



To: U.S. Senate Committee on Energy and Natural Resources

Attn: Sen. Lisa Murkowski, Chairwoman
Sen. Joe Manchin, Ranking Member

From: Mr. David Wilcox

Date: June 23, 2020

Re: The Impacts of COVID-19 on Mineral Supply Chains, the Role of those Supply Chains in Economic and National Security, and Challenges and Opportunities to Rebuild America's Supply Chains

Evolution Metals Corp. (EMC) wishes to commend the United States Senate and the Committee on Energy and Natural Resources for acknowledging the value of the Mineral Supply Chain, including Critical Minerals, and for holding a hearing on the matter on Wednesday, June 24th, 2020.

Additionally, we at EMC wish, for the record, to point out a few relevant points on this matter:

What Are Critical Minerals?

Critical minerals are materials, the majority of which are minor metals, that are vital to the US and Global economy: they are essential components of renewable energy, electronics and aerospace & defense.

The list of rare earth elements has evolved over the years but typically includes the lanthanides, plus yttrium and scandium. The list of critical minerals includes the rare earths plus other metals such as tantalum, niobium, copper and nickel.

The list of "critical minerals" we refer is defined by the United States Government. In 2017, Executive Order 13817 directed the United States Government to evaluate the critical minerals supply chain.

As a result, the United States Department of the Interior conducted a study and issued a white paper that designated 35 materials as critical. The complete list of critical minerals was recorded in the Federal Register in May 2018.

What Are the Applications for Critical Minerals?

These materials are critical components in the manufacture of electronics, renewable energy, anything that requires permanent magnets as well as aerospace & defense. One of the key components in electric vehicles is the battery, which requires materials such as high-grade processed lithium, nickel, cobalt and graphite. Electronics are highly dependent on many of these materials. Smart phones and microelectronics cannot be manufactured without them.

Many products we use every day rely on magnets, which are made with materials such as neodymium. Many wind turbines rely heavily on magnets. Many automobile components



rely on magnets.

Advanced alloys required to manufacture automobiles, airframes, energy transmission cables and many other products we require for the modern economy to function rely on these materials.

In aerospace & defense these materials are required to make night-vision goggles, operate guidance & navigation systems and countless other applications. The United States has over 100 weapons systems that require materials for which a reliable supply chain does not exist. High performance systems such as the F-35 Lightning II fighter aircraft require these materials.

Without access to a reliable source of these materials we cannot operate modern industries and provide for our military defense.

Where Do Critical Minerals Come From?

For much of the 20th century, the United States was the largest producer of rare earths in the world: the California Mountain Pass mine being one of the largest producers. However, over the past decades the US has ceded leadership which resulted in China becoming the largest producer with over 80% of the market currently based in China.

What Are the Risks to The Supply Chain?

Demand for many rare earth and critical minerals has skyrocketed in recent years with the spread of high-tech devices that use a wide variety of materials and is expected to rise dramatically.

If the United States and its allies are to create high-tech jobs, transition to a greener economy and maintain modern defense capabilities they will require a secure and reliable supply of these materials.

In June 2019, the Department of Commerce issued a study entitled “A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals”. This study states “The United States imports most critical mineral commodities. Specifically, the United States is import-reliant (imports are greater than 50 percent of annual consumption) for 31 of the 35 minerals designated as critical by the Department of the Interior. The United States does not have any domestic production and relies completely on imports to supply its demand for 14 critical minerals.”

The United States supply of critical minerals is heavily dependent on foreign resources which leaves the US vulnerable to supply chain disruptions related to political and natural events.

What is Being Done About this Crisis?

There are ongoing efforts to create supply chains that are not dependent on China. Private



industry is pursuing solutions. The Government and Military of the United States have issued calls for private industry to engage with them to solve the crisis. And United States has entered into agreements with allies including Canada and Australia to tackle the problem.

How Is Evolution Metals Corp. providing a Leading Solution?

Evolution Metals Corp.'s mission is to secure a reliable and sustainable supply chain of critical minerals for the US and its allies through the acquisition and development of mine assets and domestic production facilities.

EMC is establishing a vertically integrated supply chain. This effort includes investment in ore sources and processing facilities in friendly locations as well as engaging directly with the Executive Branch, Senate, and House of the United States Government to create alliances between companies and countries and develop solutions to the crisis.

EMC seeks out higher grade ore sources and technologies, which result in less environmental impact in the mining process. Often the rare earth elements can be simply extracted from the tailings sites where host materials such as nickel and cobalt have been mined in the past, such as coal fly ash.

EMC is focused on becoming the pre-eminent supplier of critical minerals produced in the Western Hemisphere and supporting our modern economy and security.

EMC is developing a supply chain for these materials that will support the growth of cleaner power generation. For example, electric vehicle technology has reached the point where electric vehicle demand will dramatically increase and there will be a requirement for millions of batteries that rely on various chemistries and materials such as lithium and various forms of nickel, cobalt and graphite. Larger scale storage of electric power, typically to capture the power generated by solar and wind, will demand the same materials. As we face a never before seen coronavirus crisis, EMC is focused on establishing a secure, robust and reliable supply chain for the United States and our allies. Our focus is on bringing back jobs and manufacturing capabilities, while supporting a transition to a green economy.

Best regards,

David Wilcox

David Wilcox
President and CEO
Evolution Metals Corp.

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