ALCORE Process Reaches Major Milestone Delivering 97% Fluorine Recovery

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97% Fluorine Recovery: ALCORE achieves its highest fluorine recovery to date, validating the advanced reactor design.

Process Breakthrough: 85% fluorine recovery from first of two-stage reactor process, the highest ever result from a single stage.

Excellent Process Understanding: Results confirmed theories, providing great confidence for scale-up.

ABx Group (ASX: ABX) ("ABx" or "the Company") is pleased to announce its 83%-owned subsidiary ALCORE has delivered exceptional results from its bath pilot batch reactor, increasing confidence in the technology to operate continuously and at scale.

The reactor, which is located at the ALCORE Technology Centre on the NSW Central Coast, has been designed for the recovery of fluorine from aluminium smelter bath waste to produce high-value hydrogen fluoride.

Since the bath pilot batch reactor was commissioned in October 2023[1], ALCORE has conducted many test runs, typically processing approximately 10kg total of bath and sulfuric acid. ALCORE has reported steady increases in fluorine recovery through optimisation of particle size, reactor temperature, acid concentration and feed ratio.

The latest reactor results have seen ALCORE achieve 97% fluorine recovery, improving upon the previous best of 93%, a result which was already deemed very likely to be sufficient in a commercial plant[2]. The new results provide more flexibility to optimise operation of the commercial plant.

This headline 97% recovery rate was delivered using the bath pilot batch reactor followed by further manual processing of some product material in a separate furnace. In the Company's latest test run, the bath pilot batch reactor delivered 85% fluorine recovery – the highest

[1] ASX Announcement, 8 November 2023
[2] ASX Announcement, 4 June 2024

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achieved from a single stage. The continuous pilot plant reactor will incorporate the two-stage design and will operate under similar processing conditions.

The higher fluorine recoveries achieved using particular process conditions confirmed the Company's theories on the factors that affect fluorine recovery. This further illustrates that ALCORE has developed excellent process understanding and provides great confidence for scale-up via a continuous pilot plant.

ABx Group Managing Director and CEO Mark Cooksey said:
"I am thrilled to see ALCORE deliver such stellar results with near complete recovery of fluorine from aluminium smelter bath. Additionally, the fact the results validated our theories demonstrates that ALCORE has an exceptionally strong understanding of the process, giving great confidence for on-going scale-up."

This announcement is approved for release by the board of directors.

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About ABx Group Limited

ABx Group Limited (ABx) is a uniquely positioned Australian company delivering materials for a cleaner future.

The two areas of focus are:

- Creation of an ionic adsorption clay rare earth project in northern Tasmania
- Establishment of a plant to produce hydrogen fluoride and aluminium fluoride from recycled industrial waste, to replace imports (ALCORE)

There is also a niche business of mining and enhancing bauxite resources for cement, aluminium and fertiliser production.

ABx endorses best practices on agricultural land and strives to leave land and environment better than we find it. We only operate where welcomed.

Disclaimer Regarding Forward Looking Statements

This ASX announcement (Announcement) contains various forward-looking statements. All statements other than statements of historical fact are forward-looking statements. Forward-looking statements are inherently subject to uncertainties in that they may be affected by a variety of known and unknown risks, variables and factors which could cause actual values or results, performance, or achievements to differ materially from the expectations described in such forward-looking statements.

ABx does not give any assurance that the anticipated results, performance, or achievements expressed or implied in those forward-looking statements will be achieved.