

The Manager Companies - ASX Limited
20 Bridge Street
Sydney NSW 2000

ASX Announcement
30 October 2023
(12 pages)

ACTIVITIES FOR THE QUARTER ENDED 30 SEPTEMBER 2023

STAGE 1 – PPF

- Cumulative Al-nitrate production of +200 tonnes at target 5N (99.999%) purity
- Installation of HPA circuit into Stage 1 PPF near completion with commissioning of installed equipment well advanced

PRODUCT MARKETING

- Independent market analysis confirms firmer HPA pricing environment
- Al-Nitrate qualification completed with global chemical company
- Ultra-Coat testwork expands to include 13 LiB anode end-users
- Continued HPA sales to South Korea semiconductor sector @ US\$35/kg
- Second stage testwork commenced for large volume ATH application
- Expansion of test sampling of low-carbon ATH to existing HPA producers
- ISO9001/ISO14001/ISO45001 certification received

ALPHA SAPPHIRE

- Up to \$30 million project funding from Queensland Critical Minerals and Battery Technology Fund (QCMBTF)
- Investment to accelerate the roll-out of the first 50 sapphire growth units
- Investment secures Alpha Sapphire production for Queensland
- Establishes a high value customer for the HPA First Project

FULL SCALE PROJECT

- Strategic Assessment Phase (SAP) approval from NAIF confirmed
- Letter of Support from EFA for Critical Minerals Facility funding
- \$21.7M IPP Grant and \$45M MMI-C Grant timeline alignment

CORPORATE

- Expansion of Intellectual Property rights
- Appointment of Craig Jones as Chief Financial Officer
- Inclusion in S&P ASX 300 Index
- Material R&D Claim lodged with ATO

PROJECTS UPDATE

The Board of Alpha HPA Limited (**Alpha** or **the Company**) is pleased to provide the September 2023 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:

- LED lighting;
- Lithium-ion batteries; and
- Semiconductors.

Activities in the September quarter were focused on:

- Continued production of 5N (>99.999%) purity aluminium nitrate (**Al-nitrate**), with cumulative production now at > 200 tonnes of 5N purity.
- Deployment of the Federal Government's \$15.5M Critical Minerals Development Program (**CMDP**) to finalise the installation and commissioning of equipment for the PPF's HPA circuit which will expand the facility's production to cover the full suite of the Company's high purity aluminium product range.
- Expanding product marketing and product development activities of the Company's suite of ultra-high purity precursor and alumina products.
- Ongoing process flow sheet refinement for the production of high purity (5N) alumina tri-hydroxide (**ATH**).
- Continued expansion and implementation of the Company's collaboration with the Ebner-Fametec Group to accelerate the Company's stage entry into the downstream production of synthetic sapphire glass with this strategy assisted by a \$30M funding commitment from QIC.
- Servicing the multiple workstreams related to completing Project financing discussions with Government lending agencies to facilitate a Final Investment Decision for the full scale, Stage 2 of the HPA First Project.

Further details on these activities are outlined below.

STAGE 1 – PPF

HPA circuit expansion

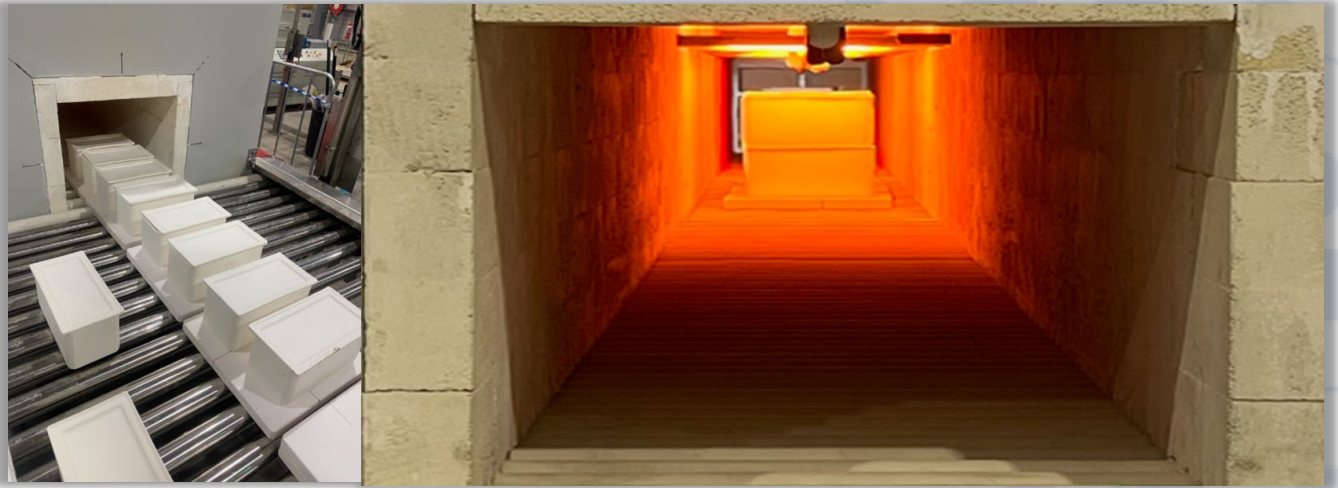
By the end of the quarter the Company was nearing the final stages of deploying the \$15.5M grant awarded under the CMDP to install a small-scale commercial high-purity aluminas (**HPA**) circuit within Stage 1 and expand the capability of the Stage 1 PPF to include Alpha's full high purity aluminium product range.

Most major equipment orders have been delivered and installed, with commissioning activities underway.

The HPA circuit is on track to be fully commissioned and in production by the end of calendar 2023 and will facilitate:

- the expansion of Stage 1 PPF production capacity of aluminium nitrate and aluminium sulphate;
- the design capacity to produce up to 15tpa of additional capacity of HPA production, this capacity is now being revisited to the upside, see below;
- Nano HPA production to service end-users in the semi-conductor (**CMP**) sector;
- the capability to produce up to an additional 10tpa of high purity boehmite;
- the capacity to produce 15-25tpa of high purity alumina-trihydrate (ATH) and;
- the production of HPA tablets for synthetic sapphire glass growth.

The HPA precursor area, which feeds the HPA circuit is now fully commissioned.



HPA tunnel kiln – in final commissioning

HPA calcination circuits

The HPA tunnel kiln and 4 of 5 rotary kilns have been installed, are operational and in final stage commissioning.

These circuits will allow Alpha to service product orders for a range of end users, including HPA sales for the South Korean semi-conductor sector (Ref: ASX 22 August 2023) and for the manufacture of sintered HPA tablets for sapphire glass growth.

Encouragingly, throughput rates through tunnel kiln commissioning indicate throughput times are likely to be reduced from 24 hours, possibly down to as low as 8 hours, indicating potential for a 2 to 3 times throughput benefit over design.

HPA milling circuits

The soundproof jet mill enclosure has been installed and connected to ventilation and is currently awaiting arrival for the scaled-up jet mill, due in November.

The HPA lined three-stage rolls crusher, to be used to meet custom HPA specifications developed with customers, is also installed.



Jet mill enclosure (LHS) and HPA rolls crusher (RHS) installed

Boehmite and ATH circuit

This high purity boehmite and ATH circuit is largely installed, with minor pipework and valve installation being progressed prior to commissioning.

Other

Various product conveyors and materials handling equipment are being installed and commissioned.

The HPA dryer unit has been installed, and commissioning commenced. This will be utilised by both eth HOA and ATH production circuits.



HPA dryer installed into Stage 1

The HPA tablet sinter oven, a key piece of equipment to accelerate production capacity of HPA tablets for sintered glass, has also now arrived on site and is undergoing installation and electrical connection.



Sinter oven for HPA tablets – delivered to site

Stage 1 production

During the quarter stable production of high purity Al-nitrate precursor continued, with cumulative Al-nitrate production having now reached approximately 200 tonnes at the target 5N (99.999%) purity level. Production levels are being maintained at around 850kg per day. Approximately 50% of the Al-nitrate production has been dedicated to conversion into HPA once the Stage 1 HPA circuit is fully commissioned. The remainder is being allocated for sales once final contracts are concluded.

Ahead of the commissioning of the new HPA circuitry, the Stage 1 Facility is producing 4N purity alpha phase and gamma phase HPA at small scale to support the Brisbane facility in supplying sales and product test orders. This includes the ongoing production of custom-shaped sintered HPA tablets for sapphire growth testing by Ebner-Fametec in Austria.

These production lines are now servicing approximately 500kg of HPA product orders across a range of potential customers.

The Stage 1 PPF is also supplying Al-nitrate to the Brisbane facility to service end-user test orders for high purity boehmites (Al-O-OH), high purity alumina trihydrate (ATH) and high purity nano-aluminas.

Solar Array

During the quarter the 360kW installation of the rooftop solar array was completed and is now operational and undergoing final testing. During peak generation, the rooftop array is estimated to be capable of generating ~30% of the Stage 1 PPF electricity demand.



Stage 1 PPF – showing completed rooftop solar installation

PRODUCT MARKETING

Alpha is servicing a wide range of product orders across a number of high-technology sectors, namely:

- **Lithium-ion battery (LiB) sector:** With a focus on cathode coating & dopants and anode coatings
- **LED Lighting sector:** With a focus on HPA for synthetic sapphire substrates and LED phosphors
- **Semi-conductor sector:** With a focus on materials for Chemical Mechanical Polishing (CMP) and thermal interface materials for semi-conductor packaging

Alpha is utilising capacity from both the Stage 1, Precursor Production Facility (**PPF**) in Gladstone, QLD and also the Company's Product Development facility in Brisbane to service various stages of its expanding market outreach which includes:

- servicing existing sales orders
- delivering into tonnage scale orders for end-user production testwork
- servicing technical qualification, usually multiple test orders
- delivering initial orders to demonstrate capability

Independent market analysis confirms firmer HPA pricing environment

During the quarter Alpha received an updated, independent analysis of the HPA and related products market, commissioned as part of the HPA First Project financing requirements.

The updated market analysis, completed by the CM Group, confirmed a firmer pricing environment for >4N purity (>99.99%), a thematic that is consistent with Alpha's own observations from its most recent product marketing activities and sales discussions, and consistent with Alpha's capability.

The CM Group price forecasts are set out below, noting the forecast:

- is specific to the >4N purity markets targeted by Alpha;
- specific for sales to ex-China markets only, and;
- specific to approved and qualified commercial HPA suppliers.

Calendar Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
High Purity Alumina (HPA)										
HPA Spec 1 - Unmilled	10 - 28	15 - 20	25 - 30	30 - 40	30 - 40	30 - 40	30 - 40	30 - 40	30 - 40	30 - 40
HPA Spec 2 - Milled	20 - 30	20 - 30	30 - 35	35 - 45	35 - 45	35 - 45	35 - 45	35 - 45	35 - 45	35 - 45
HPA Spec 3 - Custom	45 - 60	45 - 60	45 - 80	45 - 80	45 - 80	45 - 80	45 - 80	45 - 80	45 - 80	45 - 80
High Purity Alumina (HPA) Pucks										
Standard	15 - 25	20 - 25	30 - 35	35 - 40	35 - 40	35 - 40	35 - 40	35 - 40	35 - 40	35 - 40
High Density	30 - 60	30 - 60	45 - 55	50 - 60	50 - 60	50 - 60	50 - 60	50 - 60	50 - 60	50 - 60
Gamma Alumina										
Gamma Spec 1	15 - 25	15 - 25	20 - 25	25 - 30	25 - 30	25 - 30	30 - 35	30 - 35	30 - 35	30 - 35
Gamma Spec 2	8 - 15	12 - 18	20 - 25	25 - 35	25 - 35	25 - 35	25 - 35	25 - 35	25 - 35	25 - 35
Gamma Spec 3 - Milled	10 - 20	15 - 25	15 - 25	25 - 30	25 - 30	25 - 30	25 - 30	25 - 30	25 - 30	25 - 30
Spherical Gamma	n/a									
Alumina Trihydrate (ATH)										
ATH - Milled	7 - 12	12 - 18	20 - 25	25 - 35	25 - 35	25 - 35	25 - 35	25 - 35	25 - 35	25 - 35
ATH - Unmilled	5 - 10	7 - 10	12 - 15	15 - 20	15 - 20	15 - 20	15 - 20	15 - 20	15 - 20	15 - 20
Nano Alumina										
NAP - Spec 1	40 - 60	40 - 60	40 - 60	40 - 60	40 - 60	40 - 60	40 - 60	40 - 60	40 - 60	40 - 60

CM Group pricing forecast for > 4N purity materials to ex-China markets - all prices in US\$/kg (real 2023)

Al-Nitrate qualification completed with global chemical company

During the quarter Alpha confirmed technical qualification with a European based global chemicals company for the use of its high-purity Al-Nitrate in the manufacture of a high-volume catalyst. The Company has advanced commercial supply discussions and is hopeful of concluding these within one month.

Alpha is already certified with European Union's Regulation (EC) 1907/2006 (**REACH**) for the export of Al-Nitrate to the EU.

Ultra-Coat testwork expands to include 13 LiB anode end-users

Across the quarter Alpha continued to expand the uptake in the testing of Al-oxide coated graphite anode materials using ultra high purity Al-Nitrate precursors (Alpha's '**UltraCoat**' process). The UltraCoat process provides for higher capacity, faster cycling LiB cells, and replaces the traditional carbon-pitch coat which represents the incumbent graphite anode coating process.

Testwork has now expanded to include 13 LiB anode manufacturers and developers including the coatings on natural graphite, synthetic graphite and silicon based LiB anode materials.

As noted in July, Alpha has already passed first round qualification for this process with a US-based anode developer.

South Korean semiconductor sector sales

In line with the LOI received in July 2023, Alpha continued to allocate a proportion of its HPA production into sales to the South Korean semi-conductor sector.

Since July, Alpha has completed 90kg of HPA sales at US\$35/kg.

The LOI confirms the manufacturer's interest in:

- the purchase of 1 metric tonne per month of bespoke HPA powder from January 2024, to be serviced from Stage 1 PPF; and
- the purchase of up to 1,000 metric tonnes per year of bespoke HPA powder from March 2026, to be serviced from the full scale Stage 2 HPA First Project.

Testwork advanced for large volume ATH application

During the quarter Alpha advanced to second stage testwork for a large volume application using its high purity alumina trihydrate (ATH) for the manufacture of direct lithium extraction (DLE) adsorbents.

The Company is now preparing larger volume samples to service second stage testwork,

Expansion of test sampling of low-carbon ATH to existing HPA producers

Across the quarter Alpha continued to service test order requests for a range of established manufacturers of HPA. The focus of the testwork is the Company's high purity ATH ($\text{Al}(\text{OH})_3$), and high-purity pseudo-boehmite (Al-O-OH), which are both produced inside the same process area.

The testwork is based on Alpha potentially supplying a high-purity HPA-precursor product with a lower CO_2 footprint to assist the manufacturers in providing lower carbon final product.

ISO9001/ISO14001/ISO45001 certification

Following a final successful site audit, Alpha have now received ISO (International Organization for Standardization) certification with respect to:

- ISO9001: Quality Management
- ISO14001: Environmental Management
- ISO45001: Occupational Health and Safety management

These are key certifications as an international specialty chemicals supplier,

Production Focus

Across the quarter Alpha continued to service multiple product orders, (both new and follow-on) from numerous counterparties utilising capacity from both the Stage 1 Precursor Production Facility (PPF) in Gladstone, and the Company's Product Development facility in Brisbane.

Alpha's current production focus is set out below:

Expanding HPA production from Stage 1 to meet sales demand

With the HPA production line within Stage 1 nearing completion Alpha will be able to fulfil several large-scale sales orders including:

- 1 tonne production order for the South Korean semiconductor sector, from January 2024
- 1 tonne production order for St Gobain (US)
- 1 tonne production order for C4V (US)

HPA tablets for sapphire glass

Alpha continued to manufacture custom HPA tablets for ongoing technical qualification with the Ebner-Fametec sapphire growth units, as well as to start building an HPA tablet stockpile ahead of the commissioning of the Alpha Sapphire growth units in March quarter 2024.

In addition, Alpha is servicing tablet orders for a niche, high value sapphire glass production for an end-user in Japan.

Multiple nano-HPA orders from semi-conductor CMP sector

Alpha is servicing multiple orders for a total of 60kg of nano HPA material, most of which are second stage orders following successful first stage testwork.

Multiple Al-Sulfate orders for LiB cathode manufacturers

The Company is completing high purity Al-Sulfate orders for LiB cathode manufacturers. In three cases these are second round test orders. A further two end-users in the catalyst sector are awaiting Al-Sulfate orders.

Multiple gamma HPA orders for LiB cathode manufacturers

The Company is completing multiple second round test orders for high purity gamma HPA for three LiB cathode manufacturers.

STAGE 2 – FULL SCALE PROJECT

Project Finance Facilities

Alpha has been progressing a Project Finance debt facility to be joint funded by the following Australian Government financing agencies (**Lenders**):

- The Northern Australia Infrastructure Facility (**NAIF**), and;
- Export Finance Australia (**EFA**)

Alpha has advanced due diligence and negotiating funding terms with the Lenders and is pleased to report, that, in respect of the project financing for the Stage 2 HPA First Project

- The NAIF has now issued formal notice advising Strategic Assessment Phase (**SAP**) approval and;
- EFA has concurrently issued a conditional and non-binding Letter of Support (**LOS**)

In each case, these developments allow the Lenders to proceed with due diligence. A final binding commitment from NAIF and EFA would be subject to various conditions as is customary for a debt facility of this nature and includes completion of due diligence satisfactory to the Lenders. Alpha is already supporting an intensive due diligence (**DD**) process including:

- Independent Technical Engineers (**ITE**) review of multi-product HPA First Project;
- Legal & Commercial DD;
- Environment & Social DD; and
- Independent Market Reports.

With the NAIF SAP and EFA LOS in place, and the DD processes well advanced, Alpha is targeting Final Investment Decision (**FID**) in alignment with the Government Grants (see below).

About Export Finance Australia

EFA is Australia's export credit agency (ECA). EFA provides commercial finance for export trade and overseas infrastructure development. From small and medium sized enterprises (SMEs) to large corporates, foreign Governments and infrastructure projects, EFA helps Australian businesses take on the world. In doing so, EFA finance supports Australia's economic security and regional resilience.

EFA administers the Australian Government's National Interest Account, which currently includes the Critical Minerals Facility, the Defence Export Facility and lending for the Australian Infrastructure Financing Facility for the Pacific.

About NAIF

The Northern Australia Infrastructure Facility (NAIF) is a Commonwealth Government development financier, investing for impact in Northern Australia. NAIF's primary purpose is to accelerate infrastructure development and thereby drive transformational growth in northern Australia by innovative financing that:

- generates public benefit including that outside of what is captured by the project proponent.
- encourages longer term growth in the economy and population of northern Australia.
- encourages private sector participation in the financing of northern Australia's infrastructure needs; and
- facilitates sustainable Indigenous participation, procurement, and employment outcomes.

The Company is now in the mature phases of market outreach and project financing with respect to the full scale Stage 2 HPA First Project, with the expectation of positioning Stage 2 to Final investment Decision.

Government Grants

Alpha is concurrently working with the Grant administrators to align key milestone dates of the announced Government Grants with the Project Financing timetable.

- \$21.7M QLD Govt IPP Grant – FID date has been extended to on or before 31 Jan 2024
- \$45M Federal Govt MMI-C Grant – application submitted to extend FID date.

\$30M Alpha Sapphire funding from QCMBTF

During the quarter the Company announced it has agreed key terms with the trustee of the QIC Critical Minerals and Battery Technology Fund (**QCMBTF**) for up to \$30 million of project funding for the Company's 100% owned subsidiary, Alpha Sapphire Pty Ltd (**Alpha Sapphire**). The announcement followed a 6 week due diligence period by QCMBTF.

The proceeds of the project funding will be applied to accelerate the roll-out of the initial 50 sapphire growth units (Phases A and B) contemplated in the LOI announced with Austrian technology partner Ebner Industrieofenbau GmbH (**Ebner**) and Ebner subsidiary Fametec GmbH (**Fametec**) (refer ASX: 23 March 2023 and 5 June 2023).

Summary of Key Terms:

- \$30M facility, subject to full documentation
 - \$3M drawable to reimburse investment in initial 2 sapphire growth units (**Phase A**)
 - \$27M drawable from FID and until December 2024, for Alpha Sapphire to roll-out a further 48 sapphire growth units (**Phase B**), subject to Alpha matching the QCMBTF's investment
- Drawdowns subject to satisfaction of customary conditions precedent including final due diligence and internal investor approvals
- Repayments based on 4.35% x (gross sapphire sales less power costs)
- Repayments capped at 2,500 tonnes of sapphire production
- Sapphire growth units to be located in Queensland

Background

In March 2023, Alpha entered agreements with Ebner-Fametec, to provide for the staged entry by Alpha into the production and sale of synthetic sapphire glass utilising Ebner-Fametec sapphire growth technology and utilising Alpha's custom HPA tablets as feedstock.

Alpha has agreed with Ebner to purchase and roll-out sapphire growth units in the following phases:

- Phase A: Purchase and installation of an initial 2 synthetic sapphire growth units: *Now Underway*
- Phase B: Purchase and installation of a further 48 synthetic sapphire growth units: *Total 50*
- Phase C: Purchase and installation of a further 50 synthetic sapphire growth units: *Total 100*

In June 2023, the agreement between Alpha and Ebner-Fametec was expanded to include a Letter of Intent to work co-operatively on an additional, large-scale expansion of the Australia based sapphire growth installation, to be referred to as the '**Nova Phase**'. The Nova Phase will contemplate the purchase, construction, installation and operation of up to an additional 1,000 synthetic sapphire growth units.

Alpha Sapphire Business Status

Across the quarter the joint engineering teams of Alpha and Ebner-Fametec continued to liaise on the construction and installation layout for the first two sapphire growth units purchased as per Phase A of the Ebner-Fametec agreement. The construction of the units remains on schedule, with first equipment deliveries due late 2023, for installation and commissioning in early 2024 with Alpha HPA supplied sintered pucks from the newly commissioned Stage 1 HPA production. Phase A of Alpha Sapphire is estimated to produce approximately 7 metric tonnes of synthetic sapphire per year and enable large scale qualification samples and small scale sales.

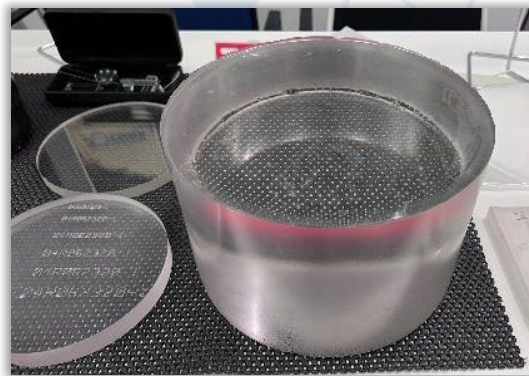
Alpha Sapphire has advanced discussions with respect to securing both a competitive source of renewable energy linked with a suitable site for the Phase B and C roll-out of the Alpha Sapphire business units (100 sapphire growth units).

Interlinked with the renewable energy supply discussions, Alpha has narrowed the evaluation of site locations to three suitable sites in Queensland, which each provide for a rapid deployment of Phase B and Phase C.

The QCMBTF project funding will secure the Phase B & C production units for Queensland, allowing Alpha to finalise commercial terms on site location and energy provision within the next few weeks



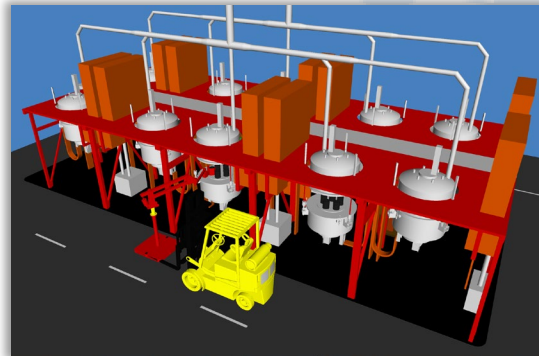
Sintered HPA feed material from the HPA First Project



Sapphire blanks and boule



Twin set of sapphire growth units (Fametec Austria)



Commercial module (10 growth units)

It is anticipated that Alpha Sapphire will become a significant customer of the HPA First Project in Gladstone. Should Alpha Sapphire scale to reach Nova Phase (1,000 units), the business will consume between 3,000 and 4,000 tonnes of HPA per annum.

CORPORATE

Expansion of IP Licensing Rights

During the quarter the Company announced it had satisfied all of the conditions to expand and consolidate its Intellectual Property (IP) rights to the aluminium extraction and refining technology on which the HPA First Project process flow sheet has been developed.

Under the expanded License conditions:

- Alpha has secured the exclusivity of the process IP License for the production of all aluminium bearing products

and;

- Alpha has secured the right to apply the IP globally (previously limited to Australian and North American production centres).

In consideration for securing these expanded IP rights the Company completed the following cash and share based payments:

- \$4.0M cash (plus GST), and
- \$1.0M (plus GST) as fully paid ordinary shares at a price of \$1.1326 per share.

CFO Appointment

Subsequent to quarter end it was announced that Mr Craig Jones will be joining the Company as Chief Financial Officer (**CFO**).

Craig has been working closely with Alpha as advisor to Alpha in respect of the Project Financing of the HPA First Project since April 2020, and has a strong working understanding of the Company and its business.

Craig has nearly 25 years of experience in a wide variety of banking, corporate and financial advisory roles. He spent 18 years in various structured lending teams within leading commercial banks, including ANZ Bank where he worked for 12 years in Sydney, Singapore, Brisbane and London. For the past 5 years, Craig has been a Director in KPMG's Corporate Finance team and responsible for arranging and structuring finance for projects in the energy and natural resources sectors, with a particular focus on critical minerals.

Craig will commence the role on or around 1 February 2024, based in the Alpha Brisbane office.

Current CFO Peter Nightingale will assume the role as Finance Director.

Admittance to S&P ASX 300 Index

During the quarter the Company was admitted to the S&P ASX 300 index.

Material R&D Claim lodged with ATO

During the quarter the Company lodged a material R&D claim which access the ATO's Temporary Full Expensing (TFE) rules as they relate to qualifying capital investment. The Company is expecting a rebate under the claim of \$6.2 million.

Related Party Expenditures

During the September quarter, the aggregate amount of payments to related parties and their associates totalled \$555,615 comprising \$462,115 of payments to Directors or Director related entities for Directors' consulting fees and \$93,500 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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pjn11917

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 2023

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	7	7
1.2 Payments for		
(a) research and development	(1,392)	(1,392)
(b) product manufacturing and operating costs	(2,404)	(2,404)
(c) advertising and marketing	(102)	(102)
(d) leased assets	-	-
(e) staff costs	(2,179)	(2,179)
(f) administration and corporate costs	(1,530)	(1,530)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	178	178
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	746	746
1.8 Other (GST on government grants)	(926)	(926)
1.9 Net cash from / (used in) operating activities	(7,602)	(7,602)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) businesses	-	-
(c) property, plant and equipment	(4,974)	(4,974)
(d) investments	-	-
(e) intellectual property	(2,000)	(2,000)
(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)	49	49
2.6	Net cash from / (used in) investing activities	(6,925)	(6,925)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	3,650	3,650
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	(34)	(34)
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	3,616	3,616

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	20,589	20,589
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(7,602)	(7,602)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(6,925)	(6,925)

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)	3,616	3,616
4.5	Effect of movement in exchange rates on cash held	(1)	(1)
4.6	Cash and cash equivalents at end of period	9,677	9,677

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	9,677	20,589
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)	9,677	20,589

6. Payments to related parties of the entity and their associates

- 6.1 Aggregate amount of payments to related parties and their associates included in item 1
- 6.2 Aggregate amount of payments to related parties and their associates included in item 2

**Current quarter
\$A'000**

556

-

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.

Director fees, salaries and superannuation payments, as well as fees paid to MIS Corporate Pty Ltd, an entity in which Director's Peter Nightingale and Norman Seckold hold a controlling interest which provides administrative, accounting, company secretarial and rental services to the Company.

7. Financing facilities

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.

	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total financing facilities	-	-

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.

	N/A
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8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(7,602)
8.2 Cash and cash equivalents at quarter end (item 4.6)	9,677
8.3 Unused finance facilities available at quarter end (item 7.5)	-
8.4 Total available funding (item 8.2 + item 8.3)	9,677
8.5 Estimated quarters of funding available (item 8.4 divided by item 8.1)	1.27

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.

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: No. Net operating cash outflows in the December quarter are anticipated to be significantly lower than in the September quarter.
The Company has lodged its 2022/23 tax return which includes a \$6.2M R&D rebate expected to be received during the December quarter.
The Company will receive a \$1.0M GST refund in the December quarter compared to a \$0.9M GST payment in the September quarter.
To accelerate the Alpha Sapphire Project, a \$30M facility with the QIC Critical Minerals and Battery Technology Fund is near execution and will deliver \$3M to the Company at 1st Financial Close (ASX announcement 28 September 2023).
Staff costs during the September quarter included year end bonus payments, a non-recurring item.

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: Further to the comments in Item 8.6.1 the Company is progressing to the Final Investment Decision on Stage 2 of the HPA First Project. As announced, funding the HPA First Project will include a Project Finance debt facility with NAIF and EFA and Federal and Queensland Government grants (ASX announcement 4 October 2023).

Given recent Federal Government announcements of support for the Critical Minerals sector, which includes the Company's project, the Company believes the steps to fund its operations will be successful.

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: Yes, see responses to Items 8.6.1 and 8.6.2 above.

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.

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 2023.

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.