
QUARTERLY ACTIVITIES REPORT

31 December 2022

Highlights:

- The project continues to progress with no health, safety or environmental incidents to date.
- Fabrication of critical long lead equipment, the Spray Roaster & Reduction Furnace, is on schedule and construction of Civil works on site is in progress.
- Project activities remain on budget with engineering at the 60% completion milestone, and 80% of the equipment packages tendered to the market.
- Value Engineering (VE) study achieves \$8.5M savings with potential further cost reduction opportunities identified.
- Budget revised to \$41.72 M from \$39M a rise of only 7%, a great achievement in the current environment.
- Stage 3 PFS – A Study initial results confirms the preferred locations of Middle East and Malaysia, with further work being conducted to target a final decision before end of Q1 2023.
- Latrobe Magnesium updates its offtake agreement with Metal Exchange Corporation for a minimum of 8,000 tpa of magnesium and the inclusion of floor prices.
- State and Federal Government announce the Critical Minerals Program and open applications for grants. Supportive conversations with the Government for Stage 2 are continuing.

1. Stage 1 Progress Update

Engineering

During 2022, the project, as did the whole industry, experienced unprecedented cost pressures because of global shocks e.g. the Ukraine war, COVID impacts on supply chains, global inflation etc. Projects typically obtain additional funding to deal with these pressures, however the project team is focused on delivering the project on budget, particularly given the nature of a demonstration plant. A re-estimate was undertaken to determine the impact to the project, which showed a 16% increase to the project's capital cost, as was expected.

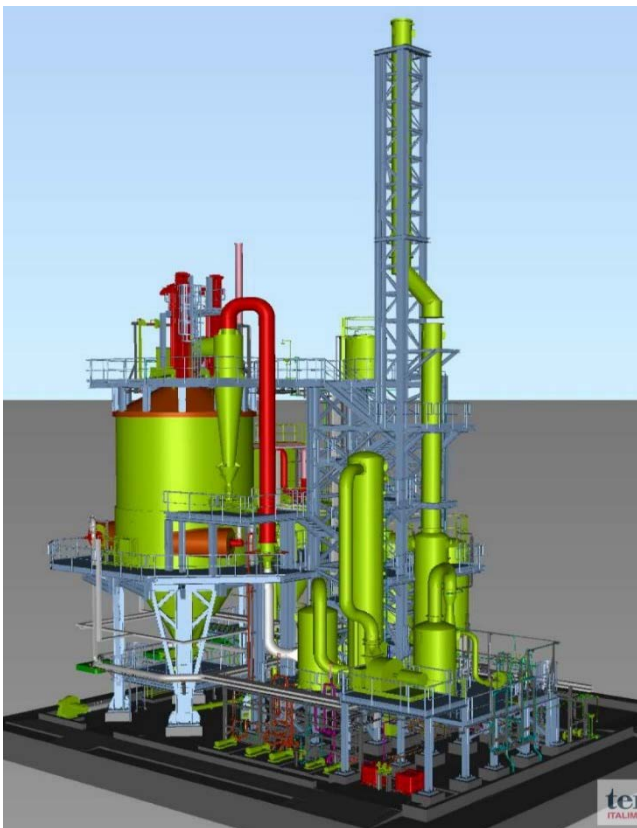
As a result, the project paused engineering progress to undertake a Value Engineering (VE) study, which was focused on finding value and reducing the capital cost where possible. This commenced in November 2022 and finished mid-January 2023.

The exercise was very successful and resulted in \$8.5M (18%) worth of cost reduction being identified.

This brought the project capital cost back to target and has allowed the project to recommence. Additionally, further cost reduction opportunities have been identified and will be implemented throughout the remainder of engineering. One side effect of this has been the unavoidable impact to the schedule due to the slowing of engineering and temporary suspension of selected procurement. Further information on the schedule can be found in the construction section below.

The project is currently 22% complete overall with engineering at the 60% completion milestone. Engineering is continuing to concentrate on the completion of the remaining few mechanical and electrical equipment packages, supporting vendor engineering and issuing for construction drawings.

Process engineering is 90% complete and continues to technically support tender documentation, VE studies, and vendor engineering. Process flow diagrams and Piping & Instrumentation diagrams are being incorporated with VE changes to finalise them for construction. Continued support is required with the procurement of instrumentation and collaboration with the process control system integrator to implement the process control philosophy into the process control system.



Mechanical engineering remains at 60% complete with the primary focus shifted to identifying and evaluating VE opportunities. As the VE study is now completed, mechanical engineering will return to the preparation of the remaining few tender packages, technical evaluations, and review of vendor data.

The mechanical and piping design team are completing the piping and equipment modelling within the 3D model incorporating the VE changes and vendor models. Many of the design activities are complete with fabrication of subcomponents commenced. The 3D model snapshot to the left shows the Spray Roaster facility layout.

Mechanical engineering has continued to review equipment packages for scope and specification efficiencies as part of the VE study. This has not impacted the long lead critical path packages, the spray roaster and reduction furnace, which are progressing on schedule. However, it has delayed the award of remaining packages and risks later than scheduled delivery.

With the Computational Fluid Dynamics (CFD) modelling of the reduction furnace completed along with the furnace design and 3D model, fabrication and assembly of the first module has progressed as can be seen in the photos below.



A total of 19 technical evaluations and recommendations for awards have been completed for the Project, representing over 60% of the total equipment packages, with recommendations for award for the following equipment to be completed in the coming weeks:

- Plate filters
- Thickeners
- Bulk handling system
- SCM system
- Condenser equipment & accessories

The seven (7) equipment packages below that remain to be tendered will be issued to the market next month:

- Fire protection system
- Crown handling
- Control valves
- Flocculant system
- Instrumentation
- Compressed air system
- Manual valves

Additionally, an inspection was undertaken for the briquetting plant at a vendor’s location in China to ensure the quality was to the project’s requirements and Australian Standards. Quality is particularly important with the briquetting plant to ensure it performs as specified. This inspection gave the project team the confidence to proceed with placing the purchase order for the briquetting plant.

Civil and structural engineering remains at 50% complete with 70% of the civil works in the first construction package issued to Stirloch Constructions, a local Gippsland contractor, which covered the ash handling, leaching, impurity removal, spray roaster, and reduction furnace areas. The remaining civil work areas are to be issued for construction next month.

Electrical and Instrumentation engineering is 33% complete with the focus on preparing the instrumentation packages for tender to the market. Electrical engineering has completed design interface with suppliers of awarded packaged equipment and progressed vendor engineering reviews for the Motor Control Centres’ (MCC’s), Switch rooms and Master Switch Board (MSB) packages.

Procurement

Procurement was suspended for equipment relating to scope that was undergoing optimisation in the VE study. Equipment was retendered to additional low-cost country sourcing vendors, specifications were streamlined and equipment packaged together to find additional value.

Ongoing vendor clarifications with the current market conditions are still proving very challenging in negotiation of standard industry accepted terms resulting in prolonged negotiations to get a fair position for LMG.

Limited procurement was able to continue on non-VE scope items with the full award of a further five (5) equipment packages, including Cooling Towers, Retort Tubes, Steam Boiler, Vacuum Pumps and Furnace Automation. The first components of the Spray Roaster can be seen in the image to the right.



Additionally, the furnace automation package was awarded to an automation vendor (name withheld for IP reasons) to commence fabrication of LMG’s reduction furnace automation solution, which will offer substantial efficiency improvement over the conventional Magnesium industry.

The award of the remaining packages, whilst delayed, is expected to accelerate over the next month given the conclusion of the VE studies and the preventative mitigations in place for the unprecedented conditions in the global supply market. Most of the remaining packages have already been tendered, evaluated and negotiated through the VE study and will be able to be awarded quickly in the coming weeks. The status of procurement is shown below.

	Number of Equipment Packages
Project Preparation	7
Tendered to Market & Under Evaluation	14
Awarded	10
Total	31

LMG awarded a long-term agreement for its logistics and freight forwarding services to Customs Agency Services (CAS), a division of Mondiale VGL. Servicing freight movements for both the construction and operational requirements of LMG’s Stage 1 and 2 plants, CAS, with Mondiale VGL, own and operate a logistics hub at Dandenong South, Victoria, which is strategically located between LMG’s site in Hazelwood North and the Port of Melbourne.

Capable of providing the full suite of logistics services in house, including quarantine approved facilities for fumigation and inspection, this site holds a capacity of 1,200 TEU (20’ container equivalent) of hardstand and a total throughput of 70,000 TEU’s per annum allowing LMG to drive efficiency in freight movement and the rapid deployment of services.

Additionally, CAS will be utilised to provide input into the supply chain considerations of LMG’s Stage 3, 100,000 tpa international mega-plant.

Given the unprecedented recent conditions in the global freight market, and with the COVID pandemic continuing to challenge the global supply chain, the appointment of the CAS team will assist LMG to mitigate the potential for shipping delays and optimise costs within a challenging environment.



LMG personnel signing the agreement with CAS at their facility in Dandenong South.

Construction

The project EPCM contractor Mincore has mobilised a logistics and administration resource full-time to support the construction manager on site and has started recruitment for future construction positions (i.e. SMP and E&I supervisor).

The civil and concrete works have progressed well with formwork, reinforcement, concrete slab and bunker completed for the ash handling, leaching, impurity removal, brine and reduction furnace areas. The spray roaster footing excavation has started with concrete works forecasted to be completed by the end of March 2023.



The development of the Structural, Mechanical, Piping and Electrical and Instrumentation (SMPEI) construction packages is progressing with award targeted before the end of Q1 2023, again slightly delayed due to awaiting vendor data from equipment packages that were held up due to the suspension of procurement.

As a result of the VE study, the schedule is currently being reviewed, optimised and rebaselined to account for the delays in awarding non-critical path equipment packages but is not expected to impact the target of commissioning the process plant this year, due to the strategy of focusing on awarding long lead critical path items and adjusting the resourcing level.

The project risk register continues to be updated with no new risks identified and risks being closed out as the project progresses. No Very High rating risks remain and only 4 High rating risks remain:

- Unexpected design changes
- Supply chain disruption
- Impurity management in reduction
- Raw material costs

Risk mitigations are in place for these risks and further close out of project risks is expected at the next schedule risk assessment update which will be undertaken after 60% engineering. The next project update will provide more information on the remaining project risks.

2. Project Funding

On 24 June 2022, LMG drew down its first \$10M advance of its \$23M project finance facility. The second \$10M advance has still not been drawn. LMG was able to extend this draw until the end of February when the balance will be drawn thereby saving a considerable interest charge.

The Company has some \$7.4 million in the Bank and with the available funding from various sources, be it project funding, state government grant and option funding, has sufficient funds available to complete the demonstration plant.

In the last quarter, LMG received some net \$1.46M research and development rebate for its 2022 activities. This amount was used to reduce our project finance loan. LMG estimates that the rebate for the 30 June 2023 year should be in the order of \$19M. This should be sufficient with the 2022 tax rebate to repay most of the project funding so LMG will then own 100% of the demonstration plant unencumbered.

3. Stage 3, 100,000tpa Plant Project: PFS–A Study

On the 1 September 2022, the results of the PFS-A were received which compared the two potential locations for the plant being the Middle East and Malaysia. Whilst the results substantiated LMG's initial thoughts as to the preferred site, more work in securing investment scenarios is required to develop both options fully to make the optimum strategic decision.

In January 2023, LMG visited Saudi Arabia and Oman for 10 days. LMG attended the Future Minerals Forum in Riyadh arranging meetings with the Minister of Investment, other Ministry officials and several potential joint venture partners who all expressed interest in supporting or participating in LMG's Stage 3 Project. LMG also visited Ras Al Khair Industrial City, one of the newest east coast mining hubs, where it met and discussed the project with The Royal Commission for Jubail and Yanbu, the responsible entity for allocating land and approvals for this location. LMG now has the necessary detailed information upon which it can make a decision for this potential location.

On the same trip, LMG visited Muscat and Duqm in Oman, where a visit to the new port at Duqm and local limestone and dolomite quarries took place. In Muscat, LMG held discussions with the Minerals Development Office (MDO), a subsidiary for the Oman Sovereign Fund, whose mandate is to develop upstream and downstream industries related to their mining activities. LMG is currently exchanging additional information so MDO may determine whether it wants to be a joint venture partner in the 100,000tpa project.

Following initial discussions in September and November 2022, LMG is intending to visit Sarawak, Malaysia in the first weeks of March 2023 and continue conversations with the relevant stakeholders and government departments responsible for the State's development. LMG will also visit ports and assess the land being proposed for the Stage 3 project.

Once LMG has completed the Malaysian visit, it will have the necessary information to make a final decision on where the 100,000tpa plant should be located. Once this location-based decision has been made, the PFS–B Study will proceed. This decision is expected to be made by the end of March 2023.

4. MEC Offtake Agreement

On 16 January 2023, LMG signed an upgraded exclusive distribution agreement with Metal Exchange Corporation (MEC) to sell the majority of its magnesium into North, Central and South America and the Caribbean markets. The contract will deliver excellent prices to LMG due to a US anti-dumping duty payable on magnesium imports from China.

This 2019 initial agreement between the parties has been upgraded due to LMG's current timing and expansion plans to its demonstration plant and expanded capacity of its +10,000 tpa commercial plant. The agreement now includes:

- Updated dates.
- A minimum firm commitment of 8,000 tpa of magnesium.
- A minimum initial term with a rolling annual renewal.
- A minimum floor price for the purchase of the magnesium.

MEC is headquartered in St Louis, Missouri. Founded in 1974, MEC has grown from a regional aluminium scrap company to a global corporation with international offices in Switzerland and China. Additionally, MEC has six manufacturing plants in the US, employs over 900 people and supplies aluminium and magnesium under short and long term agreements.

North and Central America consume 160,000+ tonnes of magnesium per annum and this is projected to increase with greater use of magnesium by the motor vehicle industry. There is only one magnesium producer in the USA, which is currently undergoing a capital refurbishment and has been mostly out of commission since 2021. Consequently, most of the magnesium is imported.

5. State Government Support

LMG has been in discussion with the Victorian Government in relation to their grant programs which they are developing in relation to critical minerals. LMG understands that its projects will be eligible for this program.

For example, LMG is looking complete a body of work involving how much fly ash can be safely removed from the Yallourn ash depository without causing any geotechnical risks, or groundwater concerns. A project of this nature is believed to be eligible for the critical minerals program.

The results of this work will help to determine the capacity of LMG's Stage 2 project. LMG has announced that upon successful commissioning of the demonstration plant, it plans to commence a project for Stage 2 with a capacity of +10,000tpa of magnesium. The Stage 1 project is not feasible to be expanded into the capacity of the commercial Stage 2 plant due to the very small-scale nature of a demonstration plant. The current production of Yallourn fly ash, until it closes in 2028, is sufficient to provide feedstock for a +10,000tpa plant for 20 to 30 years.

6. Federal Government Support

On 21 October 2022, the Hon Madeleine King MP, Minister for Resources, confirmed an unwavering commitment to the Australian resources industry's global leadership in the critical minerals sector by announcing:

"A further \$50 million will be allocated over three years to the Critical Minerals Development Program for competitive grants to support early and mid-stage critical minerals projects. This is in addition to the \$50 million already committed to six projects across Australia and will assist accelerating the development of emerging projects across the nation."

This grant is now open, and it will close on 20 February 2023. LMG will be applying for funding for several its projects including future funding for its Stage 2, 10,000+ tpa plant bankable feasibility study.

7. Listing Rule 5.3.5

ASX Listing Rule 5.3.5 requires quarterly activity reports to describe any payments made to related parties or their associates as disclosed in an Appendix 5B for the same quarter. LMG advises the amount of \$192,500 (rounded up \$193k in Appendix 5B at Item 6.1) being payments made to Directors or companies associated with Directors for their services as Directors' fees.

Should you have any queries in relation to this announcement please do not hesitate to contact the CEO on his mobile 0421 234 688.



David Paterson
Chief Executive Officer

31 January 2023

About Latrobe Magnesium

Latrobe Magnesium is developing a magnesium production plant in Victoria's Latrobe Valley using its world- first patented extraction process. LMG intends to extract and sell magnesium metal and cementitious material from industrial fly ash, which is currently a waste stream from the Yallourn brown coal power generation.

LMG has completed a feasibility study validating its combined hydromet / thermal reduction process that extracts the metal. Construction has started on site on its initial 1,000 tonne per annum magnesium plant and production is expected by 30 June 2023. The plant will then be expanded to 10,000 tonne per annum magnesium shortly thereafter with production expected 12 months later. Further plant capacity expansion will be determined once a body of Geotech works has been carried out this year.

The plant will be in the heart of Victoria's coal power generation precinct, providing immediate access to feedstock, infrastructure, and labour.

LMG plans to sell the refined magnesium under long-term contracts to USA and Japanese customers. Currently, Australia imports 100% of the 8,000 tonnes annually consumed. Magnesium has the best strength-to-weight ratio of all common structural metals and is increasingly used in the manufacture of car parts, laptop computers, mobile phones, and power tools.

The LMG project is at the forefront of environmental benefit – by recycling power plant waste, avoiding landfill and is a low CO₂ emitter. LMG adopts the principles of an industrial ecology system.

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

Latrobe Magnesium Limited

ABN

55 009 173 611

Quarter ended ("current quarter")

31 December 2022

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers		
1.2 Payments for		
(a) exploration & evaluation	(431)	(743)
(b) development		
(c) production		
(d) staff costs	(350)	(625)
(e) administration and corporate costs	(2,364)	(3,031)
1.3 Dividends received (see note 3)		
1.4 Interest received	12	16
1.5 Interest and other costs of finance paid	(46)	(46)
1.6 Income taxes paid		
1.7 Government grants and tax incentives	3,153	3,153
1.8 Other (provide details if material)		
1.9 Net cash from / (used in) operating activities	(26)	(1,276)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities		
(b) tenements		
(c) property, plant and equipment	(3,862)	(5,919)
(d) exploration & evaluation		
(e) Investment (rent bond)		
(f) other non-current assets (patents)	(11)	(11)

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities		
	(b) tenements		
	(c) property, plant and equipment		
	(d) investments		
	(e) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (provide details if material)		
2.6	Net cash from / (used in) investing activities	(3,873)	(5,930)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)		
3.2	Proceeds from issue of convertible debt securities		
3.3	Proceeds from exercise of options	305	351
3.4	Transaction costs related to issues of equity securities or convertible debt securities		
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings	(1,464)	(1,464)
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (payment of lease liabilities)	(13)	(25)
3.9	Other (repayment of short term loan)		517
3.10	Net cash from / (used in) financing activities	(1,172)	(621)

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	12,491	15,247
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(26)	(1,276)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(3,873)	(5,930)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(1,172)	(621)

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	7,420	7,420

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	28	25
5.2	Call deposits	7,392	12,466
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	7,420	12,491

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1 Payments for directors' services	193
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

7.	Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities	23,000	10,000
7.2	Credit standby arrangements	-	-
7.3	Other (GST refund)	220	-
7.4	Total financing facilities	23,220	10,000
7.5	Unused financing facilities available at quarter end		13,220

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.

Facility	\$23,000,000 - Secured
Lender	RnD Funding Pty Ltd
Interest Rate	12% pa. to 31 October 2023, and 14% pa. the remaining of the term
Maturity Date	30 June 2027

8. Estimated cash available for future operating activities		\$A'000
8.1	Net cash from / (used in) operating activities (Item 1.9)	(26)
8.2	Capitalised exploration & evaluation (Item 2.1(d))	-
8.3	Total relevant outgoings (Item 8.1 + Item 8.2)	(26)
8.4	Cash and cash equivalents at quarter end (Item 4.6)	7,420
8.5	Unused finance facilities available at quarter end (Item 7.5)	13,220
8.6	Total available funding (Item 8.4 + Item 8.5)	20,640
8.7	Estimated quarters of funding available (Item 8.6 divided by Item 8.3)	793.8

8.8 If Item 8.7 is less than 2 quarters, please provide answers to the following questions:

8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Compliance statement

- This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- This statement gives a true and fair view of the matters disclosed.

31 January 2023

Date:

Audit and Risk Committee

Authorised by:
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.