

# Ucore Completes RapidSX(TM) Demo Plant Commissioning – Begins US Department of Defense Demonstration Program

written by Raj Shah | December 21, 2023

December 21, 2023 ([Source](#)) – Ucore announces:

- Completion of its third and final stage of Commercial Demonstration Plant (“Demo Plant”) commissioning procedures
- Commencement of the US Department of Defense (“US-DoD”) demonstration program

[Ucore Rare Metals Inc.](#) (TSXV: UCU) (OTCQX: UURAF) (“Ucore” or the “Company”) announces the completion of its planned commissioning procedures for the Company’s RapidSX™ Commercial Demonstration Plant (“Demo Plant”) for the separation of heavy and light rare earth elements (“HREEs”, “LREEs”, or “REEs”). The Demo Plant is located within Ucore’s 5,000 square foot RapidSX™ Commercialization and Demonstration Facility (“CDF”) in Kingston, Ontario.

*“Since early this year, the Company has been testing, adjusting, and optimizing its 52-Stage Demo Plant to meet its RapidSX™ commercialization and demonstration deployment objectives in Louisiana<sup>[i]</sup>,”* stated **Mike Schrider, P.E.**, Ucore Vice President & Chief Operating Officer. *“Ucore is very pleased to announce the completion of commissioning procedures with its third and final mixed REE chemical concentrate<sup>[ii]</sup> and the commencement of its US-*

*DoD demonstration program. The objectives of this program are to establish a direct techno-economic comparison between conventional solvent extraction [CSX] and RapidSX™ for separating heavy and light rare earth elements and to establish RapidSX™ technology for commercial deployment in North America.”*

The CDF facility is operated by Ucore’s commercialization partner, [Kingston Process Metallurgy Inc.](#) (“KPM”).

*“KPM has been assisting in the development of RapidSX™ since right after Ucore acquired the technology in May of 2020,” stated **Boyd Davis, Ph.D.**, Co-Principal of KPM. “We are very pleased to see the successful transition from the final LREE commissioning feed to the HREE demonstration feed with no operational upsets. The automated front-end leach facility has been commissioned, is running on spec, and matches the RapidSX™ throughput. During the final commissioning phase, we processed over one tonne of mixed rare earth feed in less than one week of run-time while hitting our product specification targets – **it is rewarding when a technology matches and even exceeds expectations.**”*

KPM’s Project Leader, **Jonathan Leung, M.Eng.**, added, “It is an exciting time for the team in Kingston. We are running 24/7 until the holidays and back at the same pace in the first week of January. All 52 stages of the Demo Plant are operational, and the mechanical and control systems have been fully tested and enhanced during commissioning. We are now focusing on the loading/scrubbing balance of the first heavy rare earth demonstration run, just like in any solvent extraction plant.”



**Figure 1 – 52-Stage RapidSX™ Demo Plant**

To view an enhanced version of this graphic, please visit:

[https://images.newsfilecorp.com/files/1119/191969\\_8161b3fe140b2924\\_001full.jpg](https://images.newsfilecorp.com/files/1119/191969_8161b3fe140b2924_001full.jpg)



**Figure 2 – 52-Stage CSX Pilot Plant**

To view an enhanced version of this graphic, please visit:

[https://images.newsfilecorp.com/files/1119/191969\\_8161b3fe140b2924\\_003full.jpg](https://images.newsfilecorp.com/files/1119/191969_8161b3fe140b2924_003full.jpg)





**Figure 3 – RapidSX™ Automated Leaching Feeder**

To view an enhanced version of this graphic, please visit:

[https://images.newsfilecorp.com/files/1119/191969\\_8161b3fe140b2924\\_007full.jpg](https://images.newsfilecorp.com/files/1119/191969_8161b3fe140b2924_007full.jpg)



## **Figure 4 – RapidSX™ Human-Machine-Interface (“HMI”) Control Station**

To view an enhanced version of this graphic, please visit:

[https://images.newsfilecorp.com/files/1119/191969\\_8161b3fe140b2924\\_005full.jpg](https://images.newsfilecorp.com/files/1119/191969_8161b3fe140b2924_005full.jpg)

The Company expects to achieve a number of milestones in Q1-2024 and looks forward to providing updates regarding enhanced RapidSX™ results and performance metrics, its [US DoD](#) and [Government of Canada](#) demonstration programs, and to further detail the funding and technical development pathway from its Kingston, Ontario, CDF to [the LA-SMC in Alexandria, Louisiana](#).

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### **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 U.S. 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](http://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](http://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](mailto:mark@ucore.com)

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<sup>[i]</sup> The Demo Plant is the precursor commercialization, scale-up and technology transfer program for its developing 7,500 tonnes per annum (ex-cerium and ex-yttrium) REE separation plant – the Louisiana Strategic Metals Complex (“**LA-SMC**”) in Alexandria, Louisiana.

<sup>[ii]</sup> From a bastnasite source, and preceded by a synthetic monazite, and an ionic clay source.