

Alpha **HPA**

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ASX: **A4N**
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HPA FIRST PROJECT UPDATE

SUPPLYING DE-CARBONISATION

STAGE 1 – PPF: NOW COMMISSIONING

- **Mechanical completion achieved**
- **Plant commissioning commenced**
- **Control system installed and operational**
- **Hydrostatic testing complete**
- **Test runs complete on key utilities and equipment**
- **Administration and lab buildings occupied**
- **Security fence and gate installed**

PRODUCT MARKETING

- **Expanded US marketing**
- **Increased interest and product orders from US semiconductor sector**
- **Gamma HPA qualified and bid submitted with EU catalyst end-user**

The Board of Alpha HPA Limited ('Alpha' or 'the Company') is pleased to provide an update on project activities for its HPA First Project, representing the commercialisation and production of critical high purity aluminium products driving de-carbonisation.

Alpha is fully funded to commercial production at its Stage 1, Precursor Production Facility (PPF) in Gladstone, QLD, which has now commenced commissioning ahead of production of the Company's high purity Aluminium Precursors.

The Company is concurrently satisfying the remaining conditions precedent to the full-scale Project Final Investment Decision, with a focus on product sales, offtakes and project financing.

STAGE 1 – PPF

Mechanical completion and start of commissioning

The installation of all mechanical equipment is now complete and the mechanical completion certificate has been issued by the SMP (Structural, Mechanical and Piping) installer.

Electrical and instrumentation (E&I) installation is close to completion.

Commissioning activities have now commenced as summarised below:

Process control and equipment testing

The process control system is now installed and under commissioning including staging valves, test running electrical equipment including filter presses and bump testing of agitators and pumps.

Process utilities testing

The following process utilities have now been test run and vendor commissioned:

- Main air compressor
- Demineralised water system
- Cool water/ chiller and cooling fan
- Hot oil system
- Fume extraction and scrubber system

Additionally, filling of the LPG tank has commenced and first reagent deliveries are scheduled for mid-October.

Hydrostatic testing

Hydrostatic (water) testing and pneumatic testing of all major vessels and piping is complete.

Administration and lab buildings

Installation and certification of administration and laboratory buildings is complete and now formally occupied by the Alpha operations team.

The operations team has now moved to 24/7 shift operations and finalising training, plant inspections and testing.

Other site activities

Other site activities include:

- Security fence and gate installed
- Fire tanks filled and pump system tested and commissioned
- Final landscaping underway

PRODUCT MARKETING

Expanded US marketing

Alpha recently completed a marketing visit to the US to visit existing and prospective end-users as well as to attend the North American Battery Show in Detroit. The Li-ion battery sector in North America has recently seen a dramatic increase in capital and technology investment, accelerated by the Production Tax Credits and Consumer Tax Credit incentives within the US Inflation Reduction Act (IRA).

Highlights from the Company's recent marketing trip include:

- Test orders for each of Alpha's high purity precursors to a rapidly growing US-based cathode manufacturer;
- Interest from a further seven anode and cathode active material manufacturers to trial high purity aluminium oxide particle coating using Alpha's aluminium nitrate precursor;
- A technical meeting with a German-based cathode manufacturer currently assessing Alpha's aluminium sulphate precursor to finalise precursor specifications;
- Meetings with St Gobain to confirm expanded product and volume interest.

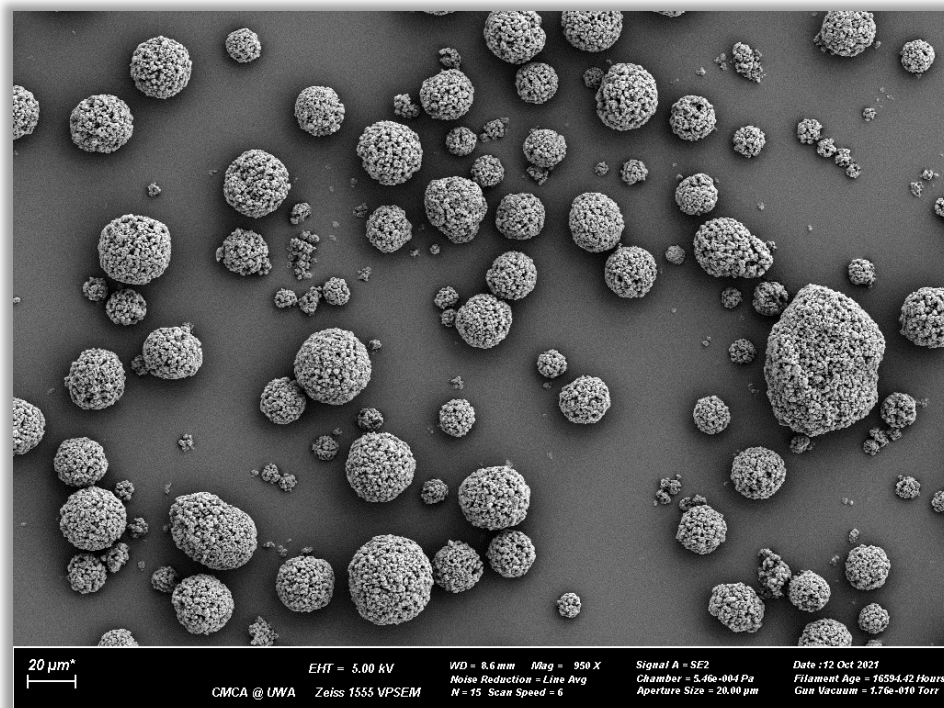
Increased interest and product orders from US semiconductor sector

Similar to the Li-ion battery sector, the US domestic semiconductor sector is undergoing strong capital and supply chain expansion through re-shoring initiatives stimulated by the US CHIPS Act.

The recent US marketing trip included a technical meeting at HQ of a global manufacturer of semiconductor polishing slurries (CMP slurries) to define supply and change management conditions and further product orders of nano-alumina for CMP polishing testwork.

Gamma HPA qualified and bid submitted with EU catalyst end-user

Alpha has qualified one its high-purity gamma alumina products with an EU based catalyst end-user. This product is a spherical gamma powder, specifically developed for specialist, high value catalyst applications. Bid pricing and freight terms have been requested and supplied, with expected first deliveries in 2023 if successful.



SEM image of Alpha's high purity, special gamma HPA powder

Alpha's Managing Director Rimas Kairaitis commented "The Stage 1 PPF's mechanical completion and commencement of commissioning less than 12 months since the commencement of construction are major milestones for our Company and particularly noteworthy in the challenging construction environment. I congratulate our staff and contractors for their fantastic commitment to the Project's execution in addition to welcoming the many new employees who have joined our operations team as we begin this exciting new phase of the Company's development."

About the HPA First Project

The Company's HPA First Project represents the commercialisation of the production of high purity alumina (HPA) and related high purity precursor products using the Company's proprietary licenced solvent extraction and HPA refining technology. The disruptive, low-carbon process technology provides for the extraction and purification of aluminium from an industrial feedstock to produce 4N (>99.99% purity) alumina and 5N (>99.999% purity) for sale into the lithium-ion battery and LED lighting industry.

Alpha completed a Definitive Feasibility Study in March 2020 following a successful pilot plant campaign in 2019. Alpha has since upscaled its Brisbane facility to demonstration scale and has now recorded over 8,000 operating hours and delivered an expanded range of over 100 high purity product orders to end-users globally.

Alpha is fully funded to the commercial production at its Stage 1, Precursor Production Facility which has now commenced commissioning ahead of commercial production of the Company's high purity Aluminium Precursors in the December quarter 2022.

The Company is now in the mature phases of market outreach and project financing with respect to the full scale HPA First Project, with the expectation of positioning the HPA First Project to Final investment Decision.

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