Advancing the Rare Earths Supply Chain Using Innovative Technology

Bear Lodge Rare Earth Deposit

Excellent Distribution of Critical Rare Earth Elements (REE)
One of the highest-grade, domestic deposits for critical magnet materials

Premier Wyoming Location
- Pro-business focus
- Excellent infrastructure
- Easily accessible, low-cost power
- Skilled workforce and industry incentives
- Most-business-friendly tax climate

Well-Defined Mineral Asset
- Excellent distribution of magnet materials
- Near-surface, high-grade zone
- Additional targets identified and drilled

Demonstration Plant to Advance Innovative REE Extraction/ Separation Process

RER and its partners are advancing a proprietary, high-efficiency REE extraction/separation technology and have successfully recovered >99.5% pure Nd/Pr oxide in pilot-plant testing.

In late 2022, the development team, which includes affiliates of General Atomics, one of the largest and most advanced technology companies in the world, and the U.S. Department of Energy (DOE), completed design of a rare earth extraction/separation demonstration plant to be built in Upton, WY. The Nuclear Regulatory Commission (NRC) license is expected in summer 2023, and construction is expected to commence in the second half of 2023. The DOE and Wyoming Energy Authority funds are expected to cover over half of the estimated $44M in costs.
RER and affiliates of innovation leader, General Atomics, continue to advance the process technology with data generated from the demonstration plant expected to be used in development of a commercial facility.

Innovative REE Extraction/Separation

Crushes feed sample to 1-3mm sizing for further processing

Produces a 92-97% pure concentrate, separating the waste and a majority of the naturally occurring radioactive material from the REEs

Reduces remaining radioactive waste to desired end-product and regulatory requirements, as well as removes the cerium

Refines REEs into product groups, including a >99.5% pure Nd/Pr, a La product, as well as Sm/Eu/Gd (SEG) and heavy REEs concentrates amenable to further processing

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