
PROJECT MONTHLY UPDATE

LMG'S DEMONSTRATION PLANT

February 2024

Highlights:

- * **The Stage 1 Demonstration Plant Project continues to progress with no reportable Health, Safety, or Environmental (HSE) incidents to date.**
- * **Magnesium Oxide (MgO) production strategy is on track, allowing LMG to initially prove its patented process and to generate early revenue, with construction labour maintained at 70+ local trade workers engaged onsite.**
- * **Major structural steel, mechanical equipment related to the MgO strategy completed with installation of piping and electrical equipment well advanced. Overall construction progress is 90% complete.**
- * **Fly Ash Handling and Utilities commissioning progressing.**
- * **All three (3) major Switch rooms energised, and commissioning of Process Control System (PCS) is in progress.**

1. Stage 1 Demonstration Plant Progress Update

1.1 Engineering & Procurement

Progress continues for the vendor closeout and commissioning handover documentation to LMG.

1.2 Construction

Magnesium Oxide Strategy

The site team have continued to progress fast-tracking the construction of the plant areas required to produce bulk bags of MgO, an intermediate product, for customer sales, prior to the production of magnesium metal.

The recently added MgO Bagging Plant was received on site earlier this month and has been installed in position, ready for ancillary piping, mechanical and electrical equipment to be installed over the next two weeks and handed over for commissioning.

The construction and commissioning of the remaining plant areas (briquetting system, reduction furnace area, the furnace automation and vacuum system) will be the second phase of the plant to be fully commissioned.

This strategy will not only demonstrate LMG's patented, world-first hydromet process can be operated successfully and prove to all stakeholders the true value of LMG's intellectual property.



Figure: MgO Bagging Plant Installed

Site

The site team have maintained a daily workforce of over 60 local trades, from our three major local contractors, Mechanical Maintenance Services (MMS), Operations and Maintenance (O&M) and GEM Industrial Services who are responsible for Structural & Mechanical installation, Electrical & Instrumentation installation, and Piping fabrication & installation, respectively. Trades have been closely managed and mobilised as the works progress from mechanical to piping completion and commissioning.

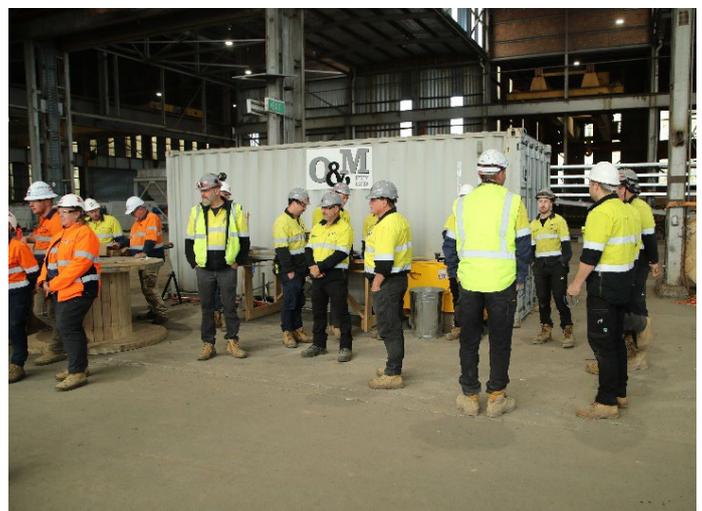
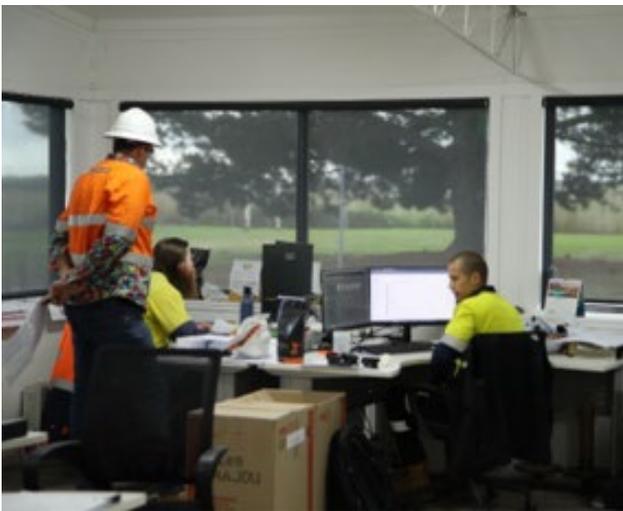


Figure: Site Construction Team – Field Engineering & Pre-Starts

Civil

All major civil and concrete works have been completed.

Structural, Mechanical and Piping

The Spray Roaster has continued to be amongst one of the areas on the project's critical path.

The construction team continue to progress with the installation of mechanical, piping, and electrical equipment. Most of the mechanical and piping items, such as tanks, burners, stacks, pumps, fans, blowers, transmitters etc. have been installed in position. The focus is to continue to run E&I cabling to already installed electrical instrumentation equipment and proceed with terminations.

Tenova, overseas supplier of the Spray Roaster equipment, have mobilised three (3) dedicated supervisors on site to assist the construction team expedite final construction and begin commissioning the system.



Figure: Spray Roaster piping installed with E&I cable installs and terminations progressing



Figure: Spray Roaster structurally and mechanically installed



Figure: Spray Roaster combustion fan and LPG gas piping installed



Figure: Spray Roaster piping and burner system installed



Figure: Spray Roaster instrumentation installed, ready for termination



Figure: Spray Roaster mechanical blower installed (top) and E&I cabling progressing (bottom)



Figure: Spray Roaster area nearing mechanical and electrical installation complete

The erection of both the Ferrosilicon and Magnesite Hopper and Bag Breaker units are complete.

Given its criticality to the production of MgO, the Magnesite Hopper Bag Breaker is largely complete, ready for commissioning.



Figure: Magnesite Bag Breaker unit with pneumatics equipment installed

The construction team continues to progress in the hydromet areas with all major mechanical equipment including thickeners, filter presses, tanks, pumps, agitators, compressors etc. installed.

The filter area, where LMG’s saleable by-products will be processed and stored, is due for completion by end of February. This area will be handed to commissioning once the final few piping runs are completely installed.

The Steam Boiler, Air Compressor and Acid Area Scrubber are all 100% construction complete, ready for commissioning to be completed in the coming week.

Pipe welding, spooling, and installation for the plants PVDF, HDPE & PVC piping and valves in the hydromet area remain the focus and is progressing steadily as construction completion nears for each area and transfers to commissioning sub-systems.

Personal Protection (PP) insulation of certain piping and tanks, for operator safety, has been awarded to another local Latrobe Valley company, Traralgon Industries which specialises in installation of insulation and cladding.

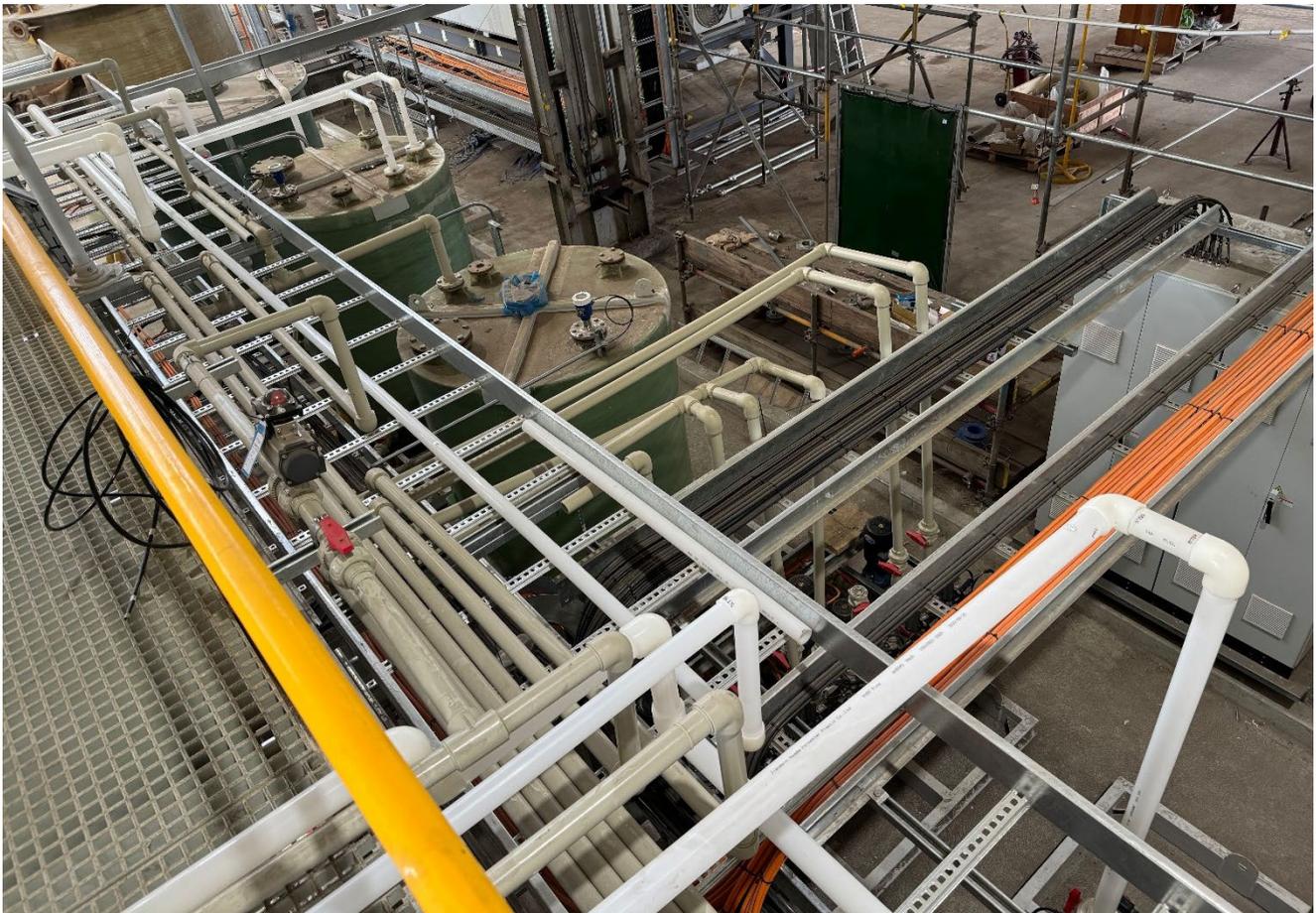


Figure: Filter area presses mechanically installed (top) and piping completed (bottom)



Figure: Filter area mechanical (tanks, pumps), piping & valves and instrumentation installed



Figure: Air Compressor & Steam Boiler ready for commissioning (top) Flocculant package installed (bottom)



Figure: Thickener and PVDF tank ping installed (top) hydromet tank pump and piping installed (bottom)



Figure: Hydromet (Acid Leach) piping progressing

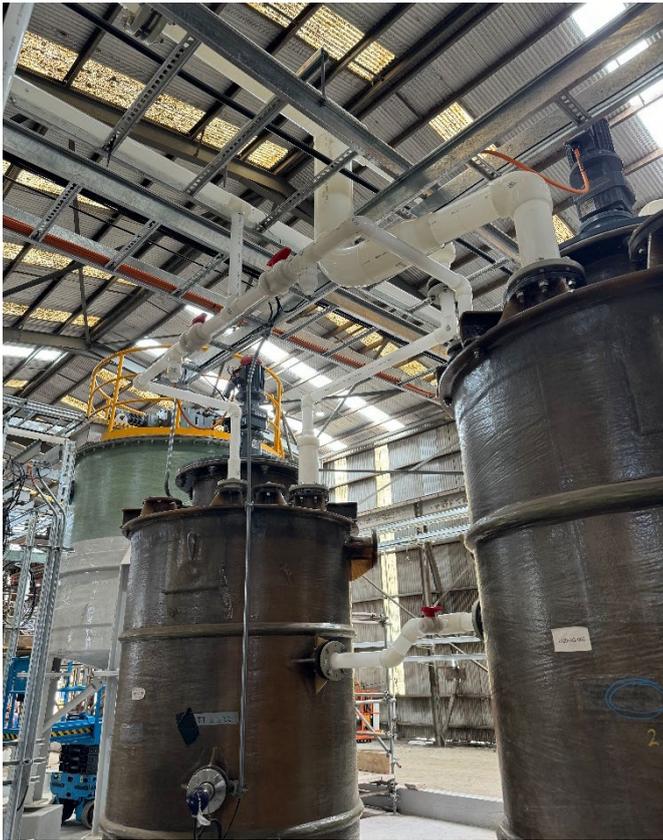


Figure: Hydromet piping progressing (left) Vortex pre-mixer installed and terminated (right)

The utilities area including raw water, process water and potable water, cooling tower and reverse osmosis (RO) areas are on target to be 100% construction completed before the end of February.



Figure: RO Plant completed, ready for commissioning (left) Raw water equipment installed (right)

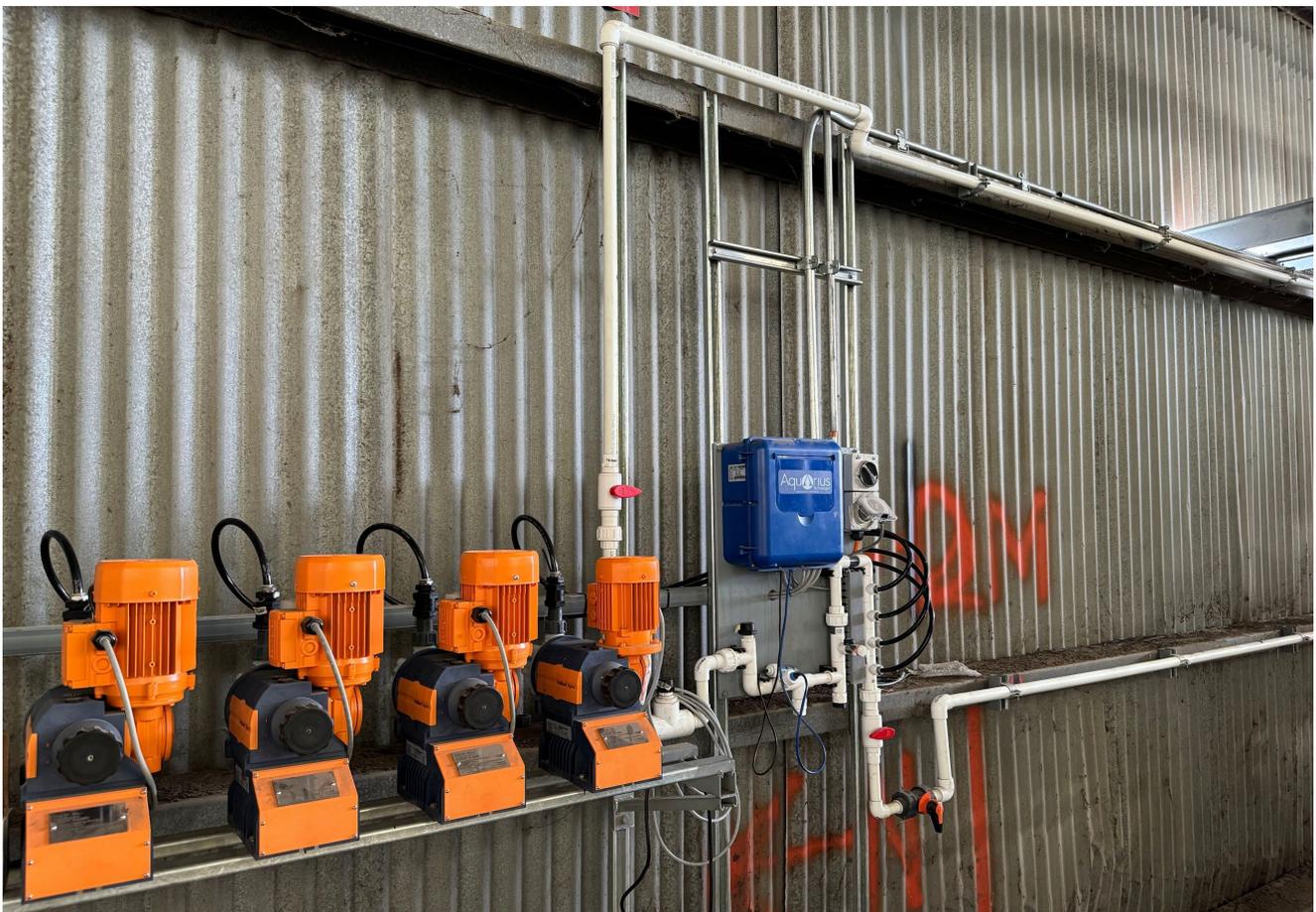


Figure: *Colling Tower construction completed (top) and Water treatment pumps installed (bottom)*

The Origin team have successfully completed the above ground piping, including supports & condenser traps, along the outside & inside of the fabrication sheds to the Spray Roaster, Steam Boiler and Reduction Furnace.



Figure: LPG gas piping installed

Electrical and Instrumentation

The electrical and instrumentation (EI) cabling, instrumentation equipment installations and terminations are largely complete for hydromet and filter areas. All three main switch rooms, control room and main switchboard have been successfully energised.



Figure: Installation of local control stations, electrical cabinets and instrumentation and cabling



Figure: Terminations completed for the control cabinets in the Filtration area

The E&I team continues to focus on progressing the installation of local junction boxes, local control stations, electrical, instrumentation cables and terminations locally for the Spray Roaster area.

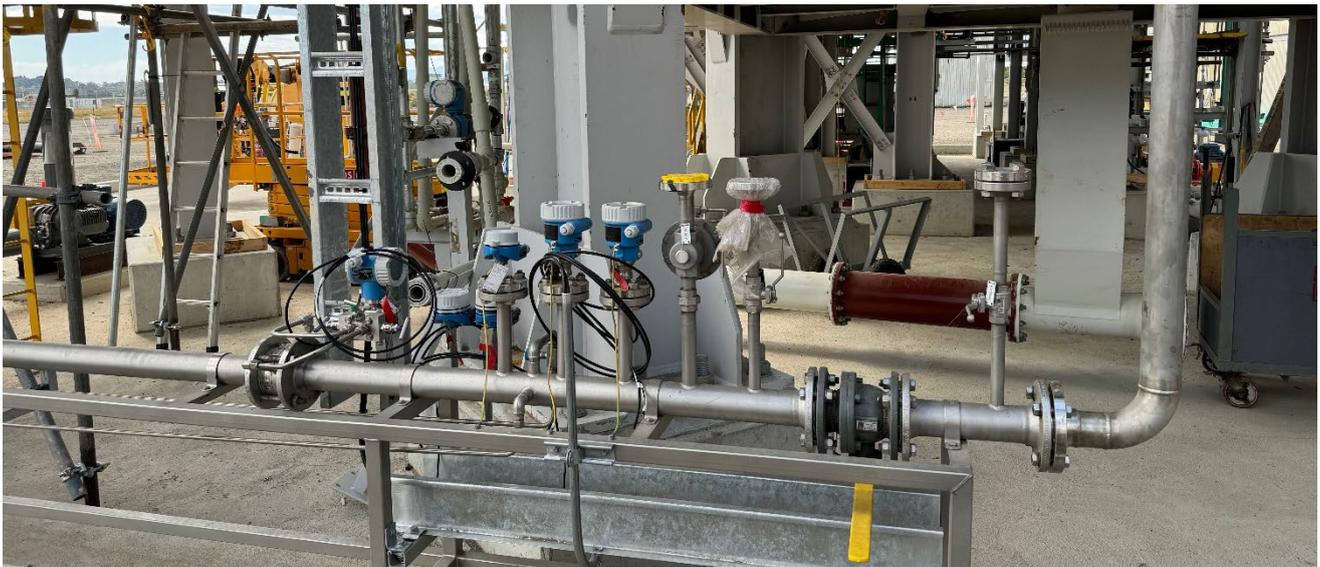


Figure: Instrumentation installed for Spray Roaster

Commissioning

Commissioning of the Fly Ash Handling area is progressing with this area now operating using the process control system in the Control Room. Commissioning of the Air and Water Utilities area is underway allowing the commissioning team to complete Stage 3 wet commissioning (i.e., water runs) when necessary.

Commissioning documentation is being further progressed to Stage 3 wet commissioning with preparations underway for water runs, filling equipment etc. Sub-system commissioning walkdowns between the commissioning and construction teams are now starting to be held to identify any issues preventing construction handover to commissioning. A formal handover process is being undertaken within the project team to ensure the sub-system scope is fully completed and that commissioning is undertaken in a timely manner ready for handover to LMG Operations.

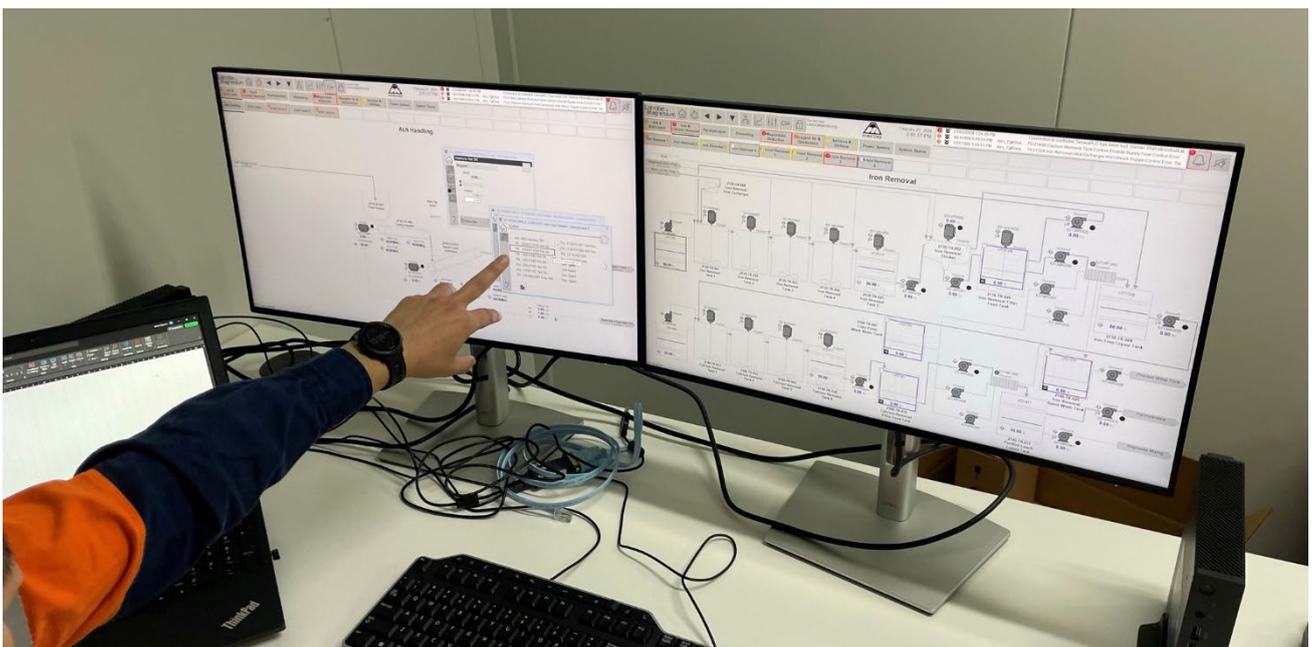


Figure: SCADA system commissioning ensuring signals to equipment is correctly received and controlled.

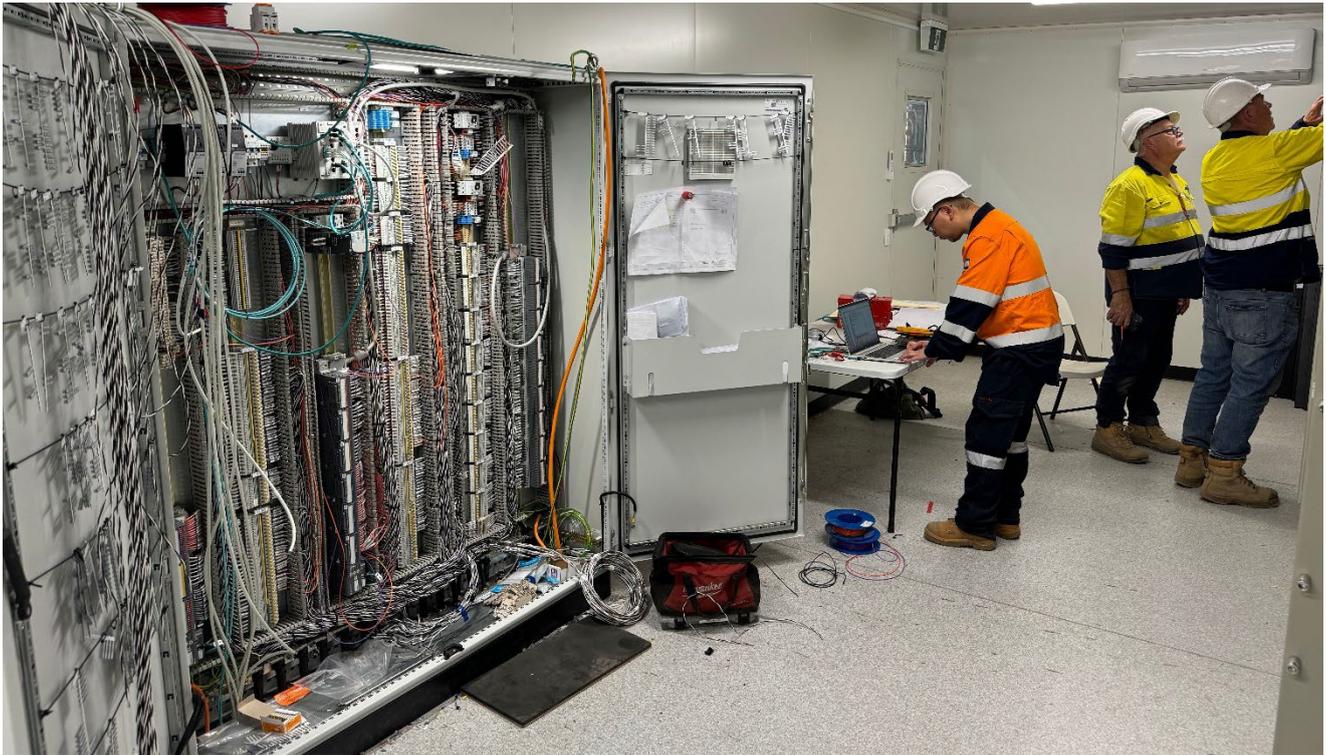


Figure: Commissioning process control systems with Rockwell representative on site.

Schedule

The schedule remains on track, with a daily focus on addressing the typical challenges that occur during commissioning. Labor availability is being closely monitored with construction partners and adjusted as needed. Hot weather impacts the project occasionally with stand downs, particularly affecting continuous activity in the spray roaster construction, however this should improve over the next month as we transition out of summer. The focus is now on interim MgO production, with a priority on installing the critical path element, the Spray Roaster, as well as remaining piping in the Hydromet area. Our target for the **first MgO production after March 2024 remains unchanged.**

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

28 February 2024

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 resource from Yallourn brown coal power generation.

LMG has completed a feasibility study validating its combined hydrometallurgical / thermal reduction process that extracts the metal. The demonstration plant will produce MgO by the end of March 2024 with the full plant being commissioned by end of Q2 2024.

A commercial plant will then be developed, with a capacity of +10,000 tonne per annum magnesium, shortly thereafter with completion targeted for December 2025. 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 its 10,000 tpa of refined magnesium production under long-term contracts to USA 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.