

QUARTERLY ACTIVITIES REPORT

30 June 2017

LATROBE MAGNESIUM PROJECT

1. Fast Cycle Retorts

During the last quarter, LMG and its engineers have designed a fast cycle vertical retort and furnace (FCR).

It is believed that this FCR will be superior to existing horizontal retorts in the following areas:

- The retort charge will be larger;
- The reduction time will be greatly reduced;
- The energy usage will be less due to more efficient heat transfer within the retort;
- The use of better quality material in the retort should greatly increase the retorts life.
- fast cycle furnaces (FCR) offer a competitive advantage over other vertical retort designs.

These benefits should produce reduced capital and operating costs for the project. The furnaces which house the retorts have been built and are programmed to be delivered to CSIRO in the week commencing 17 July 2017.

Upon delivery, the furnaces will be reassembled, tested and the other equipment and retorts which are currently being made will be connected. The FCR should be fully operational by the end of August.

In August, LMG will produce a large sample of dolomite and RWE Power fly ash to put through the FCR to produce magnesium and supplementary cementitious material. The results should be available by the end of September.

2. RWE Test Work

In June 2017, LMG carried out a number of bench scale hydromet tests on RWE Power's Hambach brown coal fly ash. The results of these tests were very encouraging.

LMG completed a concept study on the Hambach fly ash in 2014 and concluded that the project was worth developing further. German labour and gas costs are considerably lower than those currently in the Latrobe Valley.

LMG is currently making a 100kg sample so that it has sufficient ash to process the sample through both its hydromet and reduction process and produce magnesium and supplementary cementitious material. This work should be done in the next month. LMG will then make a large bulk sample to process through its newly constructed FCR in September. LMG will therefore have the results by the end of September.

Under the MoU with RWE Power, the next step, following the successful completion of the above test work, in the development of the Hambach project is the formulation of a cooperation agreement between the parties.

3. Feasibility Study

With the successful completion of the FCR test work, LMG's engineers will be in the position to finalise LMG's bankable feasibility study.



David Paterson
Chief Executive Officer

17 July 2017

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 brown coal power generation.

LMG has completed a pre-feasibility and an adjustment study validating its combined hydromet / thermal reduction process that extracts the metal. Construction is estimated to start on its initial 3,000 tonne per annum magnesium plant in September this year with production commencing 12 months later. The plant will then be expanded to 40,000 tonne per annum magnesium 18 months later. 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 Australian and overseas 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.