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Subcommittee on Energy and Mineral Resources
U.S. House Committee on Natural Resources
1324 Longworth House Office Building
Washington, DC 20515

Mr. Chairman Lowenthal, Ranking Member Stauber and Members:

Thank you for the opportunity to provide testimony regarding the consideration of H.R. 2794, "Boundary Waters Wilderness Protection and Pollution Prevention Act."

We at Twin Metals Minnesota share deeply in the goal of protecting our surrounding environment, including the Boundary Waters Canoe Area Wilderness. That is why we have devoted the past 11 years studying our geology, hydrology and surrounding environment; engaging with our local communities; and adopting the best available technologies to ensure we are putting forward a sustainable and environmentally safe mine.

However, this bill runs counter to our nation's needs and is not supported by available science. It undermines the purpose of the regulatory process that is established in law.

The premise of this legislation is a concern for acid rock drainage (ARD) and its potential impact on the BWCAW. The unique geology and our mining methods ensure that there is no risk to the BWCAW from ARD. The mine that Twin Metals has proposed encompasses the future of mining. Twin Metals will be a carbon neutral mine, utilizing renewable energy and an electric mining fleet. Twin Metals has invested in the most environmentally responsible tailings management system that is endorsed by more than 140 NGOs from around the globe. Our mine will be underground, which means our surface impact is minimal. This is the type of mining we must be advancing in this country. The Twin Metals project does not threaten the Boundary Waters. Climate change does, and the threat is real. We should be concerned that warming temperatures paired with increased precipitation are threatening the balance between various species and their ecosystems in the Boundary Waters, potentially turning this area into grassland and permanently changing the region.

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If enacted into law, the proposed bill would ultimately impede our country's ability to fight these negative effects of climate change. It would harm the

administration's capacity to realize its highest priority goals: putting the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050, and strengthening American supply chains to promote economic security, national security and good-paying, union jobs here at home.¹

President Biden has set a target of reducing greenhouse gas pollution 50-52% from 2005 levels by 2030, with an additional goal of reaching net-zero emissions economy-wide by 2050.¹ To meet these goals with a commitment to American labor and environmental standards, permitting new responsible mining projects must be a domestic priority. Mining metals like copper, nickel, cobalt, and platinum group metals is critical to our transformation to a clean-energy economy and global carbon reductions². To point to a few examples, solar and wind power technologies depend heavily on metals. A single wind turbine can contain 4.7 tons of copper³, and hybrid cars require nearly twice as much copper as a standard vehicle. Nickel is fundamental in the production of batteries for energy storage and for electric vehicles ("EVs"). Cobalt is a key element in rechargeable batteries, and the leading domestic use for platinum group metals is for catalytic converters that decrease harmful emissions from automobiles.

The World Bank's 2020 assessment of critical minerals essential to clean-energy, low-carbon technologies, Minerals for Climate Action, predicts we will need to increase cobalt production by 450% by 2050 to meet demands (as a percentage of 2018 production levels) and to increase nickel production by 100% to meet current climate targets established under the Paris Agreement.⁴ While recycling will play a critical role in the overall solution, the Nickel Institute notes that "around 68% of all nickel available from consumer products is recycled and begins a new life cycle; another 15% enters the carbon steel loop."⁵ Approximately 17% of nickel ends up in landfills. Even recovering and recycling that final 17% will not provide nearly enough nickel to meet expected demand.

¹ April 22, 2021 White House Fact Sheet, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/>

² See The Raw-Materials Challenge: How the Metals and Mining Sector Will be at the Core of Enabling the Energy Transition, MCKINSEY & CO. (Jan. 10, 2022), <https://www.mckinsey.com/industries/metals-and-mining/our-insights/the-raw-materials-challenge-how-the-metals-and-mining-sector-will-be-at-the-core-of-enabling-the-energy-transition?cid=other-eml-alt-mip-mck&hdpid=d1d9d3ec-f753-4eaf-b020-1b2640973372&hctky=1788612&hlkid=1bc2c7b118d24de78c903469e7d41688>

³ Renewables, COPPER DEVELOPMENT ASSOCIATION, INC., <https://www.copper.org/environment/sustainable-energy/renewables/#:~:text=A%20three-megawatt%20wind%20turbine.of%20copper%20per%20MW>

⁴ See Kirsten Hund et al., Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition, WORLD BANK GROUP, <https://pubdocs.worldbank.org/en/961711588875536384/Minerals-for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition.pdf>

⁵ Nickel Recycling, NICKEL INSTITUTE, <https://nickelinstitute.org/policy/nickel-life-cycle-management/nickel-recycling/>

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According to another study published in the journal Global Environmental Change, the global need for copper could increase by an estimated 350% by 2050, with current reserves depleting sometime between 2035 and 2045, as wind and solar energy demands generate an increasing percentage of electricity and more people switch to electric vehicles.⁶

The U.S. Geological Survey's 2022 Critical Minerals list includes both cobalt and nickel.⁷ The United States currently imports 47% of its nickel, and the only domestic nickel operation, Lundin's Eagle Mine in Michigan, will be coming offline in just three years. Additionally, the United States was 76% import reliant for our cobalt consumption in 2020.

If we are to reach the Biden Administration's aggressive goal of 50% vehicle electrification by 2030 and production of almost half of our nation's electricity from solar power by 2050, it is imperative that our country advance domestic mining projects in order to produce the raw materials needed for EV production and clean energy technologies. Banning mining in an area of the country that contains vast quantities of these raw materials is counterproductive to ensuring we meet these goals.

If this bill becomes law, it will impede our country's ability to secure American supply chains, strengthen national security and put Americans to work. Our nation's reliance on foreign minerals has increased at an alarming rate since the 1990s. The U.S. is 100% reliant on foreign countries for 18 strategic minerals, and we import at least 50% of 30 other minerals from foreign countries.⁸

Additionally, reliance on metals sourced from overseas locations only increases greenhouse gas pollution due to these limited environmental standards and increased transportation costs. Sourcing and processing materials locally allows the supply chain to remain within domestic control and utilized by domestic producers.

We must not assume that we can continue to rely on others to supply us with these resources. It is not a question of if – but when – critical mineral supplies will be jeopardized. As Wood Mackenzie recently reported, the push for electric vehicles is driving massive increases in demand for the raw materials needed for electric vehicle batteries. Yet, at the same time, they stated that mineral supply gaps will be inevitable if we fail to accelerate our investment in mining and refining capacity here in the United States.

The climate crisis and supply chain volatility due to the COVID-19 Pandemic and Russia's invasion of Ukraine are raising increasing concern about our nation's ability to secure the

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⁶ Ayman Elshkaki et al, Copper Demand, Supply, and Associated Energy Use to 2050, 39 GLOBAL ENV'T CHANGE 305 (Jul. 2016) (manuscript version available at:

<http://manuscript.elsevier.com/S0959378016300802/pdf/S0959378016300802.pdf>).

⁷ U.S. Geological Survey, Department of the Interior, 2022 Final List of Critical Minerals, <https://www.govinfo.gov/content/pkg/FR-2022-02-24/pdf/2022-04027.pdf>



minerals it needs, yet the United States' dependence on foreign sources of critical minerals has not lessened.

Recent supply chain volatility has made it abundantly clear that we must become more independent as a nation. In order to do that, we must source materials domestically, and for minerals like cobalt and nickel, that means northeast Minnesota.

The United States has an opportunity to access its domestic mineral resources in an environmentally safe way and under the highest of labor standards. We also can't move the multi-billion-year-old minerals elsewhere. We can only mine where they are located, and the regulatory standards are in place to do this safely.

The Duluth Complex in northeast Minnesota – where this bill is proposing to issue a blanket ban on exploration and mining – contains approximately 95% of U.S. nickel resources, 88% of its cobalt, 75% of its platinum group metals and about a third of its copper. The proposed ban would reduce critical investment in the region and limit the ability of the United States to meet its own supply chain needs.

The Duluth Complex geological formation in its entirety holds enough copper, nickel, and cobalt to help manufacture hundreds of millions of electric vehicles. It is the largest undeveloped copper-nickel deposit in the world.

The Twin Metals Project alone would provide enough nickel to build seven million electric vehicles over the life of the mine. It would produce enough copper annually to support the development of 10,000 megawatts of solar power or 13,000 megawatts of wind power. Twin Metals has invested in research into new technology that will allow for its nickel/cobalt concentrate to go directly to a battery manufacturing facility, which could provide additional jobs and domestic manufacturing in the region while keeping the full supply chain local.

Twin Metals has spent 11 years investing deeply in ensuring we put forward a model mine that will be protective of the environment and support the needs of our surrounding communities. Throughout this time, Twin Metals has hired local contractors, full-time staff members and local businesses and services in an area of northeast Minnesota that has been on economic decline for several decades. Once operational, we would employ 750 workers full-time and create another 1,500 spinoff jobs. The mine will be constructed entirely with union labor, under a Project Labor Agreement that is already in place. The capital investment and construction labor hours would be on par with the development of a professional sports stadium.

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We at Twin Metals care deeply about our surrounding environment and our workforce, and we are held to the highest of standards under state and federal laws. The Boundary Waters is already strictly protected by existing laws. Under those laws, Twin Metals will not be allowed to impact the



Boundary Waters. All we have asked for is the ability to have our plans fairly examined under the regulatory process in place.

Despite the need and urgency for these minerals, the Twin Metals project has been put on hold by a regulatory process that is subject to political pressures to the point that it circumvents laws passed by Congress and contradicts the commitment to scientific inquiry at the foundation of those laws. The union labor groups poised to build this mine share in the frustration of this lost opportunity of a \$1.7 billion investment in a rural area, where citizens feel like Washington has left them behind.

Should the ban on mining in this region be enacted, it will cause Minnesota to lose the potential for thousands of mining jobs, billions of dollars in revenues for the state's K-12 education system and billions in economic investment in the region. This decision was made without even reviewing the mine plan our company put forward.

Since we submitted our mine proposal in 2019, our project has been subject to regulatory delays and now, 29 months later, review has not yet begun and in fact, has been halted. Our situation is not an isolated case, in fact delays and cancelations are regular occurrences for mining projects in this country. The process that takes five years right across the border in Canada, takes upwards of 16 years here in the U.S. A mining ban in northeast Minnesota does not improve the regulatory process for mining, it simply shuts out a resource.

We are not asking for a permit to mine tomorrow. We are asking that this mine plan receive the thorough scientific environmental review proscribed in law.

The blunt instrument of this proposed law does not recognize the technological advancements of the last 50 years. It does not recognize the imperative to marshal all available resources to combat climate change. It relies on a study that was never intended to support the conclusions they attempt to draw. It fails to acknowledge that there are nonferrous mines that have gotten it right.

The current Superior National Forest Plan, citing previous environmental studies and Congressional directive, includes mineral development as a "Desired Condition" within the Superior National Forest. The Forest Service has also stated that generic, or programmatic environmental reviews, are ineffective.

Currently, the Superior National Forest's resources and values are fully protected by numerous federal and state laws. Some of these laws ensure that mining is conducted responsibly and in an environmentally safe manner. Others focus on protections for specific resources. In addition to the many federal and state laws, mining projects are subject to regional and local regulations, rules, and siting processes.

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In particular, the proposed ban undermines and short-circuits the National Environmental Policy Act (NEPA) and the Minnesota Environmental Policy Act's (MEPA) processes, thereby denying mining project proponents an opportunity to undergo the federal and state review processes to determine the impacts and appropriate mitigations of their individual proposed projects. This is short-sighted. NEPA and MEPA also provide decisionmakers, other federal and state agencies, local governments, tribal governments, and the public with an opportunity to evaluate the benefits of these projects. The extreme suggestion to ban mining in this area is unnecessary. Instead, the agencies should allow the federal and state environmental review processes to assess proposed projects and determine the fate of those proposed projects based on the project-specific alternatives and potential impacts.

Ultimately, if this bill becomes law, it will prevent- not support- scientific inquiry. It will lock up a critical mineral resource forever. It will choke economic opportunities in Northern Minnesota. It will continue and worsen our reliance on importing the minerals we need. Wishful thinking will not stop climate change. Only action will. That action must include increasing responsibly sourced minerals domestically. This bill would send a clear message that the United States is not willing to take serious steps to address climate change and build a clean energy economy.

I respectfully ask that you reject this bill, rescind the proposed mineral withdrawal and bring stability, fairness and predictability back to the regulatory process for mining in this country. This is the wrong legislation at the wrong time. The challenges we face today call for tailored solutions. All of us at Twin Metals cherish the beauty and diversity of the Boundary Waters. But we cannot continue to ignore the real threats ahead – climate change and mineral dependence.

Sincerely,

Julie Padilla

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