

Ucore Verifies Louisiana RapidSX(TM) Equipment Scale-Up Configurations

written by Raj Shah | August 5, 2026

August 5, 2026 ([Source](#)) – Ucore announces:

- selection of Enhanced Machine A's specific equipment and operational configurations
- the successful completion of its RapidSX™ equipment ("RSX-1") scale-up verification program for its developing Louisiana Strategic Metals Complex in Alexandria, Louisiana

Ucore Rare Metals Inc. (TSXV: UCU) (OTCQX: UURAF) ("Ucore" or the "Company") is pleased to announce that it has successfully completed the scale-up testing and optimization program for its commercial-scale RapidSX™ computerized and motionless mixing contactor assemblies to be deployed at its Alexandria, Louisiana, Strategic Metals Complex ("SMC"). This contactor equipment scale-up program ("RSX-1") builds on the 7,400+ hours of simulated commercial runtime on the Company's Demonstration Plant ("Demo Plant") at its RapidSX™ Commercialization and Demonstration Facility ("CDF") in Kingston, Ontario.



Figure 1: 4×12" (L) & 1×24" (R) RapidSX™ Contactor Scale-Up Testing & Optimization at the Kingston, Ontario, Commercialization and Demonstration Facility

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

https://images.newsfilecorp.com/files/1119/308111_4bc761d6a423a8c1_002full.jpg

The contactor scale-up and optimization program is partially funded by Ucore's US Department of War US\$18.4 million Other Transaction Agreement ("**OTA**") Modification (US\$20.4 million total) to facilitate the technology transfer from demonstration-scale in Kingston to full commercial-scale deployment in Louisiana. The completion of this optimized RapidSX™ equipment testing marks a significant milestone in Ucore's pathway to build its first commercial RapidSX™ rare earth separation machine, 'Enhanced Machine A', capable of processing 600 tonnes per year ("**tpa**") of total rare earth oxides ("**TREO**").

The **Objectives** of the RSX-1 scale-up and optimization program

were to:

- verify the commercial scale-up of the 4" diameter Demo Plant contactors and matched phase separators, and associated piping, pumps, sensors, instruments, chemistry, and operational parameters up to the selected maximum 24" diameter contactor size design for the SMC;
- confirm that the RapidSX™ technology performs as expected and performs equal to or better than conventional solvent extraction ("CSX") in all contactor sizes expected to be deployed at the Company's Louisiana SMC, under the most conservative chemistry assumptions;

The **Results** from the RSX-1 scale-up and optimization program were:

- Ucore developed an optimized operating profile for intermediate-size contactors based on over 400 completed tests with 1-1/4", 2", 4", 12", and 24" contactor diameters and configurations of organic/aqueous ("O/A") ratios and hydraulic flux rates;
- Ucore designed, compared, optimized, and validated a 24" diameter contactor assembly against a four (4) by 12" diameter contactor assembly (i.e., the same total area, working in parallel) to take advantage of RapidSX™'s inherent equipment flexibility and modularity for varying hydraulic flux rates. This was also done for other equivalent area contactor configurations.
- Ucore selected the specific operational configurations and equipment for Enhanced Machine A and other planned SMC machines.

The **Follow-On** Enhanced Machine A activities from the RSX-1

scale-up and optimization program are:

- all testing information now exists to incorporate the results into detailed design engineering
- as part of the final Factory Acceptance Testing (“FAT”) program, Ucore will test the now optimized Enhanced Machine A individual contactor assembly configuration (i.e., a two (2) x 8” diameter RapidSX™ contactor assembly) with the specifically selected components and operational parameters as part of RSX-2 & RSX-3, planned for the remainder of August and September of 2026

The extensive 12-month RSX-1 scale-up, optimization, and verification campaign was designed to evaluate mixing, phase continuity, hydraulic stability, pressure behavior, phase disengagement, and visible entrainment over a wide range of contactor diameters and operational profiles. Mass-transfer performance was compared with the CSX baseline, which represented the equilibrium reference and target performance level for determining whether the RapidSX™ contactors achieved the required extent of mass transfer – **resulting in final contactor assembly equipment selections and optimized operating parameters for the Louisiana SMC.**

“Ucore continues to make very deliberate progress in transitioning from its Kingston, Ontario, Commercialization and Demonstration Facility [CDF] to its first commercial-scale rare earth refinery in Louisiana,” stated Mike Schrider, P.E., Ucore’s Vice President and Chief Operating Officer. “As announced in May, the Company’s first SMC RapidSX™ machine, Enhanced Machine A, will allow the processing of a variety of Western mixed rare earth carbonate and/or oxide sources into NdPr, samarium, gadolinium, and potentially yttrium, contributing to a critical Western need, as new US source

restrictions take hold on January 1, 2027.”

As [Ucore reported on May 28, 2026](#), pending construction completion, commissioning, qualification, and receipt of all required funding and permits, Ucore’s Louisiana SMC is designed to be capable of accepting mixed rare earth carbonate (“**MREC**”) and mixed rare earth oxide (“**MREO**”) from Western-friendly feedstock sources and processing up to ≈9,600 tpa of contained TREO. The SMC is designed to be constructed and rolled out in modules to take advantage of the inherent flexibility of the RapidSX™ technology platform and to produce NdPr, Pr, Nd, Sm, Gd, SmEuGd (“**SEG**”), Tb, Dy, and other rare earth oxide products and intermediates.

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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 are 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, Ucore aims to support the development of a more diversified and resilient North American REE supply chain through the near-term development of a heavy and light rare-earth processing facility in the US State of Louisiana, subsequent SMCs 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 (“**Bokan**”).

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 contains "forward-looking information" and "forward-looking statements" (collectively, "forward-looking statements") within the meaning of applicable Canadian securities laws. All statements in this release, other than statements of historical fact, that address future business development, technological development, engineering, procurement, construction, commissioning, commercial production, operating costs, capital costs, project timelines, throughput, product mix, feedstock processing, government funding, customer qualification, offtake, market prices, or other future events or developments are forward-looking statements.

Forward-looking statements in this release include, without limitation, statements regarding: the design, configuration and development of the Louisiana SMC; the expected number of RapidSX™ production lines and machines; expected throughput of 9,600 tonnes per annum of TREO; expected production of NdPr, Nd, Pr, Sm, Gd, Tb, and Dy; the expected sequencing and timing of Enhanced Machine A, Production Line 1, Production Line 2, and Production Line 3; estimated capital costs for Machine A and Production Line 1 and related infrastructure; expected operating characteristics, including potential reductions in unit operating costs and improvements in reliability; targeted milestones for engineering, construction, commissioning and commercial production; availability and sourcing of feedstock; customer engagement and potential product demand; rare earth market conditions and pricing; and the potential receipt of government funding and other financing.

Forward-looking statements are based on a number of material

assumptions, including, without limitation: the successful completion and accuracy of baseline, front-end-engineering design and detailed engineering studies; the ability to complete further engineering, procurement, and construction activities as currently contemplated; the availability, cost, and timely delivery of equipment, materials, utilities, labour and construction services; the Company's ability to secure sufficient financing on acceptable terms; the receipt and timing of all required permits and approvals; the successful scale-up and commercial deployment of RapidSX™ technology from demonstration to commercial operation; the availability of qualified feedstock from third-party suppliers; successful customer qualification and offtake discussions; continued support from governmental partners; and general economic, market, and industry conditions, including assumptions regarding rare earth oxide prices, which are subject to significant volatility.

Forward-looking information relating to capital cost estimates and project design is based on a baseline engineering report and remains subject to refinement through further engineering and project development. Such estimates may not be directly comparable to previously disclosed estimates, which were prepared at an earlier stage of project development and may have included different scope elements, assumptions, or cost categories, including feedstock, working capital, or other non-capital items.

In addition, statements regarding expected operating efficiencies, cost reductions, reliability, and commercial performance are based on current engineering assumptions and preliminary analyses and are subject to validation through commissioning and commercial operations. There can be no assurance that such expectations will be achieved in whole or in part.

Although the Company believes that the assumptions underlying the forward-looking information are reasonable, there can be no assurance that such assumptions will prove to be accurate or that the anticipated results, performance, or achievements will be realized. Actual results may differ materially from those expressed or implied by the forward-looking information.

Factors that could cause actual results to differ materially include, without limitation: risks associated with the development, scale-up, and commercialization of new or unproven technologies; the risk that RapidSX™ may not perform at commercial scale as expected; engineering design changes; inaccuracies in capital or operating cost estimates; cost escalation due to inflation, supply chain disruption, or market conditions; delays or failures in procurement, construction, or commissioning; the inability to obtain or maintain required permits, approvals, or regulatory authorizations; challenges in securing adequate financing; adverse capital market conditions; variability in feedstock supply, quality, or pricing; failure to secure or maintain commercial relationships, customer qualification, or offtake arrangements; fluctuations and uncertainty in rare earth oxide prices and demand; the risk that indicative or quoted market prices, including for ex-China markets, may not be realized; operational risks once in production, including equipment failures or lower-than-expected recoveries; geopolitical risk; changes in applicable laws or regulations; environmental or permitting challenges; loss of key personnel; and general economic, business, or competitive conditions.

Readers are cautioned not to place undue reliance on forward-looking statements. The Company undertakes no obligation to update forward-looking statements except as required by applicable securities laws.

Neither the TSX Venture Exchange nor its Regulation Services Provider accepts responsibility for the adequacy or accuracy of this release.

CONTACTS

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