VANADIUM RECOVERY STUDY CONFIRMS LOWEST QUARTILE COST POTENTIAL

HIGHLIGHTS

- **Class 3 Engineering Cost Study component of Feasibility Study completed with assistance from leading Nordic engineering group Sweco Industry Oy;**
- **Operating cost estimate of US$ 4.38/lb V_2O_5 places VRP1 project in lowest quartile of the industry cost curve;**
- **Capital cost estimate of US$ 341 M for upsized 300ktpa plant (including 15% contingency); and**
- **Permitting activities well advanced with Environmental Permit submitted to Finnish regulators and a decision expected in September 2022.**

Emerging battery materials producer, Neometals Ltd (ASX: NMT) ("**Neometals**" or "**the Company**"), is pleased to announce the completion of an Association for the Advancement of Cost Engineering ("**AACE**") Class 3 Engineering Cost Study ("**ECS**") on the recovery of high-purity vanadium pentoxide ("**V_2O_5**") from high-grade vanadium-bearing steel by-product. The ECS was completed with assistance from leading Nordic engineering group Sweco Industry Oy ("**Sweco**").

As previously announced (*see Neometals announcement titled "High-Grade Vanadium Recycling Agreement" dated 6th April 2020*), Neometals has the option to enter into a 50:50 incorporated joint venture ("**JV**") to develop a vanadium recovery project ("**Vanadium Recovery Project**" or "**VRP1**") with unlisted Australian mineral development company, Critical Metals Ltd ("**Critical**"). The parties are jointly evaluating the feasibility of constructing a facility in Pori, Finland to process and recover high-purity V_2O_5 from vanadium-bearing steel making by-product ("**Slag**") generated by SSAB EMEA AB and SSAB Europe Oy (collectively "**SSAB**") in Scandinavia.

The VRP1 offers a compelling business case which is underpinned by:

- access to very high-grade vanadium feedstocks without upstream mining costs and associated operating risks;
- potentially robust economics;
- processing flowsheet utilising conventional equipment at atmospheric pressure and mild temperatures with non-exotic materials of construction; and
- a very low or net zero greenhouse gas footprint given the absence of mining and a processing route sequestering CO_2 into potentially saleable carbonate by-product.

Neometals is encouraged by the outcomes of the ECS which confirms the potential for lowest quartile operating costs. This aligns with prior outcomes from the historical Neometals pre-feasibility study ("**PFS**"), however the ECS has been completed to a ±15% level of accuracy compared to the previous -20% +25%. Capital and Operating cost estimates are denominated in US$ dollars using an exchange rate of 1 Euro: 1.123 US$.

Table 1 – *Key Metrics*

	ECS Metrics (100% ownership basis)	PFS Metrics (100% ownership basis)***
Annual Production	19.01 million lbs (8,642 t) V_2O_5	13.43 million lbs (6,091 t) V_2O_5
Annual Throughput*	300,000 tpa	200,000 tpa
Average Net Operating Cost of recovered V_2O_5	US $4.38/lb	US $4.25/lb
Total initial capital costs**	US $341 M	US $183.4 M

*Based on potential additional Slag volumes
**See Table 2 for further information on ECS initial capital costs
***Refer ASX Announcement "*Vanadium Recovery Project – PFS Indicates Robust Potential Economics*" dated 4 May 2021

ACN 099 116 631
Level 1, 1292 Hay Street
West Perth WA 6005

Locked Bag 8
West Perth WA 6872

T: +61 8 9322 1182
F: +61 8 9321 0556

info@neometals.com.au
neometals.com.au

Independent expert, Behre Dolbear Australia Pty Limited ("**BDA**"), completed a review of the ECS and confirmed that, in BDA's opinion, it qualifies as an AACE Class 3 study.

As part of the VRP1 evaluation activities, Neometals is in the process of finalising a feasibility study ("**FS**") which will include the findings from the ECS. The FS will be finalised upon execution of a binding agreement with SSAB which will include potential additional Slag volumes (up to approximately 300ktpa from what was previously 200ktpa in the PFS) as contemplated under a non-binding letter of intent ("**NBLI**") executed between Critical and SSAB on the 5th July 2022.

Neometals Managing Director Chris Reed said:

"Completion of the ECS has provided additional confidence in the operating and capital costs of VRP1, the teams have significantly reduced the technical risk of the project. Combining this high-grade feed stock with our innovative process flowsheet can deliver very high purity, low-cost vanadium chemicals globally with a very low carbon footprint. Security of supply is a key issue in Europe, vanadium has been on the list of Critical Raw Materials since 2017 and Russia supplied the bulk of Europe's vanadium feedstock in 2021. As Europe's only advanced high purity vanadium development project, VRP1 is a strategically important asset.

Notwithstanding a reduction in technical risk, Neometals is cognisant of the global economic and geopolitical outlook, current state of financial markets and the fall in the vanadium price which has increased the financial risk of the project".

CAUTIONARY STATEMENT

The ECS referred to in this announcement has been undertaken to assess the potential technical feasibility and economic viability of VRP1 that is required for Neometals to consider investment decisions in relation to VRP1. It is based on low-level technical and economic assessments that are not sufficient to provide definitive assurance of an economic development case, or to provide certainty that the conclusions of the ECS will be realised. Finalisation of the FS and further evaluation work will be required before Neometals will be in a position to determine the viability of VRP1.

Given the uncertainties involved, all figures, costs, estimates quoted are approximate values and within the margin of error range expressed in the relevant sections throughout this announcement. Investors should not make any investment decisions based solely on the results of the ECS.

Background

On the 6th April 2020, Critical executed a conditional agreement ("**Slag Supply Agreement**") with SSAB, a steel producer that operates steel mills in Scandinavia, to acquire Slag produced as by-product at SSAB's operations. The Slag Supply Agreement provides a secure basis for the evaluation of the VRP1 assuming 200,000 dry metric tonnes ("**dmt**") of Slag processing per annum (with a reference grade of 3.93% V_2O_5 for pricing under the Slag Supply Agreement) without the need to build a mine and a concentrator like existing primary producers. The Slag Supply Agreement provides for the conditional purchase of 2,000,000 dmt of Slag from SSAB.

The NBLI contemplates:

- SSAB selling, and Critical buying, additional volumes of Slag to that already agreed under the Slag Supply Agreement;
- providing Critical with a first right to purchase, by way of a separate purchase agreement, potential additional volumes of Slag above the 2,000,000 dmt already agreed under the Slag Supply Agreement;
- an estimated 1,100,000 dmt of Slag be made available in addition to the 2,000,000 dmt of Slag already agreed under the Slag Supply Agreement (a total estimated volume of 3,100,000 dmt of Slag);
- that potential additional volumes of Slag are an estimate only, made at the date of the NBLI, and volumes may increase or decrease; and
- a commitment to continuous engagement, including in relation to the availability of potential additional Slag volumes.

The NBLI enables a potential basis for evaluating 300,000 dmt of Slag processing per annum (with a reference grade of 3.93% V_2O_5).

Neometals has developed a proprietary processing method to recover vanadium from steel slag. This hydrometallurgical process utilises conventional equipment and operates at atmospheric pressure and mild temperatures. Pilot Plant testing of the selected flowsheet was completed in Perth and resulted in product purities of greater than 99.5% V_2O_5 with maximum metallurgical recoveries exceeding 75% (for *full details refer to Neometals ASX announcement entitled "Vanadium Recovery Pilot Plant - Successful Completion" released on the 11th August 2021*). The information from the operation of the Pilot Plant was utilised to inform the ECS (±15%) for a 300,000 dmt per annum hydrometallurgical processing circuit.

The ECS was based on establishing an operation at Tahkoluoto Port, near the City of Pori in Finland. This location has excellent infrastructure, including a deep-water port, as shown below in Figure 1 and was chosen after the completion of an extensive location study (*for full details refer to Neometals ASX announcement entitled "Vanadium Recovery - MOU - Site, Logistics & Utilities Supply" released on 11th December 2020*).

Figure 1 – *Aerial schematic showing location for the proposed Vanadium Recovery Project processing plant at Tahkoluoto Port, Pori in Finland*

Figure 2 below highlights the competitive operating cost of the VRP1, with a first quartile position on the industry operating cost curve (excluding royalties, taxes, depreciation, and amortisation).

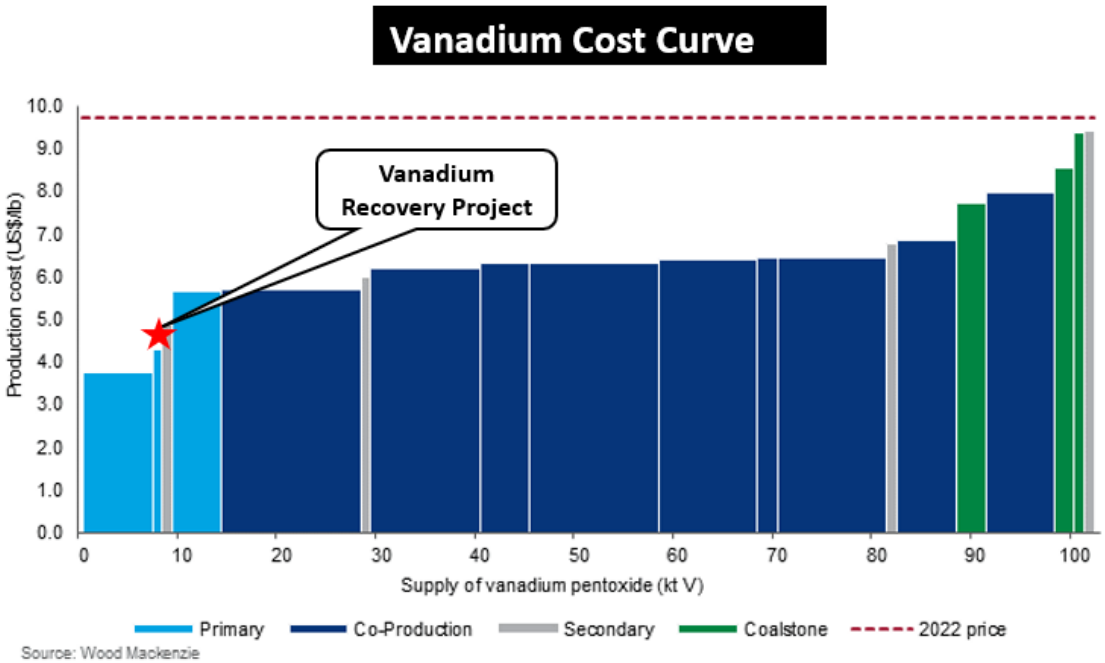

Figure 2 – *2022 Vanadium Operating Cost Curve*

Development Scenario

The development scenario for this ECS is characterised by:

- greenfields development starting with a cleared industrial site at Tahkoluoto Port, Pori in Finland;
- plant with a throughput capacity of 300,000tpa of feed;
- feedstock comprising steel by-product Slag with a grade of 3.93% V_2O_5 (being the reference grade for pricing under the Slag Supply Agreement); and
- 73.2% average recovery of V_2O_5 from feed based on results from pilot plant (*for further details on the Pilot Plant refer to Neometals ASX announcement entitled "Vanadium Recovery Pilot Plant - Successful Completion" released on 11th August 2021*).

Processing Flowsheet

The proprietary process flowsheet was developed by Neometals with assistance from an independent metallurgical laboratory. The process, for which provisional patents have been applied for in various jurisdictions, makes use of conventional equipment and unit operations, employing novel chemistry, operating at atmospheric pressure and moderate temperatures. Slag feed in Figure 3 below, is processed in a selective leach circuit to facilitate dissolution of the vanadium contained in the feed. The pregnant leach solution (PLS) is then separated from the solid leach residue. Further purification of the vanadium solution is achieved by solvent extraction. Vanadium is then recovered as ammonium metavanadate (AMV) and converted to vanadium pentoxide (V2O5) using industry standard methods.

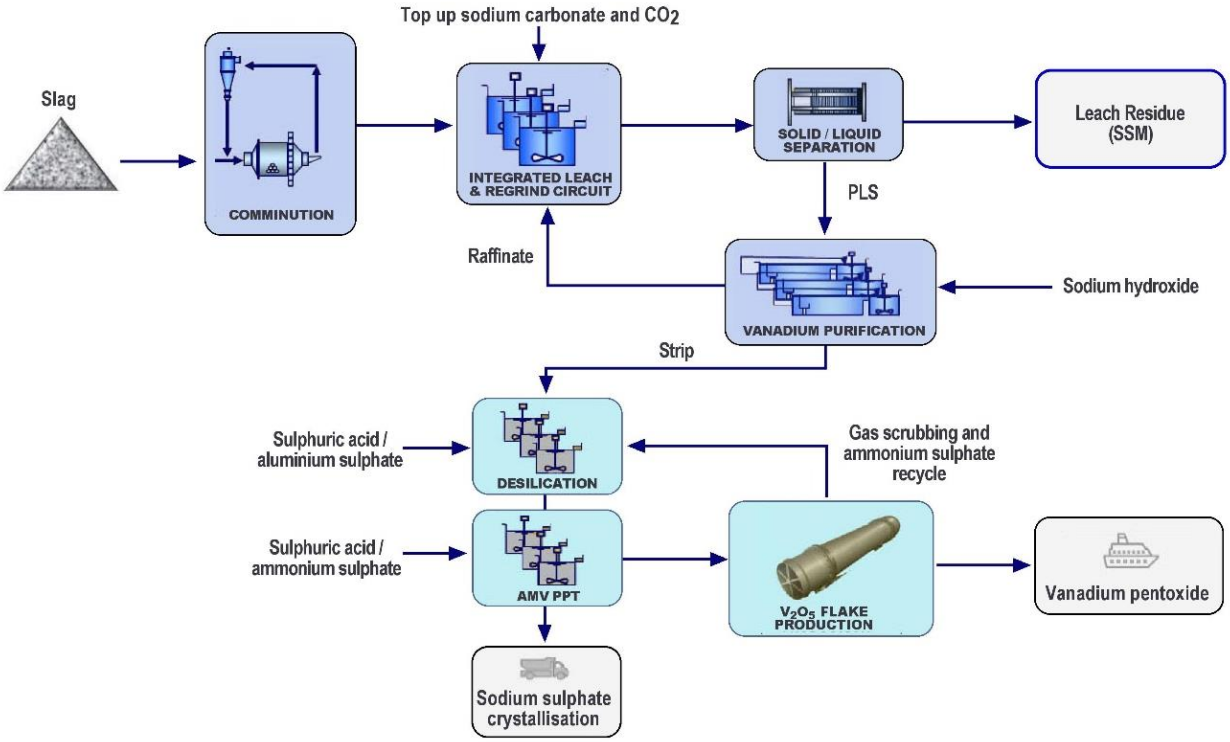

Figure 3 – *Overview of Process Flowsheet*

Project Location

For the purpose of cost estimation, Pori Finland is the selected location with plant offices, administration, ablutions facilities and a laboratory included in the scope. The ECS includes tie-ins for water and electricity. Biogas and green power sources are also readily available for the project.

Critical and the Port of Pori have executed a 20-hectare land lease agreement for the location of the VRP1 at the Tahkoluoto Port, Pori in Finland.

Capital Cost Estimate

The ECS capital cost estimate for the process plant and relevant infrastructure was developed to an AACE Class 3 level of accuracy of ±15% based on budget price estimates obtained from equipment suppliers and appropriate agreed factors. Table 2 below presents the summary of the project capital costs.

Table 2 – *Project Capital Cost Estimate (all figures expressed on a 100% ownership basis)*

Capital	US$M
Direct – Buildings and Process Plant	226.2
Indirect – EPCM etc	44.2
Contingency (15%)	40.5
Capital slag purchase and transport	30.1
Total	**341.0**

Operating Cost Estimate

The Vanadium Recovery Project operating cost was estimated by major cost type and is considered an AACE Class 3 level estimate with a nominal accuracy level of ±15%. The estimated operating cost excluding royalties is on average US$4.38/lb. V_2O_5. The operating cost breakdown is shown in Figure 4 below.

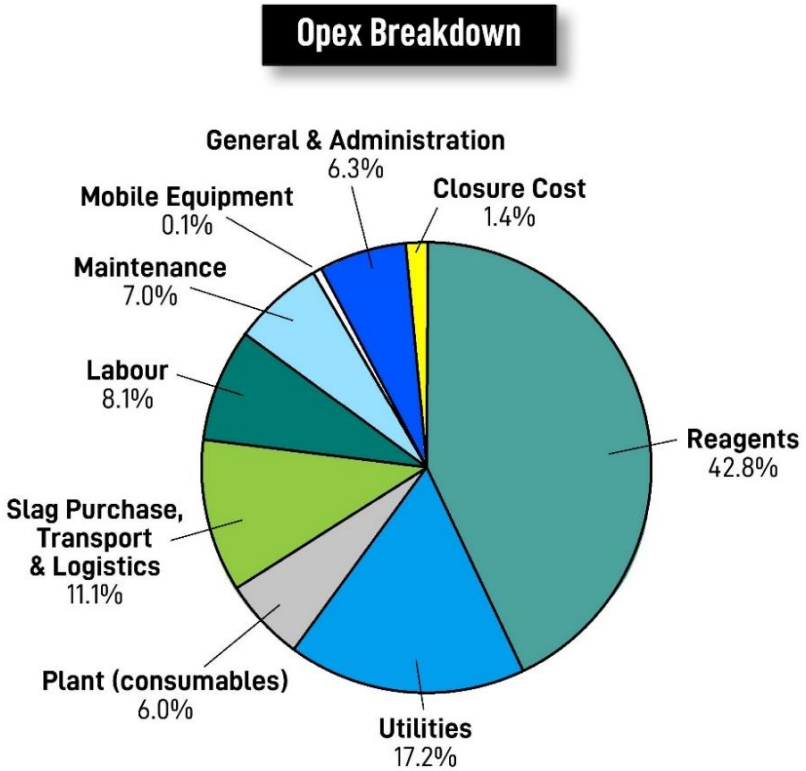

Figure 4 – *Operational cost breakdown by key areas*

Next Steps:

- Critical to progress the NBLI with SSAB into a formal agreement.
- Critical to progress letter of intent with Betolar Plc into a formal agreement for offtake of potential by-product SSM.
- Neometals to explore a number of value engineering opportunities identified during the ECS and to finalise the FS.
- Neometals and Critical to progress discussions with potential offtake and financing partners.

Forward-looking Statements

This release contains "forward-looking information" that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to studies, the Company's business strategy, plan, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'likely',' believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this news release are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information.

Forward-looking information is developed based on assumptions about such risks, uncertainties and other factors set out herein, including but not limited to general business, economic, competitive, political and social uncertainties; the actual results of current development activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of metals; failure of plant, equipment or processes to operate as anticipated; accident, labour disputes and other risks of the chemical industry; and delays in obtaining governmental approvals or financing or in the completion of development or construction activities. This list is not exhaustive of the factors that may affect our forward-looking information. These and other factors should be considered carefully, and readers should not place undue reliance on such forward-looking information.

Neither the Company, nor any other person, gives any representation, warranty, assurance or guarantee that the occurrence of the events expressed or implied in any forward-looking statement will actually occur. Except as required by law, and only to the extent so required, none of the Company, its subsidiaries or its or their directors, officers, employees, advisors or agents or any other person shall in any way be liable to any person or body for any loss, claim, demand, damages, costs or expenses of whatever nature arising in any way out of, or in connection with, the information contained in this document. The Company disclaims any intent or obligations to or revise any forward-looking statements whether as a result of new information, estimates, or options, future events or results or otherwise, unless required to do so by law.

Advice

Nothing in this document constitutes investment, legal or other advice. Investors should make their own independent investigation and assessment of the Company and obtain any professional advice required before making any investment decision based on your investment objectives and financial circumstances.

Authorised on behalf of Neometals by Christopher Reed, Managing Director

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For further information, please contact:

Chris Reed
Managing Director
Neometals Ltd
T: +61 8 9322 1182
E: info@neometals.com.au

Jeremy Mcmanus
General Manager - Commercial and IR
Neometals Ltd
T: +61 8 9322 1182
E: jmcmanus@neometals.com.au

About Neometals Ltd

Neometals' focus is the continuous development and commercialisation of our proprietary innovative technologies to achieve our Purpose in collaboration with strong global partners.

The demand for environmentally and ethically sourced battery materials will continue to grow with energy storage being the key enabler for the energy transition. Decarbonisation, sustainability and resilient supply chains are the key challenges for the energy storage and electric vehicle supply chain. Our technologies, particularly those in battery materials recycling and recovery, reduce reliance on traditional mining and processing, and support circular economic principles.

Neometals has three core battery materials businesses commercialising proprietary, low-cost, low-carbon process technologies:

- Lithium-ion Battery Recycling (50% equity)– to produce nickel, cobalt and lithium from production scrap and end-of-life lithium-ion batteries in an incorporated JV with leading global plant builder SMS group. The Primobius JV will soon commence operation of a 10tpd operation in Germany and has been selected as technology partner by Mercedes Benz. Investment decision for its first 50tpd operation with Stelco in Canada is expected SepQ 2022
- Vanadium Recovery (earning 50% equity) – to produce high-purity vanadium pentoxide via processing of steelmaking by-product ("Slag"). Finalising evaluation studies on a 300,000tpa operation in Pori, Finland and potential joint venture with Critical Metals, underpinned by a 2Mt, 10-year Slag supply agreement (together with the potential availability of a further 1.1Mt as contemplated by the NBLI) with leading Scandinavian steelmaker SSAB. Investment decision expected end Dec 2022. MOU with H2Green Steel for up to 4Mt of Slag underpins a potential second, operation in Boden, Sweden; and
- Lithium Chemicals (earning 35% equity)– to produce lithium hydroxide from brine and/or hard rock feedstocks using our ELi® electrolysis process. Co-funding pilot plant and evaluation studies on a 25,000tpa operation in Estarreja, Portugal towards a potential JV with technology co-owner Mineral Resources Ltd and Portugal's largest chemical producer Bondalti Chemicals S.A. Investment decision expected Dec 2023.