further development of ancillary facilities at mine sites can have severe consequences. Unless Congress addresses the extended timeline from discovery to production, future domestic mining projects that could help fill this Nation's critical needs could be decades away from providing any substantial benefit.

We Need Access to Explore for and Develop Mineral Deposits

It is important to remember that mineral deposits are unique geologic phenomena. In a 1999 report, the National Research Council of the National Academy of Sciences recognized just how rare mineral deposits are: "Only a very small portion of Earth's continental crust (less than 0.01%) contains economically viable mineral deposits. Thus, mines can only be located in those

few places where economically viable deposits were formed and discovered.” We cannot choose where they are located or move the mineral deposits from areas of competing interests. The Academy further noted that, on average, 1,000 mineral targets must be examined before discovering the deposit capable of becoming a mine.

We must facilitate greater investment in environmentally safe and innovative technologies within the United States and develop clean and safe domestic mines where these valuable mineral deposits are found. The United States must strive for mineral independence if we are to compete in the future world economy and demand for minerals.

Sequestering lands with known mineral deposits or that have high mineral potential prevents the United States from responsibly developing its mineral endowment. Today, out of the 600 million acres of reserved public lands, roughly 400 million acres are set aside for conservation and preservation purposes and are thus functionally off-limits to mineral exploration and mining. According to former Department of the Interior Solicitor, John Leshy, during the period from 1980 to 2020, the acres of U.S. conservation and preservation lands grew from 250 million to 400 million.

Further restricting access to mineral resources threatens our mineral security and chills investment. If we cannot invest in mineral exploration, we cannot discover that rare, “needle in a haystack” deposit. Every time we declare land off-limits to mining, we shrink the playing field and stack the odds even higher against discovery. This highlights the importance of allowing and promoting mineral exploration across our country.

It takes 10 years or more of drilling, geological analysis, baseline studies, project feasibility evaluations, and hundreds of millions of dollars of investment to advance a prospect from exploration to the *start* of mine permitting. Permitting the mine then takes at least several more years – and even longer if the project is litigated, which happens all too often and can add years before any ore can be produced.

As a Nation, we have acknowledged the urgency of increasing domestic mineral production, strengthening our supply chains, and reducing our reliance on foreign minerals. Because it often takes two or three decades to get from exploration to production, minimizing the land access and permitting obstacles that impede domestic exploration and mining is imperative.

Our Increasing Mineral Import Reliance is a National Security Threat

While the United States was pursuing policies over the past several decades that discouraged mineral exploration and mine development, China was methodically making strategic global investments in mining, mineral processing, manufacturing products like battery components and batteries made from minerals, and educating mining professionals. Today, China dominates the world’s mineral supplies and products, and the human resources required to mine and process minerals. Consequently, the United States now faces a minerals emergency that poses serious economic and national security threats.

In its July 2024 critical minerals report, the GAO illustrates that critical minerals are essential to five key sectors: aerospace, defense, energy, telecommunications and electronics, and transportation. According to GAO’s report, the U.S. imports 100 percent of ten critical minerals

and 95 percent of the listed Rare Earth Elements, with many coming from China. The national security implications of China's mineral dominance are especially troubling.

The U.S Mining Law is the Key to Increasing Domestic Mineral Production

The U.S. Mining Law is critical to achieving the objective of increasing domestic mineral production because this law capitalizes on American ingenuity, technical prowess, and entrepreneurial spirit to make the investments necessary to discover and develop minerals. The land use principles that are the hallmarks of the Mining Law including but not limited to self-initiation and security of land tenure are essential to maintaining the Nation's ability to meet future mineral demands, regain mineral dominance, and provide economic and national security. Since its enactment in 1872, the U.S. Mining Law has leveraged private-sector investment in the risky business of looking for minerals and transformed undeveloped public lands into mines that have provided the minerals needed to win two world wars, build modern society, and continually improve Americans' standard of living.

A false narrative exists that our members receive some kind of bargain by operating on federal lands and that they operate freely under historic laws dating back 150 years – mostly notably in reference to the Mining Law. Neither of these statements is accurate. According to the BLM's Public Land Statistics 2025 report, mining companies pay holding fees and service charges in the form of claim maintenance and location fees that, over the past four years have averaged approximately \$100 million per year. There also are many land use and environmental statutes, as well as amendments, regulations, and policies that have been enacted or promulgated since the Mining Law. These laws, referenced in greater detail below, work in tandem with the Mining Law to provide effective environmental regulation that has transformed the U.S. mining industry over the last 50 years. Nevertheless, throughout these many decades, Congress has preserved the basic premises of the Mining Law: self-initiation and security of land tenure for U.S. citizens in the public domain. This preservation of statutory property rights is intertwined with our aforementioned environmental and labor laws and as a result, U.S. mining companies are held to the highest standards in compliance with environmental and permitting requirements.

Given our Nation's need for a strong domestic supply, and the proven benefits that modern mining provides to local communities, the federal government should not consider adding restrictions or making changes to the Mining Law (and its basic property rights provisions) in ways that would discourage or disincentivize mineral development.

Unfortunately, over three decades of Congressional debate about the U.S. Mining Law of 1872 (30 U.S.C. §§ 21a *et seq.*, as amended) have taken their toll and contributed to the steady decline in the rate of U.S. mineral discovery and development. In response to longstanding threats to radically change the Mining Law to eliminate the land tenure security necessary to justify investing in U.S. projects, some companies have chosen to avoid the United States. Instead, they spend their mineral exploration and development budgets in countries where they have more confidence that an investment of hundreds of millions to billions of dollars won't be rendered worthless by a new law that functionally expropriates their minerals projects.

The Ninth Circuit Court of Appeals' wrongly decided 2022 decision in the *Rosemont* litigation has created more uncertainty about land tenure rights under the Mining Law and has further fanned the flames of the ongoing Mining Law debate, delayed mine permitting, and discouraged

minerals investment. Consequently, AEMA applauds the House of Representatives' bipartisan action to pass the Mining Regulatory Clarity Act (H.R. 1366).

Comprehensive Environmental Protections Are Working

Federal land management agencies' current environmental protection requirements for locatable minerals provide effective and comprehensive environmental protection that safeguard all aspects of the environment including water resources, wildlife, special status species, air quality, cultural resources, soils, vegetation, and visual resources.

Surface management regulations govern how mineral activities must be conducted on public lands to minimize environmental impacts. Both the U.S. Bureau of Land Management (BLM) and the U.S. Forest Service have specific regulations for locatable mineral activities that have been in effect for decades. These regulations, in conjunction with state environmental laws and regulations, establish environmental performance standards and reclamation bonding requirements to protect the environment and guarantee mineral projects will be reclaimed when exploration and mining have been completed.

The American people are not on the hook for and have not paid any money to clean a mine site permitted on federal lands since 1990. Today's comprehensive suite of federal and state environmental laws and regulations, combined with robust financial assurance requirements, ensure that new abandoned mines are not being created.

The BLM and Forest Service must prepare NEPA environmental reviews prior to authorizing mineral projects that already analyze impacts, identify ways to eliminate, minimize, and mitigate impacts, and verify that proposed projects will comply with all applicable state and federal regulations.

The BLM, Forest Service, EPA, and state regulatory agencies have the authority to say no to mining if there are doubts that the project can meet specific environmental protection regulatory requirements. During the permitting process, regulators can require project proponents to go back to the drawing board to redesign a project to address concerns about environmental impacts.

Numerous other federal environmental statutes also govern mining, including but not limited to the Endangered Species Act, the Clean Air Act, the Clean Water Act, the National Historic Preservation Act, Archaeological Resources Protection Act, the Resource Conservation and Recovery Act, and the Comprehensive Environmental Response Compensation and Liability Act.

The current system achieves the appropriate balance between mine development and environmental protection. There is no exalted status for mining. Rather, a rigorous demonstration is required to show that all aspects of the environment at a proposed mine will be protected.

AEMA wants to emphasize that it does not generally view compliance with substantive environmental protection laws and regulations to be a problem, because our members' projects are designed and operated with state-of-the-art environmental safeguards, and all our mining projects are fully bonded, and are carefully reclaimed when mineral exploration and mining

activities are complete. Instead, it is the federally mandated permitting process – and associated litigation and administrative delays – that have caused major problems. For mine projects that involve federal permits and authorizations, the NEPA process consistently causes lengthy federal permitting delays and frequently results in subsequent litigation.

Permitting Mines in the United States

Since NEPA’s enactment in 1969, our members have had extensive first-hand experience with the law and the federal permitting process. They are significantly impacted by decisions that are the direct result of how the NEPA process is administered by an array of federal agencies. Our members have been directly impacted by NEPA delays, including post-decision litigation, and are thus key stakeholders when it comes to developing a more efficient, timely and effective NEPA process.

Unfortunately, the United States has historically had one of the longest environmental review and permitting processes in the world for mining projects, placing the United States at a competitive disadvantage in attracting investment for mineral development. These delays do not yield substantive environmental benefits and are not worth the significant additional costs to project sponsors. Furthermore, reforming NEPA processes is also crucial for creating high-quality jobs as mineral development and operational projects generate significant employment opportunities, particularly in rural and underserved communities.

The challenges of the U.S. federal environmental review and permitting processes and how they affect our supply chain of critical minerals were described in detail in a report issued by the Wilson Center.¹ In addition, S&P Global published a report titled “Inflation Reduction Act: Impact on North America Metals and Mineral Markets,”² which identified protracted permitting as a key factor in the shortage of critical and essential minerals, stating: “extended and uncertain timelines for permitting in the U.S. and around the world are a major obstacle to bringing new [copper] supply online to narrow that shortfall.”

In recognizing the challenges associated with NEPA, the impacts of litigation must be considered because lawsuits are frequently the final step of any significant NEPA process. Typically, it is the NEPA analyses and federal permits for hardrock mining projects which are litigated in federal courts. Because NEPA litigation is so common, our members routinely anticipate at least two to three years, or more, of litigation delays when planning their proposed mining projects. Costly and time-consuming lawsuits burden projects and federal agencies and hurt communities waiting for jobs, tax revenues and other project-related benefits to materialize.

It is important to note that the streamlining of the mine-permitting process does not equate to reducing environmental protections. AEMA members experience the challenges associated with the federal permitting process every day. They also live and play in the communities where they work. Mining in America is the most environmentally responsible mining industry in the world. Miner safety and workers’ rights are the top priority. Our members take great pride in responsibly producing the minerals and metals America needs.

¹ https://www.wilsoncenter.org/sites/default/files/media/uploads/documents/critical_minerals_supply_report.pdf

² <https://cdn.ihsmarkit.com/www/prot/pdf/0823/Impact-IRA-Metals-Minerals-Report-FINAL-August2023.pdf>

AEMA applauds the bipartisan action taken by the House of Representatives to pass the Standardizing Permitting and Expediting Economic Development Act, or the SPEED Act (H.R. 4776) and the Promoting Efficient Review for Modern Infrastructure Today Act, or the PERMIT Act (H.R. 3898).

Exploration is the Lifeblood of the Mining Industry

Responding to America's minerals emergency must begin with substantially increasing mineral exploration and the rate of discovery of domestic mineral deposits that can become future mines. Without more exploration, the U.S. will remain beholden to foreign countries, including adversaries like China, for the minerals we need.

Exploration is the first step in the mining lifecycle when mineral deposits that may become future mines are discovered. Without discovery, there can be no mining. Unfortunately, because permitting has become increasingly difficult and more lands have been functionally sequestered, exploration investment levels have shrunk over the past thirty years. Consequently, there has been insufficient exploration and discovery of new mineral deposits to keep a pipeline of soon-to-be developed mining projects full. Instead, the flow of mineral discoveries leading to mine development has slowed to a trickle, which has dramatically inhibited the growth of the Nation's portfolio of future mining operations, resulting in our current reliance on foreign minerals.

The reduction in exploration investment is detailed in a 2024 report by S&P Global, which notes that over the last 15 years, exploration budgets in Canada and Australia have been 81 percent and 57 percent higher, respectively, than the United States. The lack of exploration spending is not because the United States lacks mineral wealth. According to the report, this Nation possesses comparable gold and palladium resources and reserves, and greater copper, lithium and molybdenum reserves and resources than both Canada and Australia *combined*.

Exploration drilling projects typically involve a limited range of activities that focus mainly on building temporary roads and drill pads, managing drill water and cuttings with sumps or tanks, trenching, and avoiding cultural resources or other potentially sensitive resources. The environmental impacts (mainly surface disturbance) from these projects are short-term and can be fully reclaimed. Moreover, before exploration can begin, project operators must provide BLM or the U.S. Forest Service with financial assurance that guarantees the surface disturbance created by these exploration activities will be reclaimed.

Exploring for new mineral deposits is the most time-consuming phase of the preproduction mining lifecycle. The S&P Global study found that it took three times longer to discover, explore, and develop mines in the 2020 to 2024 timeframe compared to mines developed between 1990 and 1999, due to extended periods for exploration, permitting and financing.

Mineral exploration is a data-dependent, iterative process. The IEA estimates that the iterative process from exploration to feasibility takes 12.5 years. S&P Global has a similar timeline indicating it takes 11.9 years. Both estimates reflect the fact that exploration is time-consuming.

BLM's 43 C.F.R. Subpart 3809 surface management regulations govern all mineral activities on BLM-administered lands that are subject to the U.S. Mining Law. These regulations require that all mineral exploration and mining projects comply with the mandate in the Federal Land Policy

and Management Act to prevent unnecessary or undue degradation (UUD) as specified in FLPMA Section 302(b).

Under current BLM regulations, initial exploration projects that create less than five acres of surface disturbance on BLM-administered lands must submit a Notice pursuant to 43 CFR 3809.300 - 43 CFR 3809.336 to BLM before conducting any surface-disturbing activities including building exploration drill roads and drill pads. BLM has 15 days to review the Notice and to advise the operator if more information is required before they are authorized to commence work. Operators typically retain a BLM-approved archaeologist to survey the proposed disturbance areas to identify any cultural resources that should be avoided during the exploration activities. The operator must also provide BLM with financial assurance (a reclamation bond) to guarantee that the exploration site will be fully reclaimed.

Under current U.S. Forest Service regulations, a Notice-level provision similar to the BLM's does not exist. Rather, a time-consuming Plan of Operations is required for all exploration activities on National Forest System lands, regardless of scope.

There is an especially compelling reason to streamline the exploration permitting process on National Forest System lands because according to the U.S. Forest Service, National Forests contain important hardrock mineral resources: "By accident of category and geology, the National Forests contain much of the country's remaining stores of minerals." Despite their mineral potential, National Forest System lands are underexplored due to regulatory constraints that impede initial exploration activities including preliminary drilling.

Many companies avoid exploring for minerals on National Forest System lands due to the Forest Service's expensive and time-consuming permitting process. Consequently, the known mineral potential of National Forests has been virtually written off for the last twenty to thirty years due to the difficulty in securing permits to pursue preliminary exploration drilling projects.

Codifying and expanding the BLM's notice-level provision to 25 acres and making it applicable to National Forest System lands would be an important step in reducing the overall permitting timeline from discovery to mine development because it would accelerate the discovery of mineral deposits that can become future mines, ultimately reducing the Nation's dependence on foreign minerals.

Therefore, AEMA supports and urges the House of Representatives to approve H.R. 7458, the Domestic ORE Act.

Mining and Metallurgy Expertise is Needed

The USGS provides important information about mineral resources that focuses on identifying where mineral deposits may be located and their geology. Its primary mission does not include performing the detailed mine planning and metallurgical studies to determine the economic viability of a mineral deposit, the best way to mine it, or how to process the ore to optimize mineral recoveries. These essential components of extracting ores from the ground and recovering metals from them was the mission of the former U.S. Bureau of Mines (USBM), which was housed within the Interior Department, and employed mining and geological engineers, metallurgists, process engineers, and other mining professionals.

From 1910 to 1995, the USBM was the primary federal agency responsible for conducting and coordinating scientific research and disseminating information on the extraction, processing, use, conservation, and recycling of mineral resources. Mining professionals working for the USBM effectively conducted innovative and transformative R&D to improve extraction techniques, environmental sustainability, and worker safety that had broad applicability to metals, coal, and industrial minerals mining.

Since 1995, when Congress decided to stop funding the USBM, the United States has lost its position as the global leader in mining, and the Nation's dependency on foreign minerals has skyrocketed.

The Society for Mining Metallurgy & Exploration's (SME's) September 2024 concept paper, *Why the U.S. Needs a National Materials and Mining Council* describes a new Executive Branch entity similar to the former USBM that would be responsible for providing advice and coordination on minerals and mining issues and charged with performing mining and metallurgical R&D. The key findings in SME's concept paper include the following:

- With the demise of the USBM, the United States no longer has a centralized federal department or agency with the requisite mining and mineral processing expertise to assist the Executive Branch and Congress in developing coordinated mining policies responsive to the country's mineral needs.
- The absence of a federal minerals entity makes the United States less competitive on the world's stage because most nations have a Minister of Mines or a centralized mining authority charged with developing mineral policies to ensure these countries have robust mining industries.
- Federal minerals programs are currently scattered throughout dozens of executive branch departments and agencies in a bureaucratic maze where nobody is fully responsible for ensuring a robust supply of domestic minerals.
- A new, centralized minerals entity in the Executive Office of the President (EOP) should be created immediately to eliminate this inefficient bureaucracy and to reinvigorate the country's mining and mineral processing R&D capabilities.
- Reestablishing a minerals group within the EOP would signal the importance of minerals as the front-end supply chains for all sectors and governmental functions, to ensure consistency across multiple departments and agencies, to reduce inefficiencies and duplication of efforts, and to facilitate the participation of and coordination with cabinet-level executive departments with direct interest in materials and mineral supply chains including the Departments of the Interior, Agriculture, Defense, Commerce, State and others.

By establishing the National Energy Dominance Council (NEDC) in the Executive Office of the President (EO 14213), President Trump took an urgently needed step to make minerals and energy a top priority, recognizing they are critical to economic prosperity and national security.

The NEDC's mission should be expanded to fill the mining and metallurgical expertise gap that has existed since 1995 when the USBM was disbanded. NEDC staff should include mining engineers, metallurgists, mineral economists and other mining professionals qualified to coordinate mining and metallurgical R&D and provide mining-related advice to the administration and Congress.

As the country continues to invest in critical minerals projects, it will be important for the Executive Branch to have the necessary mining and metallurgical expertise to evaluate project viability and how to optimize mining and mineral recoveries. NEDC mining and metallurgical experts should also perform R&D on enhancing recoveries of targeted critical minerals from legacy mine wastes, batteries, and recycled e-waste, all of which require mining, metallurgical, and mineral processing expertise. These are examples of the kinds of broadly applicable, cutting-edge, and transformative research that the federal government should pursue because private-sector research efforts are typically more narrowly tailored to focus on a specific project or e-waste stream. AEMA therefore urges Congress to codify the NEDC, to include a mineral resource focus, as an office or positions within the Executive Office of the President.

In addition, like many industries, mining is facing a workforce challenge that requires urgent attention. The coming wave of retirements due to the "Baby Boomer" generation leaving the workforce is particularly pronounced in the mining industry. It is estimated that more than half of the current mining workforce will be eligible to retire by 2029. Exacerbating this exodus, American higher education is simply not producing enough geologists, engineers, metallurgists, chemists and other graduates the mining industry needs. In fact, since the early 1980s, there has been a steady decline in the number of accredited mining and mineral engineering programs at U.S. colleges and universities.

Over time, the decrease in graduates has begun to hit home. Nearly all our member companies report difficulties finding enough qualified individuals to fill vacancies. Operating mines, engineering and consulting firms, or other service providers all feel the pinch. The federal agencies who review and process mine permit applications have similar challenges.

Therefore, AEMA strongly supports and urges the House of Representatives to approve the Mining Schools Act (H.R. 2457), bipartisan legislation to strengthen mining education in the United States.

Conclusion

Mining makes every aspect of our lives possible, and demand for minerals in our advanced society is increasing every day. Minerals are critical to developing the innovative technologies that will propel our economy, enable America to compete globally and improve our quality of life.

Most people never think about the pivotal role mining plays in their lifestyle and standard of living, but mined products are key to the advanced, technological, comfortable, and more healthful existence we enjoy. Like food and water, energy and minerals are essential. We are fortunate that America is blessed with a rich mineral endowment, and it is more important than ever to responsibly utilize our own mineral resources. In fact, it is a national imperative.

It is therefore imperative that lands with important mineral deposits remain accessible to responsible mineral exploration and development and that federal and state permitting processes can be completed in a timely manner.

In addition, the economic impact of the mining industry ripples out far and wide: to employees, mine suppliers, local economies and the downstream domestic industries we supply with our products. That's not to mention the tax revenues we generate for local, state and federal governments as a result of this economic activity. Last year, according to USGS, the value of domestically mined mineral raw materials increased from \$106 billion to \$112 billion, and that \$112 billion generated more than \$4 trillion in value added to the GDP. Few industries pack such an economic punch.

Thank you for conducting this important oversight hearing. AEMA looks forward to continuing to work with you to ensure America has a secure and affordable supply of the minerals and metals needed for our modern society.

Sincerely,

A handwritten signature in black ink that reads "Mark D. Compton". The signature is written in a cursive style with a large, stylized initial "M".

Mark Compton
Executive Director