RARE EARTH SALTS

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WRITTEN TESTIMONY TO THE U.S. HOUSE SMALL BUSINESS COMMITTEE

"Securing America's Mineral Future:
Unlocking the Economic Value Beneath Our Feet"

Chairman Williams, Ranking Member Velazquez, and distinguished members of the Committee, thank you for the invitation to testify on the critical issue of securing America's mineral future. I appear before you today representing Rare Earth Salts, a Nebraska-based small business at the forefront of addressing one of our nation's challenges.

The United States confronts an unprecedented threat to our economic sovereignty and national security through China's control of the rare earth elements supply chain. Rare earths are a set of 17 elements in the periodic table that play a critical role in our national security, energy independence, environmental future, and economic prosperity. These elements are far more than mere commodities; they form the backbone of modern technological advancements. From powering batteries and electric vehicles to enabling medical equipment, military systems, smartphones, and wind turbines, rare earths are foundational to the innovation driving our technological civilization.

The age of technology is indeed the age of critical minerals with vast geopolitical implications. The need for securing both domestically sourced rare earth elements and domestic rare earth processing infrastructure is vital.

Today, China controls 90% of the global downstream rare earth market, impacting the rest of the world's supply chain and giving them significant control in restricting America's access to materials vital for manufacturing and defense capabilities. This was not always the case. From the 1960s until the 1990s, the U.S., specifically California's Mountain Pass mine, led global production. However, China's deliberate industrial policy systematically captured market control, creating the vulnerable supply chain we face today. Though China's dominance in the rare earth market has prompted global efforts to find alternative sources and processes to produce these critical compounds, producers

outside of China continue to face formidable challenges, struggling to compete with the highly competitive pricing of China's domestic market.

The challenge extends beyond supply security to economic competitiveness. China's current market dominance stems from their large-scale use of Solvent Extraction (SX) methods, which were developed and implemented in the U.S. in the 1960s. These processes require hundreds of separation stages and generate excessive chemical waste. Western companies, utilizing this proven method, face higher production costs due to necessary environmental and worker protections. This cost differential has created a market failure where Western innovation cannot compete with Chinese production, despite superior technology and environmental stewardship. For small businesses like ours, this represents both a challenge and an extraordinary opportunity to innovate and lead.

The global technology race to develop next-generation rare earth separation solutions highlights the urgent market demand that Rare Earth Salts addresses. By delivering advanced separation technologies, we meaningfully contribute to enabling cost-competitive domestic production, positioning ourselves as a leader in meeting this critical need.

Founded in 2012 by Dr. Joseph Brewer, Rare Earth Salts exemplifies how America’s small business innovation can address strategic national challenges. Rare Earth Salts addresses the global need for a cost-effective, sustainable, and environmentally friendly rare earth separation process.

We have developed patented technologies for the refining of rare earth elements to high purity from various feedstocks worldwide, including both ore-based and recycled material.

Prior to developing our proprietary processes, we evaluated the strengths and weaknesses of every separation process used since the 1940s. That allowed us to invent a revolutionary electrochemical process from the ground up based on sound basic chemistry. The separation process advancements by Rare Earth Salts represent industry-changing solutions demanded by the rare earth supply chain to profitably compete with Chinese production and maintain a low environmental footprint.

Rare Earth Salts has been working closely with the U.S. government and has received multiple grants and awards for its separation technologies from the Department of Defense (DOD) and Department of Energy (DOE). The DOD and DOE are working to further establish a domestic rare earth supply chain given the well-documented national security risks arising from the foreign reliance on critical materials. These partnerships demonstrate how federal investment in small business innovation can yield strategic returns for national security while building domestic industrial capacity. Rare Earth Salts recently received an award from the DOD to increase production of heavy rare earth

elements, specifically Terbium.

The rare earth challenge represents more than supply chain vulnerability—it is a defining opportunity for American small businesses to lead the next generation of critical mineral production. Companies like Rare Earth Salts exemplify how American innovation can compete globally.

Supporting domestic innovation in mineral processing can help ensure the United States does not merely secure its mineral future but leads the world in sustainable, competitive production of these essential materials. The permanent magnet industry, which represents the predominant end use for rare earth elements, is essential to our energy independence, environmental future, and economic prosperity. By supporting small businesses developing innovative separation technologies, we can reestablish American leadership in this critical sector.

Rare Earth Salts stands ready to contribute to America's mineral independence. But this mission requires collective effort. With a robust policy framework that acknowledges the strategic importance of domestic critical mineral production, American small businesses can help transform this challenge into a competitive advantage. The technology is ready. The market need is undeniable. The national security imperative is urgent. We need to now unlock the economic value beneath our feet and secure America's mineral future.

Chairman Williams, Ranking Member Velazquez, and distinguished members of the Committee, thank you again for the invitation to testify, and I look forward to your questions.