

May 24th, 2023

C2M2A — A Year in Review 2022

(Progress Report No. 6)

Thank you to all for your continued and enthusiastic interest in the Canadian Critical Minerals & Materials Alliance. I am pleased to report on the significant initiatives undertaken during the first half or 2023.

Strategic Review

Coming off a very busy 2022 (Progress Report #5 dated January 23rd, 2023), the question key for C2M2A is 'where and how-to' build upon C2M2A achievements in 2023 to maximize the value for its member firms.

Marilyn Spink, P.Eng., a seasoned mining industry leader and metallurgical engineer (and a Director on C2M2A member Avalon Advanced Materials), was retained to conduct confidential one-on-one virtual interviews with C2MA's members and several organizations who expressed interest but had not yet joined. An overview of the feed back received, which essentially addressed advocacy vs promotion, scope of materials (broader critical materials vs REE-focused) and governance, is being shared with current members.

Federal Policy - Budget, Parliamentary Appearances

C2M2A continues to work with representatives with Natural Resources Canada (Critical Minerals Office, CanmetMATERIALS & CanmetMINING), Innovation, Science & Economic Development (ISED) and Global Affairs advocating for clearer priorities and policy initiatives. This work is now focused on program and specific policy design framed by the release of the <u>Canadian Critical Minerals Strategy</u> (December 2022) to which C2M2A provided written briefs.

News Media

C2M2A continues to be approached by news media for comments, including The Financial Post, <u>CBC News Network</u>, Global News, <u>CBC Radio 'The House'</u>, the Wall Street Journal, Investorintel, CIM Magazine, Newsweek, and others. The more recent perspectives of media interest – the reality of Canada's natural resource potential and material processing capacity, how can the mining (generally mis-perceived as environmentally negative) actually contribute to the greening of the economy, and reactions to and implications of Canada's major downstream investments into gigabattery plants.

Articles & Presentations

C2M2A, both in response to invitations and proactive pursuit, continues to moderate panels and deliver keynote addresses at conferences & workshops, deliver lectures and publish articles during the first half of the year. The primary themes have been around the importance of distinct critical material supply chains (not all materials are battery



materials – as REE are integral to permanent magnets and ultimately traction and smaller motors, scandium for light weight structural components, and others for application in semiconductors and medical devices. The recognition that economies are driven by 'demand pull' and not build upon 'supply push' imperatives reinforced by the growing demand around ESG reporting and circular economy, and the need for educated & trained engineers, technicians, trades and financiers build and operate these new critical material supply chains also highlighted. These initiatives have been hosted by EUCCAN (April 27th) NRCan's Mineral Outlook Dialogue, Rare Earth International Association (REIA), Canadian US Embassy & UK High Commission, International Standards Organization (ISO) -- Strategic Advisory Group on Critical Materials & independent AFNOR and DIN proposals, Australian Critical Minerals Office, CanmetMATERIALS (distinct from CanmetMINING) and Next Generation Manufacturing Canada (NGen).

Early this year, C2M2A member Boyd Davis (<u>Kingston Process Metallurgy</u>) joined a virtually delivered lecture & panel discussion on Critical Minerals & Materials Supply Chains Opportunities for Canada, with a particular focus on the challenges related to scaling-up technologies & projects from the lab to production at University of Saskatchewan.

Collaborating with other Canadians

ACCELERATE ZEV Supply Chain Alliance

C2M2A participated in two industry workshops focused on fleshing out ZEV material supply chains. Among the 40 or so participants were the Canadian Chamber of Commerce, Global Automakers Association and Honda, VW and several recyclers, all with an eye on articulating and aligning targets, priorities and policy recommendations. Three workshops were facilitated at MaRS

Battery Metals Association of Canada (BMAC)

Participated in a one-day virtual workshop hosted by BMAC in March in support of bringing together industry, academia and government in building a collaborative approach. These discussions were focused primarily on needed tax incentives, exports and regulations to support Canadian market development and R&D .

Next Generation Manufacturing Canada (NGen) Critical Materials

NGen is the industry-led, non-profit organization leading Canada's Global Innovation Cluster for Advanced Manufacturing. NGen recently launched a new call for project proposals targeting the entire value chain of road-based battery and fuel-cell electric vehicles and their respective systems and components (applications closed mid-May). In 2021, NGen funded over \$76M worth of business-led collaborative projects in support of building capabilities in Canada's EV value chain. NGen, in collaboration with Global Affairs Canada, through the High Commission of Canada in London, and the National Research Council Industrial Research Assistance Program (NRC IRAP), is also facilitating a Canadian Technology Partnering Delegation to the UK focused on Critical Minerals at the end of June. It will focus on introducing Canadian SMEs with innovative



technologies and solutions for the Critical Minerals supply chain to potential British partners.

ISO Standards - Critical Minerals & Materials, REEs and Lithium

TC298 REEs: With an increase in the number of Participating Member countries to 14, significant progress continues to be made with seven standards published and 9 under development. Recently, C2M2A member Lucinda Wood (Saskatchewan Research Council) assumed the chair of Canada's Mirror Committee. TC333 Lithium: Canada is one of 20 Participating Member countries. They have yet to publish any standards but have 14 under development. Lithium battery standards are not covered under TC333. Strategic Advisory Group (SAG): Canada, who has been directly engaged at the main table is about to issue its final report by mid year, with significant recommendations around consolidating the issue its final report which addresses the need for standards works common to all critical materials (e.g., some testing & analysis techniques and dimensions around sustainability, etc.). This work has led to AFNOR (France) and DIN (Germany) proposing two new Technical Committees, one related to critical materials other than REEs and Lithium) and Sustainability/ESG respectively.

Rare Earth International Association (REIA)

C2M2A members* and C2M2A and continues to serve on REIA's Board and Advisory group, actively participating in its regular events. REIA's will be hosting its AGM and day-and-a-half conference in mid-June. C2M2A members Neo Performance Materials*, Saskatchewan Research Council*. Appia Rare Earths & Cyclic Materials (recently pledged C2M2A member) will be serving on several panels one of which being 'Canada's valued contribution to Global REE supply chains'

In closing, our efforts in advocation and championing Canada's interest in critical mineral & material supply chains could not have been achieved without the commitment and active engagement of its members and partners. For that... I thank you.

Until soon - Be well, Be safe and Be kind.

Ian M. London, P.Eng., MBA **Executive Director**

Executive.director@c2m2a.org ianlondon@rogers.com www.c2m2a.org