

ACTIVITIES FOR THE QUARTER ENDED 30 SEPTEMBER 2024

HIGHLIGHTS

HPA FIRST PROJECT STAGE 2

- Earthworks well progressed
- Long lead critical path packages awarded
- Key construction hires completed
- Formal Groundbreaking ceremony
- \$14.85M MMI-C grant funds received

PRODUCT MARKETING

- Large scale battery end-user qualification near completion with safety benefits of Al-nitrate based UltraCoat battery process confirmed
- First DLE test results confirm 2x standard lithium extraction rates
- Semiconductor sector testing confirms Alpha's purity advantage with over 400kg of new orders received
- HPA tablets qualified with sapphire optics end-user
- High volume product test orders received
- 64 individual product test and/or sales order received in September quarter

HPA FIRST PROJECT STAGE 1

- HPA production rates exceed >1,200kg/week
- Aluminium Nitrate circuits re-starting for full Stage 1 capacity
- Stage 1 production continues to service sales and test orders for:
 - Semiconductor sector
 - Direct Lithium Extraction
 - Sapphire glass production

ALPHA SAPPHIRE

- First sapphire qualification and maiden sales
- Sapphire boules issued for processing to semi-conductor and LED end-users



The Board of Alpha HPA Limited (**Alpha** or **the Company**) is pleased to provide the September 2024 quarterly activities report.

Alpha remains strongly focused on the delivery of the HPA First and Alpha Sapphire Projects, each representing the commercialisation and production of critical high purity aluminium products driving de-carbonisation utilising the Company's proprietary aluminium purification and refining technology.

The HPA First and Alpha Sapphire Projects will deliver a range of ultra-high purity aluminium products that are critical materials to the supply chains of key de-carbonising high-technology sectors including, semiconductors, LED lighting and lithium-ion batteries.

Activities in the September quarter were focused on:

- Advancing earthworks at Stage 2 of the HPA First Project site ahead of a formal groundbreaking ceremony.
- Progressing the procurement of long lead time items and awarding key process vendor packages for Stage 2 of the HPA First Project.
- Ongoing expansion of product marketing and product development activities with a particular focus on the Company's UltraCoat process for battery safety and the use of the Company's amorphous alumina tri-hydroxides (ATH) for the Direct Lithium Extraction (DLE) market.
- Continued sapphire boule production from the Company's initial 2 crystal growth units for dispatch to end-users for qualification testing.

Further details on these activities are outlined below.

HPA FIRST PROJECT

About the HPA First Project

The Company's HPA First Project represents the commercialisation of the production of high purity aluminium materials using the Company's proprietary, exclusively licensed 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) and 5N (>99.999% purity) aluminium materials for sale into high technology markets including the semiconductor, lithium-ion battery and LED lighting sectors.

Alpha is in production at its HPA First Project Stage 1, Precursor Production Facility (PPF) across the Company's full range of high purity aluminium materials and has commenced construction of Stage 2 of the HPA First Project.

On 20 May 2024, Alpha released a final Definitive Feasibility Study and FID for Stage 2 of the HPA First Project, being the full commercial scale deployment of the process technology on the same site.

Alpha has commenced construction of Stage 2 of the HPA First Project, which will be the world's largest, single site facility for the manufacture of high purity aluminium materials.

HPA FIRST PROJECT STAGE 2

Earthworks

During the quarter Stage 2 earthworks were materially advanced with good progress on site clearing, clean fill import and compaction. The Stage 2 site works construction village is in place and operational. The Alpha construction team in Gladstone is now fully established and overseeing works.



HPA First Project site showing earthworks well advanced, Stage 1 PPF and Orica Yarwun to the right of picture.

Long lead equipment packages

Engineering and Procurement activities are progressing to finalise major equipment vendor data and secure delivery dates. The Stage 2 Project team is accelerating final process area design and continue to award long lead critical path packages, with orders already place for:

- Rotary dryers
- Calciners
- Solvent Extraction (SX)
- Pressure Filters
- Cooling Towers
- Aluminium Nitrate Centrifuge

Utilities

Stage 2 raw water connection from Gladstone Area Water Board has been installed and is ready for connection.

Ergon Energy connection design works progressing with key equipment orders in place by the end of the year.

Jemena is also progressing an updated proposal for a new natural gas let down station to be located on the property and connected to the Queensland Gas Pipeline (QGP).

MMI-C Grant

A further \$14.85M (inclusive of GST) was received in September as a milestone payment from the \$45.0 million Commonwealth Government Modern Manufacturing Initiative (MMI) grant.

Stage 2 Groundbreaking Ceremony

On 2 September 2024, Alpha was pleased to mark the commencement of the Stage 2 Project construction with a Groundbreaking ceremony held on the Project site.

The event was attended by a number of key Project stakeholders including community representatives, Orica, project contractors and Alpha staff and directors.



Alphas senior executive team at the formal Stage 2 Groundbreaking ceremony.

HPA FIRST PROJECT - STAGE 1

Across the quarter Stage 1 operations remained focused on servicing customer qualification test orders and small scale sales orders for:

- Alpha and gamma phase HPA
- Sintered HPA tablets
- Nano-HPA
- High purity alumina hydrates (boehmite (Al-O-OH) and 'ATH' (or Al(OH)₃); and
- Aluminium nitrate (Al-nitrate)

The HPA and alumina hydrate circuits continue in stable operations, with HPA production levels continuing to exceed design capacity and reaching >1,200kg per week and alumina hydrate production reaching >100kg (wet cake) per day.

Aluminium Nitrate circuits re-starting

With the establishment of stable operations of the high purity alumina and high purity aluminium-hydroxide circuits, the aluminium solvent extraction (SX) circuit and high-purity Al-nitrate circuits have now been recommenced to provide high purity precursor material for the plant and to supply ongoing Al-nitrate product demand.

PRODUCT MARKETING

First DLE test results confirm 2x standard lithium extraction rates

Alpha's ability to manufacture novel, amorphous, nanocrystalline, high purity alumina tri-hydroxides (ATH) continues to be of particular interest to end-users for Direct Lithium Extraction (DLE) sorbents.

As per previous updates, Alpha has serviced, or is servicing, 13 separate DLE end-user test product orders. DLE counterparties range from technical service providers, global materials businesses to petroleum majors looking to extract lithium from oil-field brines.

Alpha has now received the first test results from a leading DLE sorbent manufacturer which have confirmed Alpha's material is easier to process into a final sorbent and has generated lithium extraction rates of approximate twice the level of the market incumbent sorbents. Although still in early stage, this is considered strongly encouraging and Alpha has immediately provided a larger volume sample for test work.

Results from test work materials provided to multiple other end-users are still pending.

Semiconductor sector

Alpha has further advanced the marketing of its HPA and high purity alumina hydrate products as precursors for thermal interface materials in the rapidly growing semiconductor packaging sector. A key Japan based end-user has confirmed Alpha's materials have passed a key quality threshold with zero detectable uranium (U) or thorium (Th) impurities.

Accordingly, and at the end-user request, Alpha has now submitted quotations to this end-user for the next scale-up of end-user testing, for a total 1,200kg of samples.

HPA tablet qualification

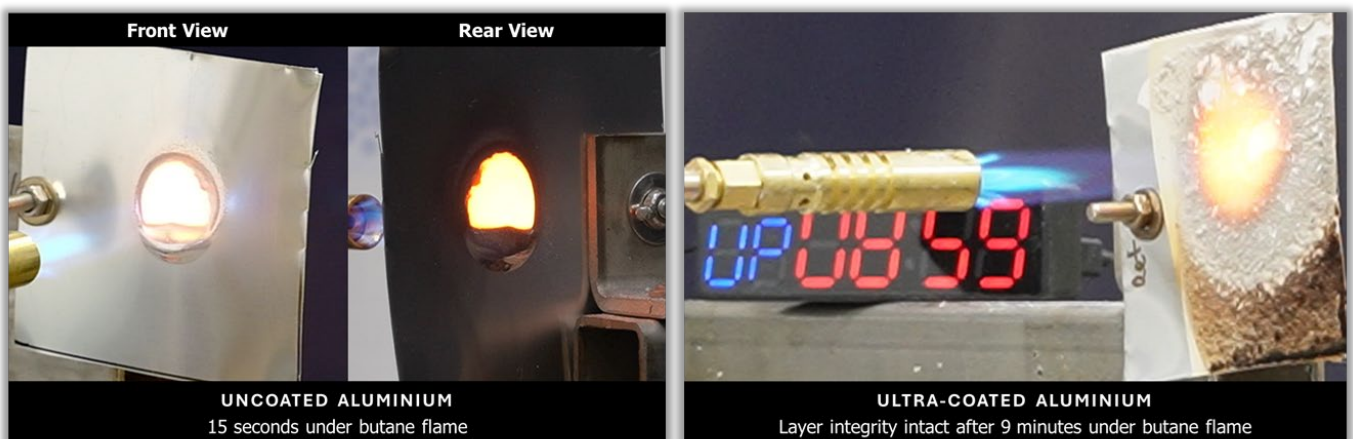
Alpha has passed qualification to supply HPA tablets to a synthetic sapphire glass manufacturer in an arrangement considered non-competitive to Alpha's own sapphire growth plans. Accordingly, and at the end-user request, Alpha has now submitted quotations for commercial supply.

UltraCoat Safety confirmed

Flame testing has confirmed the safety benefits of the UltraCoat process, which utilises Alpha's proprietary ultra-high purity Al-Nitrate precursor to apply controlled thickness high-purity aluminium-oxide and hydroxide coatings to a range of surfaces within the Li-B cell environment.

Flame testing has now confirmed that aluminium Li-ion cell casings utilising the UltraCoat process can withstand $>1,000^{\circ}\text{C}$ thermal runaway conditions for >9 minutes, when compared to <15 seconds on uncoated aluminium cell casings. Alpha has successfully filed a provisional patent for the UltraCoat process.

Alpha is currently engaged with >15 anode developers, battery makers and cell casing manufacturers to qualify the UltraCoat process.



UltraCoat can be applied to chemically coat:

- Li-ion battery anode and cathode active materials
- Li-ion battery cell casings
- Li-ion electrode sheets

Li-Battery anode UltraCoat submitted for final battery qualification

Alpha has advanced the test work and collaboration with a number of Li-ion battery anode producers and developers and is pleased to note that a global leader has completed internal anode coating test work and full battery life-cycle test work to confirm the material performance and safety benefits of the use of Alpha's high purity Al-nitrate in the coating process. Accordingly, the counterparty has submitted coated anode materials to their major Li-ion battery customers for final qualification, which is expected to complete in calendar 2024.

The wider regulatory and EV manufacturer focus on Li-ion battery fire prevention is considered strongly favourable for the accelerated testing and adoption of this Alpha's UltraCoat technology. Alpha's commercial scale aluminium nitrate production is currently under expansion with Stage 2, which will support increased production of the UltraCoat technology.

Product orders

Alpha continues to receive and service a high volume of test orders, consolidating market signals for robust and growing market demand. In the September quarter, 64 separate product test and/or sales orders were received.

Sales orders have included a 500kg HPA sale order for LED phosphor manufacture to an EU based end-user, to be completed in early October 2024.



Alpha phase (LHS) and gamma phase (RHS) HPA orders ready for shipment from Stage 1

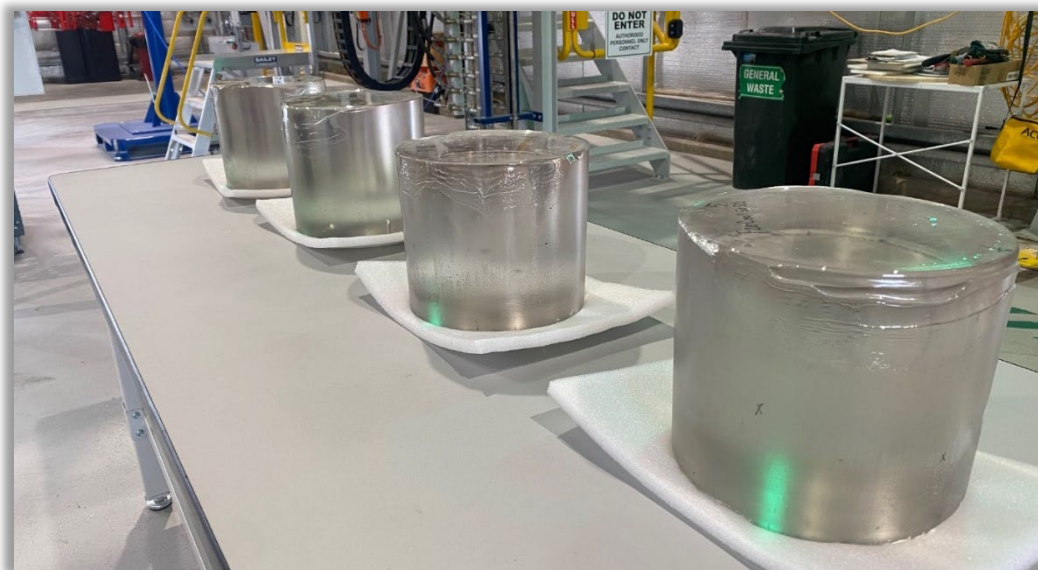
ALPHA SAPPHIRE



Alpha Sapphire is a 100% owned Alpha subsidiary dedicated to the commercialisation of the growth, processing and sale of high value synthetic sapphire glass utilising Alpha's high purity alumina feedstock.

Synthetic sapphire glass is a critical, high-value input into LED lighting, and a range of high technology optical applications. Its use and demand profile are linked to the growth of key technologies including mini and micro-LED displays and power-semiconductors.

During the quarter Alpha continued sapphire growth cycles of high-quality synthetic sapphire boules from the initial 2 (Phase A) sapphire growth units in Gladstone.



Raw, 30kg single crystal sapphire boules generated from an August production run

Following successful test work, Alpha Sapphire has now been qualified with a leading sapphire optics supplier who provide sapphire blanks as scratchproof lenses to many leading premium watch makers.

Pleasingly this has precipitated maiden sapphire sales, with first sapphire now being shipped for sale (*see image below*).

Additional sapphire boules are also being despatched for processing to synthetic sapphire wafers to service qualification enquiries for LED, semiconductor and sapphire optics end-users.



5 sapphire boules packed for shipping to sapphire optics buyer.

CORPORATE

Receipt of A\$6.2M R&D Tax Incentive

In July 2024 the Company received an R&D Tax Incentive refund of A\$6.2 million for the 2022/23 financial year. The R&D Tax Incentive is an Australian Government program under which companies receive cash refunds for 43.5% of eligible expenditure on research and development. The incentive refund results from R&D expenditure on the Company's HPA First Project.

Related Party Expenditures

During the September quarter, aggregate payments to related parties and their associates totalled \$546,524 comprising \$496,524 of payments to Directors or Director related entities for Directors' consulting fees and \$50,000 in fees were paid to MIS Corporate Pty Limited ('MIS'), an entity in which Directors Norman Seckold and Peter Nightingale have a controlling interest. MIS provides full administrative services, including administrative, project commercial services, accounting, business development, staff, rental accommodation, services and supplies to the Group.

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Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity

Alpha HPA Limited

ABN

79 106 879 690

Quarter ended ("current quarter")

30 September 2024

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	5	5
1.2 Payments for		
(a) research and development	(518)	(518)
(b) product manufacturing and operating costs	(4,504)	(4,504)
(c) advertising and marketing	(134)	(134)
(d) leased assets	-	-
(e) staff costs	(2,747)	(2,747)
(f) administration and corporate costs	(2,273)	(2,273)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	1,461	1,461
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	19,862	19,862
1.8 Other (GST on Gov grants)	1,358	1,358
1.9 Net cash from / (used in) operating activities	12,510	12,510
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) businesses	-	-
(c) property, plant and equipment	(17,479)	(17,479)
(d) investments	-	-
(e) intellectual property	-	-
(f) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
2.2	Proceeds from disposal of:		
	(a) entities	-	-
	(b) businesses	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) intellectual property	-	-
	(f) 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	(17,479)	(17,479)
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	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(5)	(5)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	(5)	(5)
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	189,619	189,619
4.2	Net cash from / (used in) operating activities (item 1.9 above)	12,510	12,510
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(17,479)	(17,479)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(5)	(5)
4.5	Effect of movement in exchange rates on cash held	57	57
4.6	Cash and cash equivalents at end of period	184,702	184,702

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	184,702	189,619
5.2	Call deposits	-	-
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)	184,702	189,619

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	547
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<i>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.</i>		

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<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>		
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	30,000	3,000
7.4 Total financing facilities	30,000	3,000
7.5 Unused financing facilities available at quarter end	-	
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 provided by QIC Critical Minerals and Battery Technology Fund (QCMBTF) for acceleration of 50 sapphire growth units. Security is first ranking security over shares in Alpha Sapphire and its assets. Repayment amount is 4.35% of gross revenue (less power costs) generated from Alpha Sapphire from sapphire product sales, on the first 2,500 tonnes of sapphire product sales. Greater of full repayment amount and the full commitment becomes repayable in prescribed circumstances (including events of default).		

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	12,510
8.2 Cash and cash equivalents at quarter end (item 4.6)	184,702
8.3 Unused finance facilities available at quarter end (item 7.5)	-
8.4 Total available funding (item 8.2 + item 8.3)	184,702
8.5 Estimated quarters of funding available (item 8.4 divided by item 8.1)	N/A
<i>Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.</i>	
8.6 If item 8.5 is less than 2 quarters, please provide answers to the following questions:	
8.6.1 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?	
Answer: N/A	
8.6.2 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?	
Answer: N/A	
8.6.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
Answer: N/A	
<i>Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.</i>	

Compliance statement

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

Date: 30 October 2024.

Authorised by: By the Board.
(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 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 standard applies 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.