

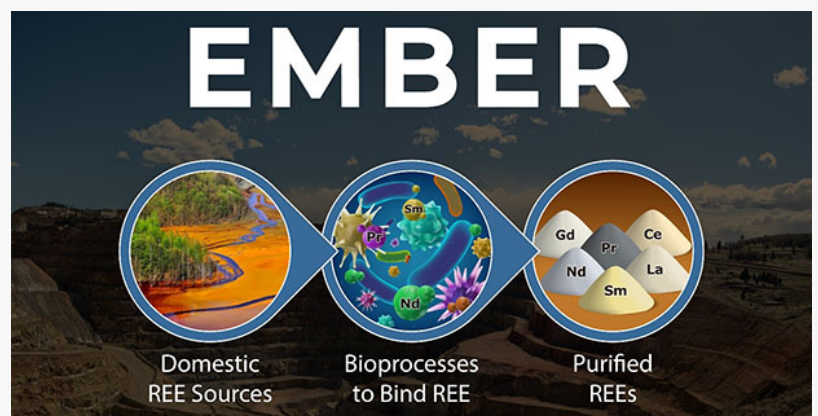
Western Rare Earths Working to Address China's Rare Earths Dominance through DARPA program

Supplying mineralized ore to researchers seeking funding from DARPA's new Rare Earth Elements (REE) bioengineering research program

PHOENIX, ARIZONA, USA, October 12, 2021 /EINPresswire.com/ -- [Western Rare Earths](https://www.einpresswire.com/news-item/western-rare-earths-wre) (WRE), a mining exploration company based in Arizona with additional projects in Wyoming and Nevada, is supplying feedstocks (mineralized rocks or ore) to researchers who are seeking funding from the Defense Advanced Research Projects Agency's (DARPA) new [Rare Earth Elements \(REE\) bioengineering](https://www.einpresswire.com/news-item/western-rare-earths-wre) research program.

"For more than a year, we have quietly cultivated supportive relationships with top researchers in the REE processing field. We are excited by the opportunity to contribute to securing US domestic supply chains of rare earths, and doing so in innovative, environmentally responsible and cost-effective ways," said Marty Weems, WRE's CEO. "This program is perfectly congruent with our Environmental and Sustainability goals. REEs are critical to the renewable energy, reduced carbon future and success in this program using our uniquely non-radioactive feedstocks could make the researcher's jobs easier and eliminate the need to manage radioactive waste."

REEs are a group of 17 metals that are *critical components to many Department of Defense (DOD) systems, including lasers, precision-guided weapons, fuel cells, magnets for motors, and other devices. According to the USGS's latest numbers, the US is currently 80% dependent on China for its rare earths needs. A less than ideal reality as each F-35 Strike Fighter requires 920



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Western Rare Earths Logo

pounds of Rare Earth material, and an SSN 774 Virginia class submarine needs 9,200 pounds.

DARPA is encouraging US scientists to engineer a new REE supply chain by utilizing bioengineering or “biomining” approaches through the Environmental Microbes as a Bio-Engineering Resource ([EMBER](#)) program. Biomining is more environmentally friendly than the toxic processing method synonymous with the Chinese REE industry. In addition to its benefits to the environment, the advantage of biomining is that it will facilitate domestic REE separation and purification. This is the critical path to lessen US vulnerability to and dependence on China.

The United States has only one active REE mine, which is in Mountain Pass, Calif., and has operated intermittently since the 1960s but still depends on China for processing. Given these domestic gaps, securing a U.S.-based REE supply chain is a longstanding bipartisan priority, with the DOD leading the charge. This focus, coupled with multiple presidential executive orders, has resulted in hundreds of millions of dollars in funding support through the Department of Energy (DOE) and DOD.

Currently, EMBER has attracted dozens of world-class researchers working to revolutionize an 80-year-old industry. WRE is providing some of the very few mineral deposit feedstocks that qualify for use in the program. WRE feedstocks from Arizona and Wyoming are unique in that they are both non-radioactive and give access to almost all 17 metals in a single source.

Unlike most other REE mineral deposits, these feedstocks from WRE are not plagued with the radioactive element Thorium. WRE has provided REE mineralized ore to three research teams, including researchers from national laboratories and elite American “Research One” universities applying to the EMBER program.

Finally, WRE is providing some in-kind donations of its staff’s services to the research teams. In return for its participation and support of this program, WRE expects two primary benefits: the research teams may be able to help WRE isolate the most effective and environmentally friendly extraction methods for its REE mineralized ore; and WRE expects rights to use any new technology developed by the teams it is supporting, potentially saving the company money in the future by domestically processing, separating, and purifying rather than offshoring to China.

Disclaimer: No endorsement by DARPA is implied toward any feedstock provider.

* <https://www.dla.mil/HQ/Acquisition/StrategicMaterials/Materials/>

Western Rare Earths (WRE), the wholly owned subsidiary of American Rare Earths Limited (ASX: ARR), is an exploration company developing the advanced La Paz Rare Earth Project in Arizona, the Halleck Creek Rare Earth Project in Wyoming and the Searchlight Heavy REE project in Nevada. WRE has assembled world-class technical and leadership teams to advance the development of these projects and collaborate on disruptive sustainable processing of Critical

Minerals.

For more information see: www.westernrareearths.com

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