

VITAL'S SASKATOON RARE EARTH EXTRACTION PLANT ON TRACK FOR FIRST FEED END 2021

HIGHLIGHTS

- Construction is underway on Vital Metals' rare earth extraction plant in Saskatoon, Saskatchewan, Canada which will process ore from Vital's Nechalacho mine
- All major processing equipment items procured within budget with some items oversized to provide additional production capacity
- Plant will have start up throughput capacity of 1,000t/yr excluding cerium (equivalent to 470t/yr of NdPr)
- Vital has expanded Stage 2 capacity to 2,000t/yr ex. cerium (940t/yr NdPr) – representing 50% larger plant throughput capacity than initially planned
- Vital has engaged Halyard Incorporated to oversee project management and general engineering of the facility and a Principal's Representative to manage delivery of the project
- Saskatchewan Research Council (SRC) will provide technical support during plant construction and operation and ensure ongoing collaboration between Vital and the Rare Earth Processing Facility
- Vital expects first feed into the plant in December 2021; first product by June 2022.

Vital Metals Limited (ASX: VML) ("Vital Metals" or "the Company") is pleased to provide an update on development of its rare earth extraction facility in Saskatoon, Saskatchewan, Canada, where it expects first feed into the plant by the end of CY2021.



Figure 1 -
A Dense
Media
Separator to
be used in
Vital's rare
earth
extraction
process

Vital Metals' Managing Director Geoff Atkins said commissioning of the plant would occur incrementally over the first half of CY2022 and first product out is scheduled to occur end of H1 CY22.

"Vital has procured all key equipment required to process REE ore from our Nechalacho operation in the Northwest Territories into rare earth carbonate at the Saskatoon plant, including oversizing of some items to enable us to increase production in our second stage of operations," Mr Atkins said. "This will provide our plant with the capability upon start-up to produce 1,000t REO (excluding Cerium), or approximately 470t NdPr per annum, with initial expansion capability to ramp up to a capacity of 2,000t REO (excluding Cerium), or 940t NdPr, per annum."

"This procurement represents all major plant, equipment and engineering for the project, at a cost of approximately \$6m, despite the majority of equipment being oversized."

"Our decision to oversize some items is based on the experience of our management team at other rare earth projects and will allow us to expand our production facility in the future with only minimal additional capital expenditure."

"Construction of our custom-built facility is underway at the same time as the SRC Rare Earth Processing Facility being built by Saskatchewan Research Council, and it's exciting to see this rare earths hub start to take shape in Saskatoon."

"Our first shipment of ore is due to leave Nechalacho this month and we expect to start feeding in to the plant before the end of CY2021, with commissioning to follow."



Figure 2 - Construction underway on Vital's custom-built facility for its rare earth extraction plant in Saskatoon, Canada

As detailed in the flowsheet (see Figure 3), Vital has procured equipment based on a start up production capacity of 1,000t/yr excluding cerium (equivalent to 470t/yr of NdPr) with Stage 2 expansion capacity of 2,000t/yr excluding cerium (940t/yr NdPr). This represents a plant throughput 50% larger than initially planned, with the expanded capacity providing Vital with the opportunity to further double its production capacity

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- Nechalacho Site**
- Primary Crusher → Screening → Ore Sorter → Barge & Truck Transfer & Rail
- Plant Site Secondary & Tertiary Crusher**
- Crusher Capacity: 5,000 tpa, 5,200 tpa/year
10,000 tpa of ore at 65-75% TREO, 6,000 tpa of combined TREO
- Saskatoon Hydromet Plant**
- DMS Plant → Gas Scrubbing → Gas → Kiln → Cooler
- Kiln Capacity: 5,000 tpa, 5,000 tpa/year
10,000 tpa of ore at 65-75% TREO, 6,000 tpa of combined TREO
- Leaching and Precipitation**
- HCl Leach → Centrifuge → Impurity Precipitation → Centrifuge → RE Carbonate Precipitation → Thickener → Pressure Filter
- RE Product**
- 1,000 tpa REO ex Ce (1,354 tpa TREO inc 470 tpa NdPr) start up design capacity
 - 2,000 tpa REO ex Ce (2,708 tpa TREO inc 940 tpa NdPr) following duplication of leaching circuit
- Waste Water Treatment**
- Waste Water → Recycle Water → NaCl Salts
- Solid Waste Disposal**
- Solid residues & NaCl salt crystals will be disposed in licensed facilities
- Zero Liquid Discharge Site**
- All waste water gets treated via a crystallizer. The crystals get disposed offsite and water gets recycled back as process water.

Figure 3 - Flowsheet for operations at Vital's rare earth extraction facility in Saskatoon.

- Dense Media Separation
- Rotary Calciner
- Cooler
- Waste Gas Scrubber
- Purification and Precipitation tanks
- Centrifuges
- Candle Filters.

Vital sized leaching tanks for initial throughput requirements only and therefore these will be the only plant equipment which will require duplication to achieve expanded operations. This selectivity in oversizing equipment is based on Vital's team's experience in previously commissioning similar plants and will help ensure commissioning and ramp up occurs as smoothly as possible.

In addition to the processing equipment, construction works within the strategically located site in Saskatoon have commenced with piling and foundation works completed and electrical services installed. Fabrication of the building well advanced with its delivery to site scheduled to occur in October for erection. As detailed in its ASX announcement on 21 May 2021, Vital's 10-year lease includes the provision of a new custom-built facility including services.

To support project management and general engineering of the processing facility construction, Vital has executed a consultancy services agreement with the Toronto-based Halyard Incorporated. Halyard previously successfully completed the engineering, fabrication and installation of Vital's ore sorter at Nechalcaho. They will complete the design and procurement of the civil, mechanical, electrical and control elements of the Project, effectively connecting the key equipment together to support an efficient overall operation.

Vital has further engaged an experienced "Principal's Representative" to oversee the Project's delivery and work with Halyard in project managing the delivery of the works.

In addition, Vital has signed an agreement with the Saskatchewan Research Council (SRC) to provide technical support with the construction and operation of the plant and ensure ongoing collaboration between Vital and SRC as it develops the SRC Rare Earth Processing Facility nearby. This agreement will help SRC and Vital to maximise potential synergies between the two operations.

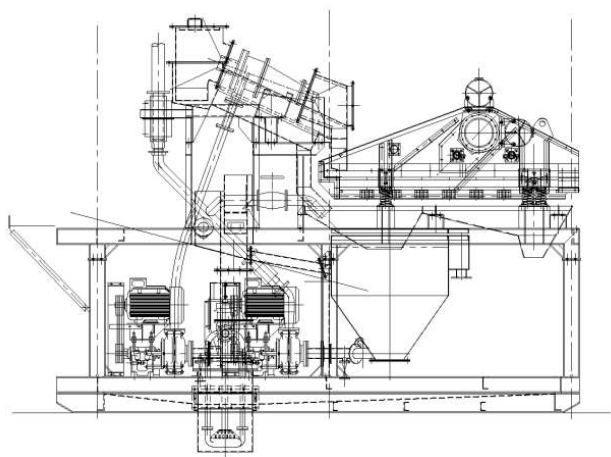


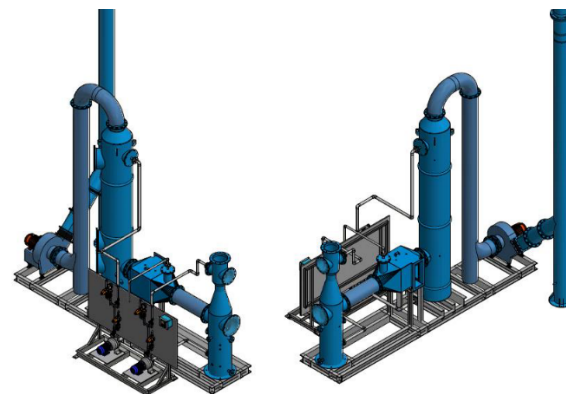
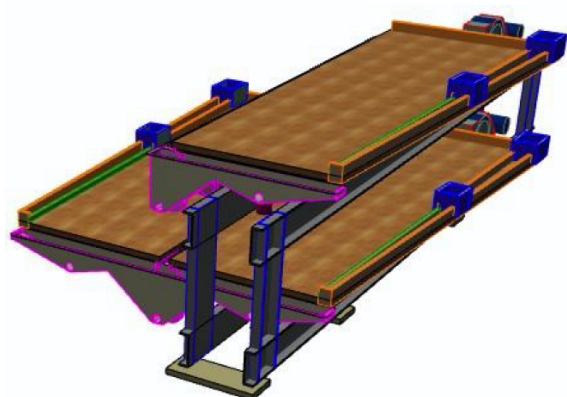
Figure 4 – Schematic drawing of the rare earth extraction plant



Figure 5 – Example of the the dense media separation unit to form part of the extraction plant



Figures 6 & 7 – Examples of centrifuges and kiln components of the rare earth extraction plant



Figures 8 & 9 – Tables and waste gas components

- ENDS-

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This announcement has been authorised for release by the Board of Vital Metals.



ABOUT VITAL

Vital Metals Limited (ASX:VML) is an explorer and developer focussing on rare earths, technology metals and gold projects. Our projects are located across a range of jurisdictions in Canada, Africa and Germany.

Nechalacho Rare Earth Project - Canada

The Nechalacho project is a high grade, light rare earth (bastnaesite) project located at Nechalacho in the Northwest Territories of Canada and has potential for a start-up operation exploiting high-grade, easily accessible near surface mineralisation. The Nechalacho Rare Earth Project hosts within the Upper Zone, a JORC Resource of **94.7MT at 1.46% TREO** comprised of a Measured Resource of 2.9MT at 1.47% TREO, an Indicated Resource of 14.7MT at 1.5% TREO, and an Inferred Resource of 77.1MT at 1.46% TREO.¹

Forward Looking Statements

This release includes forward looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward-looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, and “guidance”, or other similar words and may include, without limitation statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production output.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the company’s actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of resources or reserves, political and social risks, changes to the regulatory framework within which the company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the company and its management’s good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the company’s business and operations in the future. The company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the company’s business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the company or management or beyond the company’s control.

Although the company attempts to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be anticipated, estimated or intended, and many events are beyond the reasonable control of the company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements.

Forward looking statements in this release are given as at the date of issue only. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the company does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.

¹ Refer ASX Announcements dated 13 December 2019, 19 February 2020 and 15 April 2020. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in that market announcement continue to apply and have not materially changed.