ionic
rare earths

ASX Announcement

07 March 2024

IONICRE NEARING FIRST RARE EARTH PRODUCTION FROM MAKUUTU

- **First Mixed Rare Earth Carbonate (MREC) production fast approaching from Makuutu Demonstration Plant;**
- **Construction and commissioning of Phase 1 of the technical facility complete with metallurgical equipment installed and tested, with zero HSE incidents and strong community support;**
- **Mineral processing activity commencing with 24-hour operations to agglomerate and prepare samples for column and crib desorption trials;**
- **Makuutu Demonstration Plant to validate test work and provide strong basis for grade control, mine design, material handling, metallurgical reconciliation, and construction while maximising inputs to the updated Makuutu DFS; and**
- **Makuutu's basket contains 71% magnet and heavy rare earths content, and is one of the most advanced heavy rare earth projects globally available as a source for new supply chains emerging across Europe, the US, and Asia.**

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Ionic Rare Earths Limited ("IonicRE" or "the Company") (ASX: IXR) is pleased to announce the successful completion of construction and commissioning of Phase 1 at its technical facility and Demonstration Plant at the Makuutu Rare Earths Project ("Makuutu") in Uganda. Makuutu is being developed by IonicRE's local Ugandan operating entity Rwenzori Rare Metals Limited ("RRM").

The completion of the Makuutu Demonstration Plant technical facility is a significant milestone for the Company, made possible by the collective efforts of its dedicated team and strong support from the local community. The Demonstration Plant's construction and commissioning proceeded seamlessly, with no Health, Safety, and Environment (HSE) incidents reported throughout the entire process. This achievement underscores IonicRE's unwavering commitment to prioritising safety and environmental stewardship in all aspects of its operations.

Moreover, the Company is proud to highlight its collaboration with the local community, which played a crucial role in the project's success. Many individuals from the local community were employed as casual labourers, fostering economic growth, and strengthening community ties in the process.

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The demonstration technical equipment has been installed and commissioned with the aim of Phase 1 in further optimising metallurgical test work and to provide further technical validation bases for grade control, mine design, material handling, metallurgical reconciliation, and construction activity whilst also supporting Project financing and strategic partner activity.

At the technical facility, front end processing of the material was completed during February 2024 which included the homogenisation, screening, and sizing of materials, which all provided critical inputs to the desorption processes which are progressing well.

In addition, with the primary construction works completed, the Demonstration Plant is in the process of ramping up its operations to a 24-hour schedule to further reduce development time to scale up mixed rare earth carbonate (MREC) production which is expected within the next fortnight.

The initial stage of activity at the Makuutu Demonstration Plant positions IonicRE favourably in meeting the growing demand for these critical elements across the various high-tech industries which are so dependent on rare earths.

Ionic Rare Earths' Managing Director Mr Tim Harrison commented;

"We are delighted to announce the successful completion of our Demonstration Plant Phase 1 commissioning, with expected first MREC production in the next two weeks."

"This represents another step towards development at Makuutu. This work is essential to validating our mine development plan and generating MREC samples for off-take discussions with potential partners over the next few months. The progress at Makuutu also reaffirms our position as a strategic resource for near-term development and a secure, long-term supply of magnet and heavy rare earths for new supply chains to emerge."

"The progress achieved over the past 9 months since works started on site with the Demonstration Plant is a testament to the hard work and dedication of our team, and the unwavering support of the local community."

For more information about IonicRE and its operations, please visit www.ionicre.com.

Authorised for release by the Board.

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Figure 1: Ore loading of agglomerator feed conveyor.

Figure 2: Conveyor to load agglomerator and desorption cribs.

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Figure 3: Agglomerated ore composite samples.

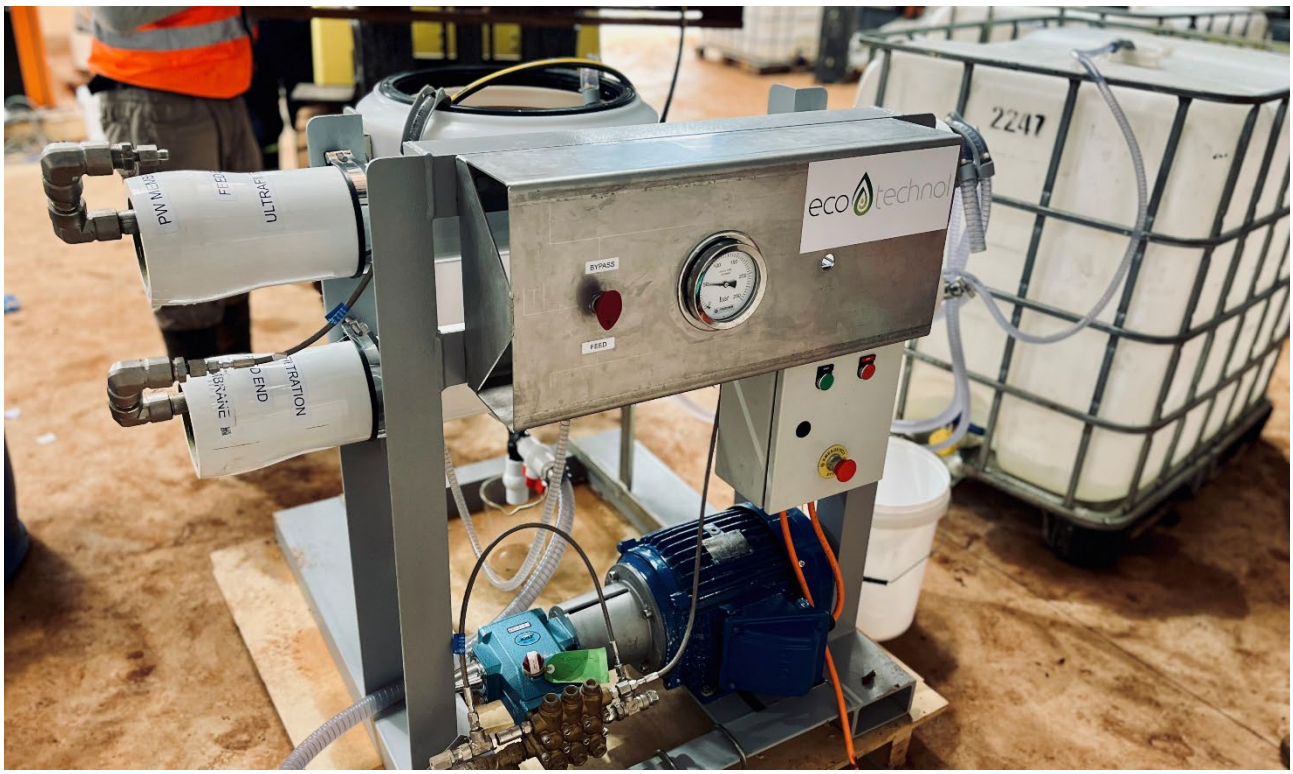

Figure 4: Testing of nanofiltration circuits.

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Figure 5: Analysing results in the XRF room.

Figure 6: Commissioning filter presses for MREC precipitate filtration.

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Figure 7: Process commissioning MREC precipitation.

ABOUT IONIC RARE EARTHS LTD

Ionic Rare Earths Limited (ASX: IXR or IonicRE) is set to become a miner, refiner and recycler of sustainable and traceable magnet and heavy rare earths needed to develop net-zero carbon technologies.

The Makuutu Rare Earths Project in Uganda, 60% owned by IonicRE, moving to 94% ownership in Q1 2024, is well-supported by existing tier-one infrastructure and is on track to become a long-life, low Capex, scalable and sustainable supplier of high-value magnet and heavy rare earths oxides (REO). In March 2023, IonicRE announced a positive stage 1 Definitive Feasibility Study (DFS) for the first of six (6) tenements to progress to mining licence which was awarded in January 2024. The Makuutu Stage 1 DFS defined a 35-year life initial project producing a 71% rich magnet and heavy rare earth carbonate (MREC) product basket and the potential for significant potential and scale up through additional tenements.

Ionic Technologies International Limited ("Ionic Technologies"), a 100% owned UK subsidiary acquired in 2022, has developed processes for the separation and recovery of rare earth elements (REE) from mining ore concentrates and recycled permanent magnets. Ionic Technologies is focusing on the commercialisation of the technology to achieve near complete extraction from end of life / spent magnets and waste (swarf) to high value, separated and traceable magnet rare earth products with grades exceeding 99.9% rare earth oxide (REO). In June 2023, Ionic Technologies announced initial production of high purity magnet REOs from its newly commissioned Demonstration Plant. This

technology and operating Demonstration Plant provides first mover advantage in the industrial elemental extraction of REEs from recycling, enabling near term magnet REO production capability to support demand for early-stage alternative supply chains. In September 2023, Ionic Technologies announced with the support of the UK government, collaboration partnerships to build a domestic UK supply chain, from recycled REOs to metals, alloys and magnets and supplying UK based electric vehicles (EV) manufacturing, with potential to replicate across other key markets.

As part of an integrated strategy to create downstream supply chain value, IonicRE is also evaluating the development of its own magnet and heavy rare earth refinery, or hub, to separate the unique and high value magnet and heavy rare earths dominant Makuutu basket into the full spectrum of REOs plus scandium.

This integrated strategy completes the circular economy of sustainable and traceable magnet and heavy rare earth products needed to supply applications critical to EVs, offshore wind turbines, communication, and key defence initiatives.

IonicRE is a Participant of the UN Global Compact and adheres to its principles-based approach to responsible business.

Forward Looking Statements

This announcement has been prepared by Ionic Rare Earths Limited and may include forward-looking statements. Forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of Ionic Rare Earths Limited. Actual values, results or events may be materially different to those expressed or implied in this document. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward-looking statements in this document speak only at the date of issue of this document. Subject to any continuing obligations under applicable law and the ASX Listing Rules, Ionic Rare Earths Limited does not undertake any obligation to update or revise any information or any of the forward-looking statements in this document or any changes in events, conditions, or circumstances on which any such forward looking statement is based.

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