



Alpha **HPA**

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The Manager Companies - ASX Limited
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ASX: **A4N**
ASX Announcement
8 September 2020

(3 pages)

HPA FIRST PROJECT AND COMPANY UPDATE

DEMO SCALE PILOT PLANT PRODUCTION

- **Second 'double-flow' solvent extraction (SX) and crystallisation run completed**
- **Production of >500kg of high-purity Al-crystal**
- **Successful production of sintered HPA pellets for sapphire glass/LED customers**
- **Plant capital upgrade complete**

COMMERCIAL

- **Additional HPA test order received from Japan**
- **End-user engagement commenced under the Traxys MOU**
- **Alpha HPA office established in Brisbane**

The Board of Alpha HPA Limited ('Alpha HPA' or 'the Company') is pleased to provide an update on activities for its HPA First Project, representing the evaluation and intended commercialisation of the production of ~10,000tpa of high purity alumina (HPA) using the Company's proprietary licenced solvent extraction (SX) and HPA refining technology.

DEMO SCALE PILOT PLANT PRODUCTION

Alpha HPA is now operating its key process circuits at an expanded 'demonstration scale' capacity, at its Brisbane based Pilot Plant Facility as it works to meet several larger scale HPA test orders, particularly from sapphire glass/LED manufacturers.

Second 'double-flow' SX and crystallisation run completed

Alpha HPA has now completed the second of three planned 'double-flow' SX and Al-salt crystallisation campaigns. These SX and crystallisation campaigns have manufactured >500kg of high-grade intermediary Al-salt, which is being progressively converted into HPA Pre-cursor, and then HPA.

HPA production

Alpha HPA has now manufactured ~250kg of HPA Pre-cursor, of which >15kg has been dried and calcined into HPA. Initial HPA production has been directed at commissioning the HPA pellet press and sintering oven (see below). HPA production is scheduled to accelerate in the second half of September.

Successful production of sintered HPA pellets

Alpha HPA has now commissioned a custom-built pellet press and sintering oven to successfully manufacture its first HPA pellets of the desired size and density to match sapphire glass customer requirements (see photo below).

Plant capital upgrade completed

Additional capital equipment installation required for the Pilot Plant to operate at demonstration scale is now complete with the recent installation of the high-purity, positive pressure Pre-cursor room, pellet press and sintering oven. In addition, the Company's dedicated jet-mill, currently operating at C4V laboratories in NY, USA, is being re-located to the Company's Pilot Plant to allow single-site, end-to-end production of jet-milled powder and pellets per customer requirements.



HPA pellets for sapphire glass end-users (~45 x 45 x 20mm)



Custom HPA pellet press and die-set



High-purity, positive pressure HPA Pre-cursor area



HPA Pellet sintering oven

COMMERCIAL

Market Outreach

Alpha HPA has received an additional test order from a Japanese customer for milled HPA powder. The sample will be shipped from the Company's HPA stockpile held at C4V laboratories in NY, USA.

In addition, the Company has now commenced a new customer outreach program in co-ordination with Traxys under the terms of the Traxys MOU (ref: ASX 20 August 2020).

Alpha HPA office established in Brisbane

Alpha HPA has established a new Brisbane office. Which will house the HPA First Project delivery team, ahead of Project establishment in Gladstone.

Managing Director, Rimas Kairaitis, commented; *"The Company continues to make excellent progress on several technical and commercial work streams critical to readying the HPA First Project for commercialisation."*

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About the HPA First Project

The Company's HPA First Project represents the evaluation and intended commercialisation of the production of ~10,000tpa of high purity alumina (HPA) using the Company's proprietary licenced solvent extraction and HPA refining technology. The technology provides for the extraction and purification of aluminium from an industrial feedstock to produce 4N (>99.99% purity) alumina for the intended use within the lithium ion battery and LED lighting industry. Following a successful testwork program and completion of a Pre-Feasibility Study (PFS), updated in March 2019, Alpha HPA has now completed Definitive Feasibility Study (DFS) based on the successful completion of its Pilot Plant program at its dedicated laboratory facility in Brisbane.

The Company has commenced full permitting, market outreach and project financing processes, with the expectation of positioning the HPA First Project to Final investment Decision.

Competent Persons Statement (Process Development Testwork)

Information in this announcement that relates to metallurgical results is based on information compiled by or under the supervision of Dr Stuart Leary, an Independent Consultant trading as Delta Consulting Group. Dr Leary is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM). Dr Leary has sufficient experience to the activity which he is undertaking to qualify as a Competent Persons under the 2012 Edition of the 'Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Leary consents to the inclusion of the technical data in the form and context in which it appears.

For further information on testwork results and processes see ASX announcements dated 28 July 2020, 19 June 2020, 21 May 2020, 23 April 2020, 25 March 2020, 17 March 2020, 10 December 2019, 21 November 2019, 10 October 2019, 23 September 2019, 28 August 2019, 5 August 2019, 25 July 2019, 2 July 2019, 3 June 2019, 17 April 2019, 7 March 2019, 4 December 2018, 20 November 2018, 6 September 2018, 31 August 2018, 9 July 2018, 30 April 2018, 26 April 2018, 21 March 2018, 6 March 2018, 21 February 2018, 8 December 2017, 30 November 2017, 29 November 2017, 24 November 2017 and 13 November 2017.