

**U.S. NUCLEAR REGULATORY COMMISSION
MATERIALS LICENSE**

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 37, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

<p align="center">Licensee</p> <p>1. Rare Element Resources, Inc.</p>	<p>In accordance with: Documents identified in LC 11</p>	<p>4. Expiration Date:</p> <p align="center">April 30, 2027</p>
<p>2. P.O. Box 271049 Littleton, CO 80127</p>	<p>3. License Number: SUA-1603</p>	<p>5. Docket No. / Reference No.:</p> <p align="center">040-38415</p>
<p>6. Byproduct Source, and/or Special Nuclear Material</p> <p>Source</p>	<p>7. Chemical and/or Physical Form</p> <p>Any</p>	<p>8. Maximum amount that Licensee May Possess at Any One Time Under This License</p> <p>1000 tons</p>

9. Authorized use: Rare earth element separation and processing of ore containing natural uranium and natural thorium for the recovery of high purity Neodymium and Praseodymium.
10. Possession, and storage of source material for the recovery of rare earth elements, as a pilot project, is authorized and limited to the licensee's location at the Upton Logistics Center located at 131 Buffalo Creek Road in Upton, WY 82370.
11. The Rare Element Resources (RER) pilot project, including operation of its rare earth element processing system, media exchanges, treatment for reuse or disposal, sample or process system analysis, and final disposition pathways shall be as specified in its license application documents dated May 4, 2022 (ML22130A014), May 24, 2022 (ML22144A417), August 26, 2022 (ML22238A107); September 19, 2022 (ML22258A140 and ML22258A141), and September 30, 2022 (ML22256A320, ML22256A321 and ML22256A322), and as amended, or modified by documents dated November 7, 2022 (ML23205A131), December 1, 2022 (ML22333B028), March 21, 2023 (ML23080A184), and April 7, 2023 (ML23097A072).
12. The Radiation Safety Officer (RSO) shall be responsible for the establishment and maintenance of a radiation safety and environmental monitoring program in accordance with the descriptions provided in the documents listed in LC 11. The RSO and radiation support staff, shall at a minimum, possess the professional qualifications and training requirements for health physics as described in Regulatory Guide 8.31. The Radiation Safety Officer (RSO) for this license is Mr. Michael Schierman, CHP. Mr. Bret Berg and Mr. Schierman are approved as Authorized Users (AU) based on the training and qualification information provided in the November 7, 2022, Notification of Change in Senior Management (ML23205A131) and the September 2022 Technical Report documentation listed in LC 11 (ML22256A322).
13. The licensee shall not commence operations until the NRC performs a pre-operational inspection to confirm, in part, that operating procedures and approved radiation, safety and environmental monitoring programs are in place, and that pre-operational testing is complete. The licensee should inform the NRC, at least 90 days prior to the expected commencement of operations, to allow for sufficient time for NRC to plan and perform the pre-operational inspection. NRC will approve the possession and storage of the source material

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for the recovery of the rare earth elements under this license upon satisfactory completion of the pre-operational inspection, and upon receipt of documentation demonstrating the licensee has verified the assessed public dose and documented that additional proposed authorized users have completed training in accordance with the commitments made in the September 2022 Technical Report (ML22256A322) and the response to the request for additional information for the Technical Report (ML23097A072).

14. Uranium and Thorium in the ore is considered a waste product and will be solidified and shipped offsite for disposal in accordance with the commitments made in the documents references in LC 11.

15. Change, Test, and Experiment License Condition

- A. The licensee may, without obtaining a license amendment, pursuant to 10 CFR 40.44 and subject to the conditions specified in (B) of this condition:
 - i. Make changes to the facility as described in the license or license application;
 - ii. Make changes to the procedures as described in the license application; and
 - iii. Conduct tests or experiments not described in the license application.

- B. The licensee shall obtain a license amendment pursuant to 10 CFR 40.44 prior to implementing a proposed change, test, or experiment if the change, test, or experiment would:
 - i. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the license application.
 - ii. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a facility structure, equipment, or monitoring system (SEMS) important to safety previously evaluated in the license application.
 - iii. Result in more than a minimal increase in the consequences of an accident previously evaluated in the license application.
 - iv. Result in more than a minimal increase in the consequences of a malfunction of an SEMS previously evaluated in the license application;
 - v. Create a possibility for an accident of a different type than any previously evaluated in the license application.
 - vi. Create a possibility for a malfunction of an SEMS with a different result than previously evaluated in the license application;
 - vii. Result in a departure from the method of evaluation described in the license application (as updated) used in establishing the final safety evaluation report (FSER), environmental impact statement (EIS), environmental assessment (EA) technical evaluation reports (TERs) or other analysis and evaluations for license amendments. For purposes of this paragraph as applied to this license, SEMS means any SEMS that has been referenced in a staff safety evaluation report (SER), TER, EA, or EIS and supplements and amendments thereof.

- C. The licensee must obtain a license amendment if the change, test, or experiment is not consistent with the NRC staff's previous conclusions, or the basis of, or analysis leading to those conclusions, regarding actions, designs, or design configurations analyzed and selected in the site or facility SER, TER, and EIS or EA. This includes all supplements and amendments to the license, as well as all SERs, TERs, EAs, and EISs associated with amendments to this license.

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D. The licensee's determinations concerning (B) and (C) of this condition shall be made by a Safety and Environmental Review Panel (SERP). The SERP shall consist of a minimum of three individuals. One member of the SERP shall have expertise in management (e.g., a Plant Manager) and shall be responsible for financial approval for changes; one member shall have expertise in operations and/or construction and shall have responsibility for implementing any operational changes; and one member shall be the RSO or equivalent, with the responsibility of assuring changes conform to radiation safety and environmental requirements. Additional members may be included in the SERP, as appropriate, to address technical aspects such as groundwater or surface water hydrology, specific earth sciences, and other technical disciplines. Temporary members or permanent members, other than the three above-specified individuals, may be consultants. In addition to the requirements stated in this license condition and the requirements of 10 CFR 40.44, the overall SERP program will operate as described in Section 7.5 of the Sept 2022 Technical Report (ML22256A232). If one of the principals is a consultant, then that principal SERP member must be approved by the NRC. The RSO identified in LC12 is approved to be a SERP principal. Designees for any of the three principal SERP members must have the same qualifications and experience as the principal they are acting for or be specifically approved by the NRC.

E. The licensee shall maintain records of any changes made pursuant to this condition until license termination. These records shall include written safety and environmental evaluations made by the SERP that provide the basis for determining changes are in compliance with (B) of this condition. The licensee shall furnish, in an annual report to the NRC, a description of such changes, tests, or experiments, including a summary of the safety and environmental evaluation of each. In addition, the licensee shall annually submit to the NRC, changed pages, which shall include both a change indicator for the area changed (e.g., a bold line vertically drawn in the margin adjacent to the portion changed) and a page change identification (date of change, change number, or both) for the operations plan, radiation safety plan and decommissioning plan from the approved license application that reflects changes made under this condition. SERP evaluation records will be provide to NRC for review upon request. Records of SERP evaluations shall be maintained at the addresses listed in LC 2 and LC 10.

16. RER may, without NRC approval, make changes to the radiation safety program and standard operating procedures and conduct tests, or experiments provided they are reviewed by the SERP, and if RER ensures the following conditions are met:

- A. the changes, tests or experiments do not conflict with any requirements specifically stated in the license or impair RER's ability to meet all applicable NRC regulatory requirements or any conditions of this license, AND,
- B. RER continues to comply with the safety and environmental commitments made in the documents identified in LC 11 of this license, AND,
- C. the changes, tests or experiments are consistent with NRC's findings in the SER (ML#) and EA (ML#) approving this license.

If all of these conditions are not met, or if RER seeks to change any conditions of this license or any performance requirements in the documents identified in LC 11, then NRC approval through a license amendment request will be required.

17. Standard operating procedures shall be developed and followed for all licensed activities, including the

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handling of licensed materials during media exchanges, sample collection, sample analysis, effluent treatment for reuse or disposal, packaging for transportation, etc. The standard operating procedures (SOPs) shall specify the radiation safety practices to be followed. The SOPs shall also include provisions to prevent or respond to the range of reasonably foreseeable potential accidents, such as a release or spill of licensed material. A copy of the SOPs shall be kept in the areas and buildings of the facility where they are used. The SERP will review and approve all standard operating procedures before they are implemented.

18. The licensee shall be required to use a radiation work permit (RWP) for all work where the potential for significant exposure to licensed material exists and for which no SOP exists. All RWPs shall be approved by the RSO, or designee qualified by way of specialized radiation protection training. Each RWP will include: (a) the scope of work to be performed, (b) any precautions necessary to reduce exposure and (c) any additional monitoring required prior to, during or after completion of the work.
19. The results of sample analyses, monitoring surveys, equipment calibration, reports of audits and inspections, meetings, and training sessions required by applicable regulations, or this license and any subsequent reviews, investigations, and corrective actions shall be documented. Unless otherwise specified in this license or in NRC regulations, all documentation shall be maintained for a period of five years.
20. All written notices and reports to the NRC required under this license shall be addressed in care of the Document Control Desk, U.S. Nuclear Regulatory Commission, 11555 Rockville Pike, Rockville MD 208532. Required telephone notifications shall be made to the NRC Operations Center at (301) 816-5100 unless otherwise specified.
22. If notifications are required by RER to other state or federal agencies based on activities associated with this license, a courtesy notification shall be made to the NRC. If a written report is required to be submitted by RER to another state or federal agency based on activities associated with this license, a copy of the report shall be submitted to the NRC.
23. RER will ensure that all system equipment is installed properly before commencement of the licensed activities. After commencement of operations, RER will ensure that no alternations are made to components of the system that contain or have the potential to contain licensed material unless approved either by SERP or the NRC as required.
24. RER will document its decommissioning cost estimate in its financial assurance mechanism and adjust decommissioning costs pursuant to applicable NRC requirements, such as changes in engineering or design, economic conditions, such as inflation, or license amendment on a triennial basis or at license renewal.

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FOR THE U.S NUCLEAR REGULATORY COMMISSION

Dated: July 27, 2023



Signed by Von Till, Randolph
on 07/27/23

Bill Von Till, Chief
Uranium Recovery and Materials
Decommissioning Branch
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

