

September 19, 2012

Jaye T. Pickarts, P.E.
Chief Operating Officer
Rare Element Resources
225 Union Blvd, Suite 250
Lakewood, Colorado 80228

SUBJECT: RARE ELEMENT RESOURCES, INC., BEAR LODGE PROJECT, WYOMING –
RESPONSE TO LETTER DATED JUNE 22, 2012

Dear Mr. Pickarts:

I am writing in response to your June 22, 2012, letter to Keith McConnell concerning the potential licensing of the Rare Element Resources (RER) Bear Lodge Project in northeast Wyoming. As requested, my response below will address both the regulatory and environmental monitoring components for a U.S. Nuclear Regulatory Commission (NRC) license to possess source material. Please note that the NRC licensing requirements, as described below, differ from your understanding stated in the June 22, 2012 letter.

It is the NRC's understanding that the RER Bear Lodge Project will involve the rare earth element recovery of lanthanum, cerium, praseodymium, neodymium, samarium, europium, and gadolinium. It is also the NRC's understanding that the ore that contains these rare earth elements may also contain uranium and thorium. The NRC licensing requirements that pertain to your proposed operation can be found in Title 10, Part 40 of the Code of Federal Regulations (10 CFR Part 40). In 10 CFR 40.4, source material is defined as "(1) uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores which contain by weight one-twentieth of one percent (0.05%) or more of: (i) uranium, (ii) thorium or (iii) any combination thereof." Pursuant to 10 CFR 40.3, RER will be required to submit a source material license application to the NRC in order to conduct processing of rare earth minerals if any of the processing steps, including waste generation, result in materials with concentrations of uranium and thorium that equal or exceed 0.05% by weight. Conversely, RER would be exempt from the licensing requirement if it meets the unimportant quantities of source material exemption found in 10 CFR 40.13 (i.e., uranium and thorium by weight less than one-twentieth of one percent (0.05%)) throughout its processing steps.

In the event that you exceed the 10 CFR 40.4 threshold, you will need to follow the regulations in 10 CFR Part 40, *Domestic Licensing of Source Material*, pertaining to license applications, including 10 CFR 40.31 (Application for Specific License), 40.32 (General Requirements for Issuance of Specific Licenses), and 40.36 (Financial Assurance and Recordkeeping for Decommissioning). Relevant guidance documents for the licensing process include NUREG-1556, Vol. 12, *Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Possession Licenses for Manufacturing and Distribution*, and NUREG-1748, *Environmental Review Guidance for Licensing Actions Associated with NMSS Programs*.

In addition, the following NRC public websites can assist you with the licensing process:

Source Material

<http://www.nrc.gov/materials/srcmaterial.html>

Licensing

<http://www.nrc.gov/about-nrc/regulatory/licensing.html>

Materials Environmental Reviews Under the National Environmental Policy Act (NEPA)

<http://www.nrc.gov/materials/active-nepa-reviews.html>

With respect to environmental monitoring, holders of source material possession licenses must meet the effluent standards specified in 10 CFR Part 20, *Standards for Protection Against Radiation*. The NRC does not have a guidance document for environmental monitoring for source material possession licenses. Although not directly applicable to a source material possession license, Regulatory Guide 4.14, *Radiological Effluent and Environmental Monitoring at Uranium Mills*, contains a good discussion on pre- and operational radiological monitoring of air, water, and biota. This document can provide a good starting point in developing a pre-and operations environmental monitoring program.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

I hope the information provided above is of assistance. If you have any questions or require additional information, please contact me at 301-415-7612 or Paul.Michalak@NRC.gov.

Sincerely,

/RA/

Paul Michalak, Branch Chief
Materials Decommissioning Branch
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental protection
Office of Federal and State Materials
and Environmental Management Programs

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Paul Michalak, Branch Chief
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 Licensing Directorate
 Division of Waste Management
 and Environmental protection
 Office of Federal and State Materials
 and Environmental Management Programs

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OFC	DWMEP	DWMEP	OGC	DWMEP
NAME	PMichalak	SAchten	BJones	PMichalak
DATE	7/24/12	7/24/12	9/19/12	9/19/12

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