Ucore Engineering Report Drives Optimized Commercial Deployment Plan for Louisiana Strategic Metals Complex

written by Raj Shah | May 28, 2026

Orbital Engineering, Inc.'s Louisiana SMC report supports:

- **a three production-line RapidSX™ configuration targeted to process up to ≈9,000 tpa of TREO contained in qualified rare earth feedstocks, eliminating the fourth production line as originally considered.**
- **the production of a full rare earth product suite, including NdPr, Pr, Nd, Sm, Gd, Tb and Dy, noted by the U.S. DoW as most crucial under their Defense Production Act and IBAS Programs.**
- **incorporating the principles of lean manufacturing with fewer parallel production lines, yielding fewer individual column stages, resulting in reduced maintenance points, less operator time, and other operating cost efficiencies, yet with similar processing throughput.**
- **the creation of an additional ≈600 tpa TREO capacity, multi-purpose RapidSX™ Machine "A" to be constructed first under the DoW Phase 2 Project, allowing for broader product flexibility, production line integration, and simplified execution.**

May 28, 2026 (Source) – **Ucore Rare Metals Inc. (TSXV: UCU) (OTCQX: UURAF)** ("**Ucore**" or the "**Company**") is pleased to announce the results of a CAPEX and Capacity Engineering Report, dated May 27, 2026, prepared by the

Company's engineering consortium and led by **Orbital Engineering, Inc.** ("**Orbital**"). This report reflects the efforts to move from the Company's Kingston, Ontario, Commercialization and Demonstration Facility ("**CDF**") to Production Line 1 at the Louisiana Strategic Metals Complex ("**SMC**"). Details include engineered capital expenditure ("CAPEX") and capacity projections for the initial standalone Machine A, and its planned integration into the first multi-machine RapidSX™ Production Line[1] ("**Production Line 1**") at the Louisiana SMC.

Optimized Louisiana SMC Configuration

As a result of efficiencies identified through engineering, demonstration, and scale-up work testing, Ucore is designing the Louisiana SMC to consist of the initial ≈600 tonnes per annum ("tpa") total rare earth oxide ("TREO") Machine A plus **three RapidSX™ Production Lines** (or "Trains"), each capable of processing up to ≈**3,000 tpa of TREO**. This optimized configuration reduces the planned number of production lines from four to three, while targeting an overall Louisiana SMC throughput capacity of ≈**9,600 tpa of TREO**. This configuration better balances capital intensity, reliability, maintainability, commercial flexibility, and operating cost per unit of production.

Each machine will use optimized RapidSX™ columns and supporting equipment throughout, increasing upfront capital costs but improving long-term operating economics by reducing the number of parallel processing lines, individual columns, pumps, valves, instruments, and maintenance points, and lowering operator time per unit of production.

*"After approximately **6,500+ run-time hours** in Ucore's RapidSX™ Commercialization and Demonstration Facility, our engineering team has developed a commercial configuration that is expected*

to lower unit operating costs and improve reliability over the life of the plant with expanded initial investment," stated **Pat Ryan, P.Eng., Chairman and CEO of Ucore**. *"This is an important evolution in the Louisiana SMC plan. We are moving from a lowest initial build-cost concept toward a more robust commercial operating configuration designed for higher throughput per production line, fewer production lines, fewer maintenance points, and better long-term operating performance."*

Mike Schrider, P.E., Vice President and Chief Operating Officer of Ucore, commented: *"The engineering objective has been to translate RapidSX™ demonstration work into a commercial configuration that is practical to build, practical to operate, and scalable for North American rare earth supply chain requirements. The optimized design is intended to reduce process complexity while retaining Ucore's ability to process qualified feedstocks from multiple independent rare earth sources."*

Pending construction completion, commissioning, qualification, and receipt of all required funding and permits, Ucore's Louisiana SMC shall 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 TREOs**. The SMC is designed to take advantage of the inherent flexibility and modularity of the RapidSX™ technical platform and capable of producing **NdPr**, **Pr**, **Nd**, **Sm**, **Gd**, SmEuGd ("**SEG**"), **Tb**, **Dy**, rare earth oxide products, and intermediates.

Enhancements to Standalone Machine A

The first RapidSX™ machine to be deployed in Louisiana, Machine A, is to be partially funded through the Company's previously announced US$18.4 million funding agreement with the US Department of War (see Ucore Press Release dated July 14, 2025).

Originally contemplated as a single machine with 64 RapidSX™ stages and designed to replicate the 'any split' methodology demonstrated at the CDF through intermediate product storage and machine reuse, the now enhanced Machine A will consist of ≈118 RapidSX™ stages. This will allow for the direct production of neodymium-praseodymium (**"NdPr")** from conventional **MREC** or **MREO** feedstocks, as well as praseodymium (**"Pr"**), neodymium (**"Nd"**), samarium (**"Sm"**), gadolinium (**"Gd"**), terbium (**"Tb"**), **and/or** dysprosium (**"Dy"**) from select partial MREC product groups without the use of interim product holding tanks for successive separations. **This important strategic adjustment was in direct response to feedback from North American defense contractors regarding their urgent need to secure Western sources of these critical oxides.**

Combining Machine A with Production Line #1

Upon successful operation and completion of gating items associated with Machine A, the Company intends to construct RapidSX™ Machines #1 and #2 of Production Line 1, dedicated to processing up to 3,000 tpa of TREO to produce an NdPr product. At the same time, Machine A will have the ability to work independently or attach to the back end of Production Line 1 to produce a SEG[2] product, while subsequent Production Lines 2 and 3 will be installed to eventually broaden the SMC's multi-product suite of offerings.

Planned Production Scale-Up

Ucore's Louisiana SMC facility scale-up is proceeding under a defined execution plan:

Deployment step	Scope	Products
Enhanced Machine A	The first RapidSX™ commercial machine capable of up to **≈600 tpa TREO** of bespoke processing	NdPr at an estimated throughput of **≈600 tpa TREO**, with the ability to also produce Pr, Nd, Sm, Gd, Tb, and/or Dy, depending on feedstock and sub-products availability
Production Line 1	Two RapidSX™ machines of **≈3,000 tpa TREO** throughput	NdPr production with the remaining products feeding Production Line 2
Enhanced Machine A – Integration	Machine A can be integrated into Production Line 1	Capable of producing a SEG product sub-group
Production Line 2	Five RapidSX™ machines **≈3,000 tpa TREO** throughput	NdPr, Tb, Dy, and SEG. Machines #3, #4 and #5 will be sized to accept intermediate streams from Production Lines 1 and 3
Production Line 3	Two RapidSX™ machines **≈3,000 tpa TREO** throughput	NdPr production with the remaining products feeding Production Line 2

Engineered Capital Cost Estimates

Orbital's engineered capital cost estimate for the Enhanced Machine A and Production Line 1 is as follows:

Item	Engineered Capital Cost Estimate
Enhanced Machine A	US$60M
Production Line 1	US$44M
Oxide Production and Packaging	US$31M
Machine A and Production Line 1 – Cumulative Cost	**US$135M**

The updated capital plan reflects the Company's move from a lower initial build-cost configuration to a more robust configuration designed to lower long-term unit operating costs, improve process reliability, and increase maintainability as the Louisiana SMC scales toward commercial operations. The updated estimates also reflect inflation and market-cost escalation since the prior pre-engineering estimates, as well as the expansion of commercial-scale oxide production and packaging equipment with more substantive supporting infrastructure and higher-capacity systems.

As mentioned above, the US$60 million estimated capital cost of Enhanced Machine A will be partially funded by the previously announced US$18.4 million funding agreement with the US Department of War. The amounts in the table above do not include the cost of the first-fill of prospective feedstocks. The estimated timeline for completing the installation, testing, and commissioning of Machine A remains H1-2027.

Rare Earth Market Conditions

Market prices for rare earth oxides sold outside of China continue to reflect constrained Western supply chains and strong demand for critical magnet materials. According to Benchmark Mineral Intelligence's Rare Earths Price Assessment (30th April 2026), selected rare earth oxide prices were as follows:

Product	China price	Indicative ex-China price
NdPr oxide	US$116 / kg	US$119 / kg
Tb oxide	US$890 / kg	Upwards of 5x DDP China
Dy oxide	US$200 / kg	Upwards of 7x DDP China

The markets for samarium and gadolinium remain more opaque, with fewer published data points available. However, the Company's trading partners have anecdotally observed samarium and gadolinium each trading outside of China at more than US$300 per kg. The Company cautions that these indicative and anecdotal pricing observations may not be representative of realized sales prices, which will depend on product specification, jurisdiction, customer qualification, contract terms, volume, delivery timing, and other commercial factors.

Canadian SMC Update

The Company remains engaged with Canadian federal government officials regarding the Company's proposed Canadian rare earth processing facility and the conditional funding package of up to **C$36.3 million** announced by Ucore on October 31, 2025. Ucore looks forward to providing further details to stakeholders as they become available in the coming months.

About Ucore Rare Metals Inc.

Ucore is advancing North American rare earth separation and refining through its Louisiana Strategic Metals Complex and the commercialization of its RapidSX™ separation technology. Ucore's vision is to become a leading advanced technology company providing metal separation products and services to the mining and mineral extraction industry.

Through strategic partnerships, Ucore's plan includes the development of a heavy and light rare earth processing facility in the United States, subsequent Strategic Metals 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 TSX Venture Exchange under the trading symbol "UCU" and in the United States on the OTC Markets' OTCQX® Best Market under the ticker symbol "UURAF."

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 includes, 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 t 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

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

---

[1] A RapidSX™ Production line is a series of RapidSX™ Machines (each machine conducts a specific solvent extraction chemistry split) working together to produce multiple separated products.

[2] Samarium, Europium and Gadolinium.