NRC Issues License to Rare Element Resources Inc.
for Rare Earth Extraction Pilot Project in Wyoming

The Nuclear Regulatory Commission has issued a license to Rare Element Resources Inc. for a proposed pilot project in Wyoming to demonstrate a proprietary process to extract rare earth elements from ore.

Rare earth elements are essential in many applications, including electric automobiles, smart phones, advanced wind turbines, computer hard drives, magnets, and military systems.

RER’s Upton Pilot Project, sponsored in part by the U.S. Department of Energy, involves a mined pile of about 1,000 tons of ore to be transported from the Black Hills National Forest in northeastern Wyoming to a rare earth element processing plant in Upton, Wyoming. Extracting the rare earth elements from the ore will produce waste streams including thorium and some uranium, requiring a source material license from the NRC.

Under the NRC license, RER will treat and stabilize the process wastes before sending them to a licensed low-level waste disposal facility.

The NRC’s review of the license application included a technical safety review and an environmental assessment. The agency published a notice of opportunity in May to request a hearing. No petitions were filed.

RER intends to start processing the ore pile in April 2024. The project is expected to take a year, followed by two years to decommission. The license is valid through April 30, 2027.