Ucore Announces RapidSX Commercialization and Development Facility; Kingston Process Metallurgy Awarded Contract as RapidSX Laboratory Partner

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American Critical-Materials Independence Starts Here.(TM)

Halifax, June 23, 2020 - Ucore Rare Metals Inc. (TSXV:UCU) (OTCQX:UURAF) ("Ucore" or the "Company") is pleased to announce that further to the Company's June 18, 2020 announcement titled 'Strategic Update About Ucore, Innovation Metals and the RapidSX™ Technology', Ucore's wholly owned subsidiary, Innovation Metals Corp. ("IMC"), has executed a binding agreement with Kingston Process Metallurgy Inc. ("KPM") to serve as IMC's long-term laboratory partner for the commercialization of the RapidSX™ technology. IMC's proprietary RapidSX™ technology is being developed for the cost-effective, bulk/commercial separation and purification of rare-earth elements ("REEs") - including both heavy REE ("HREEs") and light REEs ("LREEs") - for the production of REE oxides ("REOs"), in addition to other critical metals, such as lithium ("Li"), nickel ("Ni"), and cobalt ("Co") for lithium-ion ("Li-ion") battery materials. Ucore is also pleased to announce that IMC has secured the premises for the RapidSX™ Commercialization and Development Facility ("CDF") in Kingston, Ontario, Canada.

IMC developed the RapidSX™ separation technology with the assistance of US$1.8 million in funding from the United States Department of Defense ("US DoD"), resulting in the production of commercial-grade, separated REOs at the pilot scale. The technology combines the time-proven chemistry of conventional solvent extraction ("SX") with a new column-based platform, which significantly reduces time to completion and plant footprint, as well as potentially lowering capital and operating costs. SX is the international REE industry's standard commercial separation technology and is currently used by 100% of all REE producers worldwide for bulk commercial separation of both HREEs and LREEs.

Kingston Process Metallurgy - RapidSX™ Commercialization Laboratory Partner

KPM is IMC's laboratory partner and will be supporting all aspects of IMC's technical work to commence the RapidSX™ optimization and commercialization program to scale up the RapidSX™ technology. Established in 2002, KPM is a highly respected, industry-leading contract chemical-process development company based in Kingston, Ontario. With more than 40 employees, KPM specializes in commercial process development and optimization, with techno-economic and process modeling in parallel. KPM has the demonstrated expertise, multidisciplinary skills, and fundamental knowledge to develop concepts and solve unique challenges for its clients.

IMC's technical work will be led by IMC CEO and Ucore CTO and Director, Dr. Gareth Hatch, CEng, FRSA, FIMMM, FIET and IMC COO and Ucore VP of Metallurgy, Dr. Kurt Forrester, CEng, MIChemE, MAusIMM(CP). KPM principals Dr. Boyd Davis and Mr. Alain Roy will oversee the program of work at KPM and will directly manage the RapidSX™ CDF.

With an accomplished career in chemical metallurgy with a focus on applied thermodynamics, Dr. Davis is a co-founder of KPM, is a former President of the Metallurgy and Materials Society ("MetSoc") of the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") and is an adjunct professor at Queen's University in Kingston where he volunteers to supervise graduate students. He was also the originator and conference Co-Chair of the MetSoc, Society for Mining Metallurgy & Exploration Inc. ("SME"), and the Minerals, Metals & Materials Society ("TMS") 'Extraction 2018', the first global conference on extractive metallurgy.

Mr. Roy began his career at Hydro-Quebec's Energy Technology Laboratory (laboratoire des technologies de l'énergie or "LTE") working on thermal plasma for metallurgical applications, prior to joining Noranda Inc. (now Glencore International) at their Canadian Copper Refinery ("CCR") for five years, followed by three

years at the company's advanced material facility (NORAM Engineering and Constructors, Ltd., now 5N Plus Inc.), and two years at the Brunswick Lead Smelter. Mr. Roy then co-founded KPM where he serves as Vice President, Operations.

Dr. Hatch and Dr. Davis have previously worked together in a number of aspects of the REE sector, including the Critical Rare Earth Elements Network. "IMC is thrilled to partner with KPM in the commercialization of RapidSX™," said Dr. Hatch. "KPM has an accomplished track record of metallurgical process development and commercialization, with a particular emphasis on clearly establishing the techno-economic feasibility of processes and appropriate unit-operation selection early on in the commercialization process."

"KPM is excited to work alongside IMC on this new venture," said Dr. Davis. "We believe that this partnership is a significant step forward for U.S. and Canadian REE initiatives. KPM is happy to support the development of the innovative RapidSX™ technology and the business strategy of Ucore and IMC, for the securing of installed REO manufacturing capacity in North America."

RapidSX™ Commercialization and Development Facility in Kingston, Ontario

Photo credit: Ucore Rare Metals Inc. (2020)

Figure 1: Kingston Process Metallurgy's 10,000 square-foot Pilot Facility in Kingston, Ontario, Canada.
To view an enhanced version of this graphic, please visit:
https://orders.newsfilecorp.com/files/1119/58406_2edce45ae477cbcc_002full.jpg

IMC's RapidSX™ CDF will occupy half (5,000 ft^2) of the KPM Pilot Facility in Kingston. Long-term KPM client and industry-leading lithium-ion battery recycling company, Li-Cycle Corp. ("Li-Cycle") currently occupies the other half of the facility (5,000 ft^2). Through its work with KPM over the past three years, Li-Cycle's Pilot Facility (pictured in Figure 1 above) is now the most advanced Li-ion-battery-recycling project in North America, with full-scale commercial operation achieved in Spring 2020. The CDF at the KPM Pilot Facility is in close proximity to KPM's main laboratory facility.

"The development of an individual REE separation and purification plant is Ucore's targeted first commercial development component of our strategy," said Pat Ryan, P.Eng., Chairman and Interim CEO. "In order to meet this critical objective and in the shortest timeframe possible, our planned Alaska Strategic Metals Complex ("SMC") will be designed to have the ability to produce REOs from commercially available, U.S. allied-sourced REE feedstocks, addressing US security of supply for the most critical and highest-value REEs, specifically, praseodymium ("Pr"), neodymium ("Nd"), terbium ("Tb"), and dysprosium ("Dy"). We expect the Alaska SMC to operate at a commercial scale utilizing pre-Bokan mixed REE concentrate ("MREC") feedstocks while the Bokan HREE project continues to be developed."

Effectively Addressing End-User Concerns

The purpose of the RapidSX™ CDF is to develop bulk/commercial capabilities for the separation and purification of HREEs and LREEs, in addition to other technology/critical metals, from commercially available feedstocks. The RapidSX™ technology is feedstock agnostic, having demonstrated the capability of separating and purifying materials from a variety of sources, in contrast to being tied to any one particular source.

Due to its modular configuration and reduced number of stages, RapidSX™ is capable of readily reconfiguring for separating LREE-rich, HREE-rich and/or even blends of mixed REE feedstocks. This presents significant competitive advantages to both Ucore and IMC, as the companies' path to revenues are expected to be accelerated by utilizing existing, commercially available MRECs, not originating from China. Source optionality addresses consistently expressed end-user concerns regarding the risks of 'sole sourcing' materials. Considerable concerns regarding sole sourcing have been repeatedly communicated by end

users, long before the global COVID-19 pandemic and its impact on critical-materials supply chains.

American Critical-Materials Independence Starts Here

"Achieving Ucore's goal of American critical-materials independence is contingent on scaling new, transformative technologies, like RapidSX™ - rapidly," said Ucore President, Ty Dinwoodie. "The advantage of RapidSX™ is that it is not necessarily a 'new' technology, but rather a substantial improvement on the decades-old REE industry-standard SX separation technology. This speaks to the near-term and the important objective is to demonstrate independently the techno-economic merits of the technology in terms of commercial viability. This requires scaling RapidSX™ from lab-scale and demonstration-scale pilots to commercial scale as quickly as possible, while adhering to highest scientific and engineering standards. With KPM and our RapidSX™ Commercialization and Development Facility, we intend to do just that."

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About Ucore Rare Metals Inc.

Ucore is focused on rare and critical metals resources, extraction and beneficiation technologies with potential for production, growth, and scalability. The Company has a 100% ownership stake in the Bokan-Dotson Ridge Rare Earth Project. Ucore's vision and plan is to transition to become a leading advanced technology company that provides mineral separation products and services to the mining and mineral extraction industry. This vision includes the development of the Alaska SMC in Southeast Alaska and the development of the Company's rare earth minerals property located at Bokan Mountain in Alaska.

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

About Innovation Metals Corp.

IMC has developed the proprietary RapidSX™ process, for the low-cost separation and purification of REEs, Ni, Co, Li and other technology metals, via an accelerated form of solvent extraction. IMC is commercializing this approach for a number of metals, to help enable mining and metal-recycling companies to compete in today's global marketplace. IMC is a wholly owned subsidiary of Ucore Rare Metals Inc.

For more information, please www.innovationmetals.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 and/or acquisition activities (including any related required financings), timelines, litigation outcomes, events, or developments that the Company expects, 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. In regard to the disclosure in the "About Ucore Rare Metals Inc." section above, 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 Alaska Strategic Metals Complex ("Alaska SMC"). Ucore has also assumed that sufficient external funding will be found to prepare a new National Instrument 43-101 ("NI 43-101") technical report that demonstrates that the Bokan Mountain Rare Earth Elements project ("Bokan") is feasible and economically viable for the production of both REE and co-product mineral materials and metals and the then prevailing market prices based upon assumed customer off-take agreements. Ucore has also assumed that sufficient external funding will be secured to develop the specific engineering plans for the Alaska SMC and its 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 Alaska SMC; Ucore not being able to raise sufficient funds to fund the specific design and construction of the Alaska SMC; adverse capital-market conditions; unexpected due-diligence findings; unexpected or adverse outcomes in the currently outstanding litigation matters between Ucore and IBC Advanced Technologies, Inc.; 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 Alaska and/or in the support expressed by the Alaska Industrial Development and Export Authority ("AIDEA") regarding the development of Bokan and/or the Alaska SMC; 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 TSX Venture Exchange ("TSXV") nor its Regulation Services Provider (as that term is defined by the TSXV) accepts responsibility for the adequacy or accuracy of this release.

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