THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Natural Resources
OFFICE OF PROJECT MANAGEMENT AND PERMITTING

550 West 7th Avenue, Suite 1430
Anchorage, AK 99501-3561
Main: 907-269-8690

September 25, 2025

2025 Draft List of Critical Minerals, MS-913
U.S. Geological Survey
12201 Sunrise Valley Drive
Reston, VA 20192

Re: 2025 Draft List of Critical Minerals (USGS-2025-0039)

Dear Ms. Bracewell,

Thank you for the opportunity to review and provide comments on the 2025 Draft List of Critical Minerals (CML) (Federal Register, Vol. 90, No. 163, 41591-41593) and associated Methodology Report (Open File Report 2025-1047). The following comments represent the consolidated comments of the State of Alaska Department of Natural Resources (DNR).

Pursuant to the Energy Act of 2020, "critical minerals" are defined as "the minerals, elements, substances, or materials that "(i) are essential to the economic or national security of the United States; (ii) the supply chain of which is vulnerable to disruptions (including restrictions associated with foreign political risk, abrupt demand growth, military conflict, violent unrest, anti-competitive or protectionist behaviors, and other risks throughout the supply chain); and (iii) serve an essential function in the manufacturing of a product (including energy technology-, defense-, currency-, agriculture-, consumer electronics-, and healthcare-related applications), the absence of which would have significant consequences for the economic or national security of the United States."[1]

Overall, DNR supports the addition of copper and silver to the CML, and the continuation of tin on the list. However, DNR suggests the retention of tellurium on the CML, and the addition of metallurgical coal.

As noted in the State of Alaska's 2021 comment letter on the 2021 draft version of the CML, copper is an essential component of many aspects of modern society including electric vehicles, electronics, building materials, green energy infrastructure, industrial machinery and equipment, and healthcare products. DNR supports the addition of copper to the CML.

Likewise, DNR supports the addition of silver to the CML. Silver is used in 5G communication technologies, electric vehicles, photovoltaics, capacitors, water purification, air conditioning, jewelry and silverware, and other industrial uses. Its value as a conductor makes it critical in technology and electronics devices, and its antimicrobial properties are valuable in medical devices and water treatment.

[1] Energy Act of 2020. Public Law 116-260, section 7002(c)(4)(A).

Tellurium and tin each warrant inclusion as critical minerals due to their essential roles in emerging technologies and current supply vulnerabilities. Fortunately, there are potential domestic sources in Alaska. Tellurium is vital to energy applications, especially in cadmium telluride (CdTe) solar panels. It is also significant to the oil and gas and midstream industries because it is used as an additive in metal alloys to improve corrosion resistance and machinability, enhancing the durability and performance of critical infrastructure components like pipes and valves. Additionally, tellurium plays a role in refining catalysts and sensors, supporting efficient and environmentally sound hydrocarbon processing. Although tellurium occurs primarily as a byproduct in other mining operations, its supply remains geographically concentrated, raising concerns over supply chain security. Alaska hosts deposits and mining tailings containing tellurium, representing a valuable opportunity to diversify and strengthen the U.S. resource base. Given the strategic importance of tellurium for energy, electronics, and other high-tech sectors, its supply disruptions could have significant economic and national security consequences and meet the key thresholds for critical mineral status.

Tin's importance is similarly underscored by its widespread use in electronics soldering, alloys, and emerging battery technologies. The United States is heavily reliant on imports to meet demand, including significant quantities of recycled tin scrap principally sourced from Canada and Mexico. Trade tensions or border disruptions with these neighboring countries could severely impede the flow of tin scrap and waste into the U.S., tightening supply and increasing costs for critical manufacturing sectors. Meanwhile, Alaska's mineral deposits include tin-bearing deposits that, if developed, could bolster domestic supply and improve resilience against foreign supply risks. Given the expected growth in tin demand driven by technological advancement and the vulnerability of current supply chains, tin is a strong candidate for critical mineral designation to foster investment in secure, diversified sources.

Metallurgical coal also merits consideration as a critical mineral due to its indispensable role in steelmaking, which underpins national infrastructure, defense, and manufacturing industries. Metallurgical coal is the primary fuel and reducing agent in blast furnace steel production, making its availability strategically vital. Although the U.S. has domestic and imported sources, supply risks exist due to global market fluctuations and geopolitical factors. Alaska holds known deposits of metallurgical coal that could enhance the domestic supply base if developed. The 2025 draft list acknowledges the need to evaluate metallurgical coal's criticality further, reflecting its increasing importance amid energy transitions and industrial priorities. Including metallurgical coal along with tellurium and tin in critical mineral policies would foster supply chain security and support essential sectors of the economy and national security.

Alaska is home to a wide range of mineral resources and is a large contributor to the critical minerals development of the nation. Alaska has 191.1 million acres of land open to mining, more than any other state. Alaska is recognized as having one of the largest mineral endowments in the United States by leading national and international mining companies. This was reaffirmed in

the recently published 2024 Fraser Institute report.[2] Alaska is a past, present, and potentially future producer of critical minerals.

Alaska is currently producing critical minerals from two lode mines. The Red Dog Mine in northwestern Alaska is one of the largest zinc mines in the world. The Red Dog Mine is the United States leading producer of zinc and lead. The mine is the second largest in the United States in terms of silver output. The Red Dog Mine is also the only domestic producer of germanium.

The Greens Creek Mine in southeastern Alaska near Juneau also currently produces critical minerals. The Greens Creek Mine is the United States' leading producer of silver and the third largest U.S. producer of zinc. The mine is the sixth largest in the United States in terms of lead output and ranked 20th in terms of gold production. Greens Creek Mine also produces minor amounts of copper.

Alaska's mineral endowment includes numerous deposits, prospects, and occurrences that have the potential to produce 49 of the 50 critical minerals in the current USGS list and 51 of the 54 critical minerals on the draft list. Current Alaskan mineral exploration projects with critical minerals potential span the state and range from initial exploration stage to advanced exploration stage.

For example, the Trust Land Office has been conducting the Icy Cape Gold and Industrial Heavy Minerals Project (Project) near Icy Bay since 2015. This Project is sampling bulk mineral sands and undertaking drilling campaigns for stratigraphic framework drilling and for resource definition drilling, resulting in the discovery of several significant occurrences. While the Project is predominantly a placer gold project, industrial heavy minerals will play a significant role as by-products in the project's economics. The mineral sands deposits at Icy Cape are polyminerallic and polymetallic and include the following critical minerals: Platinum Group Metals (platinum, palladium, iridium, and rhodium), garnet (while garnet is not a critical mineral, a significant amount of the garnet at Icy Cape are yttrium-rich-garnets, a critical element), titanium, and zirconium-bearing minerals. Prospective industry partners are interested in the critical minerals potential at Icy Cape, especially titanium and zirconium minerals as part of an effort to develop a more robust domestic supply chain.

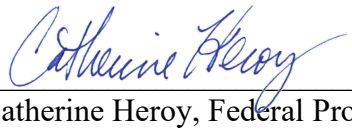
Additionally, Alaska is home to nearly one hundred other critical minerals projects in various stages of development and exploration. Graphite One's Graphite Creek project near Nome is the highest grade, largest known, large flake graphite deposit in the U.S., is on the FAST-41 Dashboard, and aims to establish a complete domestic supply chain with a downstream manufacturing facility in Ohio. Teck Alaska Inc. is exploring the Anarraaq-Aktigiruq zinc-lead-silver-germanium deposits near the Red Dog Mine for near term development. Ambler Metals LLC's Arctic (copper-zinc-lead-gold-silver) and Bornite (copper-cobalt-germanium) deposits are ready to advance to development with renewed federal approval of the Ambler Access Project (Ambler Road). Ucore Rare Metals Inc.'s Bokan Mountain rare-earth-element deposit near

[2] Mejía, Julio, and Aliakbari, Elmira, 2025, Fraser Institute Annual Survey of Mining Companies, 2024, Fraser Institute, 86 p., https://www.fraserinstitute.org/sites/default/files/2025-07/annual-survey-of-mining-companies-2024_0.pdf , ISBN 978-0-88975-834-6

Ketchikan awaits a development decision. The Pebble deposit near Bristol Bay is one of the world's largest undeveloped mineral deposits with defined copper, gold, molybdenum, silver, and rhenium resources, along with potential for palladium, vanadium, titanium, and tellurium. Additionally, a number of Alaskan antimony projects, such as those being proposed by U.S. Antimony Corp., Felix Gold Ltd. and Nova Minerals Ltd., are being pursued.

On behalf of the State of Alaska Department of Natural Resources, I'd like to thank you for taking the time to review our comments on this publication. Please do not hesitate to contact me if you have any questions or need additional information or clarification.

Sincerely,



Catherine Heroy, Federal Program Manager
Office of Project Management and Permitting
Alaska Department of Natural Resources

cc: *John Boyle, Commissioner, DNR*
Randy Bates, Commissioner, DEC
Doug Vincent-Lang, Commissioner, ADF&G