Ucore Progresses Through Heavy Rare Earth Processing as It Completes Second Milestone of Strategic US DoD Contract

written by Raj Shah | March 4, 2024
March 4, 2024 (Source) – **Ucore Announces:**

- **Successfully separating holmium through lutetium from lanthanum through dysprosium on a scale of 1000s of liters and above the targeted purity of 99% with its RapidSX™ technology Demo Plant**
- **Completion of second DOD Project Milestone**

Ucore Rare Metals Inc. (TSXV: UCU) (OTCQX: UURAF) ("Ucore" or the **"Company")** is pleased to report that it has completed the second milestone outlined in its US$4 million Other Transaction Agreement (the "**OTA**") with the US Department of Defense (the "**DoD**") at the Company's *Commercialization and Demonstration Facility* ("**CDF**") in Kingston, Ontario, utilizing its 52-Stage RapidSX™ Demonstration Plant ("**Demo Plant**") for the separation of mixed heavy and light rare earth elements ("**REE**") chemical concentrate feedstocks – i.e., mixed rare earth oxides (**MREOs**) and carbonates (**MRECs**).

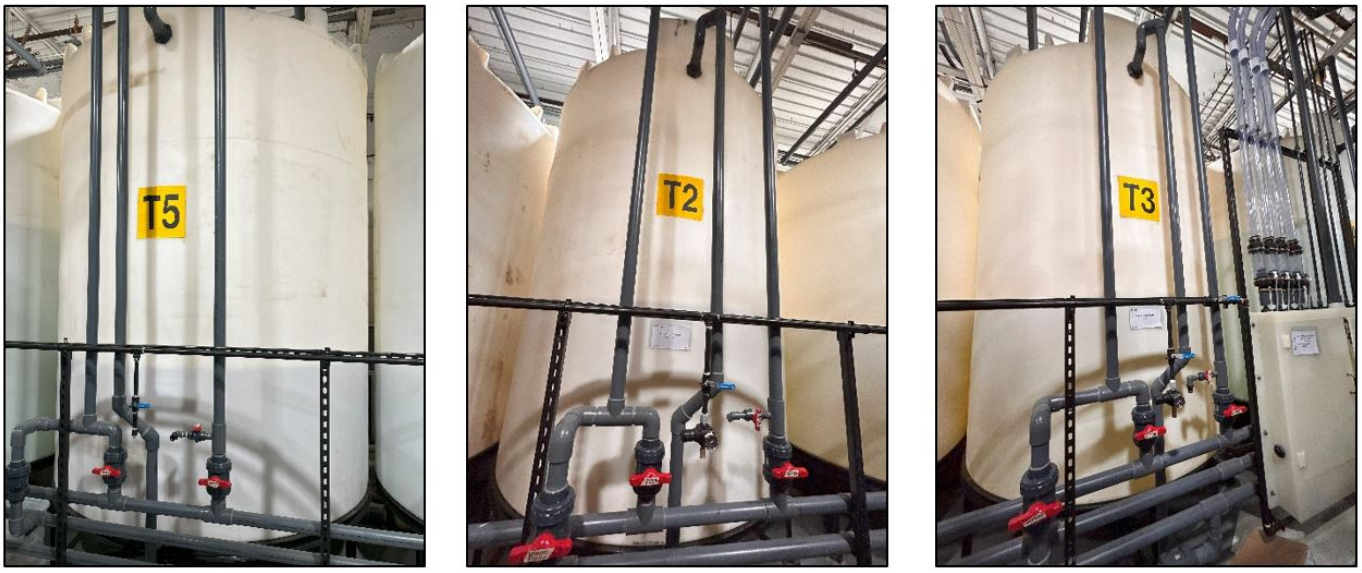

Figure 1: Thousands of liters of separated rare earth chloride products: ***T5 Raffinate*** *(La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy),* ***T2 Strip One Liquor*** *(Ho, Y, Er, Tm, Yb) and* ***T3 Strip Two Liquor*** *(Yb, Lu) – each tank has a 17,400 liter capacity.*

To view an enhanced version of this graphic, please visit: https://images.newsfilecorp.com/files/1119/200305_ucoreimage1.jpg

The OTA is focused on the ultimate individual separation of the rare earth permanent magnet ("**REPM**") elements praseodymium (**Pr**), neodymium (**Nd**), terbium (**Tb**), and dysprosium (**Dy**) plus yttrium (**Y**) from US-friendly heavy MREO sources. **Since completion of Demo Plant commissioning work in December 2023,** the Company has been processing MREO under the OTA. Work under the Agreement is broken down into 10 milestones, with the completion of each milestone representing a significant step in unlocking the four primary REEs required to produce rare earth permanent magnets from a single MREO source – **including highly sought after Dy which enables REPMs to operate in a high temperature environment and is nearly exclusively processed in China.**

Ucore is working to change this narrative – the Company recently completed the second OTA milestone by successfully

separating **holmium through lutetium** from **lanthanum through dysprosium** on a scale of 1000s of liters of separated raffinate and strip liquor products above the targeted purity of 99% (see Figure 1).

Rare earth separation and refining within the CDF is achieved through a series of separations utilizing the single RapidSX™ 52-stage Demo Plant (or "**RapidSX™ Machine**") for each separation[i] to isolate and purify individual rare earth REEs in combination with each of the six 17,400-liter tanks. Each of the ten OTA milestones correlates to a Project payment and seven of these relate to completion of specific separations with the two different heavy MREOs, with the remainder relating to the sourcing of feedstocks and further reporting of results. The Company expects to complete work under the OTA in Q3-2024 to be immediately followed by a similar demonstration with light MRECs through its recently announced $4.28 million Natural Resources Canada Program.

# # #

---

[i] The full-scale deployment of the RapidSX™ technology platform in the Louisiana Strategic Metals Complex ("**SMC**") will have each RapidSX™ Machine placed in series to generate the required individual products for each light and heavy REE train.

About Ucore Rare Metals Inc.

Ucore is focused on rare- and critical-metal resources, extraction, beneficiation, and separation technologies with the potential for production, growth, and scalability. Ucore's vision and plan is to become a leading advanced technology company, providing best-in-class metal separation products and

services to the mining and mineral extraction industry.

Through strategic partnerships, this plan includes disrupting the People's Republic of China's control of the North American REE supply chain through the near-term establishment of a heavy and light rare-earth processing facility in the US State of Louisiana, subsequent Strategic Metal Complexes in Canada and Alaska and the longer-term development of Ucore's 100% controlled Bokan-Dotson Ridge Rare Heavy REE Project on Prince of Wales Island in Southeast Alaska, USA.

Ucore is listed on the TSXV under the trading symbol "UCU" and in the United States on the OTC Markets' OTCQX® Best Market under the ticker symbol "UURAF."

For further information, please visit www.ucore.com.

Forward-Looking Statements

This press release includes certain statements that may be deemed "forward-looking statements." All statements in this release (other than statements of historical facts) that address future business development, technological development and/or acquisition activities (including any related required financings), timelines, events, or developments that the Company is pursuing are forward-looking statements. Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance or results, and actual results or developments may differ materially from those in forward-looking statements.

Regarding any disclosure in the press release above about the US Department of Defense or the Government of Canada Programs and the expected successful progress and resulting milestone payments from these Programs, the Company has assumed that the

Programs (including each of their milestones) will be completed satisfactorily. For additional risks and uncertainties regarding the Company, the CDF, the Demo Plant and ongoing Programs (generally), see the risk disclosure in the Company's MD&A for Q3-2023 (filed on SEDAR on November 20, 2023) (www.SEDAR.com) as well as the risks described below.

Regarding the disclosure above in the "About Ucore Rare Metals Inc." section, the Company has assumed that it will be able to procure or retain additional partners and/or suppliers, in addition to Innovation Metals Corp. ("IMC"), as suppliers for Ucore's expected future Strategic Metals Complexes ("SMCs"). Ucore has also assumed that sufficient external funding will be found to complete the Demo Plant demonstration schedule and also later prepare a new National Instrument 43-101 ("NI 43-101") technical report that demonstrates that the Bokan Mountain Rare Earth Element project ("Bokan") is feasible and economically viable for the production of both REE and co-product metals and the then prevailing market prices based upon assumed customer offtake agreements. Ucore has also assumed that sufficient external funding will be secured to continue the development of the specific engineering plans for the SMCs and their construction. Factors that could cause actual results to differ materially from those in forward-looking statements include, without limitation: IMC failing to protect its intellectual property rights in RapidSX™; RapidSX™ failing to demonstrate commercial viability in large commercial-scale applications; Ucore not being able to procure additional key partners or suppliers for the SMCs; Ucore not being able to raise sufficient funds to fund the specific design and construction of the SMCs and/or the continued development of RapidSX™; adverse capital-market conditions; unexpected due-diligence findings; the emergence of alternative superior metallurgy and metal-separation technologies; the inability of Ucore and/or IMC to

retain its key staff members; a change in the legislation in Louisiana or Alaska and/or in the support expressed by the Alaska Industrial Development and Export Authority ("AIDEA") regarding the development of Bokan; the availability and procurement of any required interim and/or long-term financing that may be required; and general economic, market or business conditions.

Neither the TSXV nor its Regulation Services Provider (as that term is defined by the TSXV) accept responsibility for the adequacy or accuracy of this release.

CONTACTS

Mr. Michael Schrider, P.E., Ucore Vice President and Chief Operating Officer, is responsible for the content of this news release and may be contacted at 1.902.482.5214.

For additional information, please contact:

Mark MacDonald
Vice President, Investor Relations
Ucore Rare Metals Inc.
1.902.482.5214
mark@ucore.com