

ASX:AGE



**WNFM**  
World Nuclear Fuel Market

# Advancing Samphire Uranium Project into Trial Production



**Alligator  
Energy**

Greg Hall – CEO  
Andrea Marsland-Smith – CEO Designate  
WNFM June 2025



## Forward Looking Statements

This presentation contains projections and forward-looking information that involve various risks and uncertainties regarding future events. Such forward-looking information can include without limitation statements based on current expectations involving a number of risks and uncertainties and are not guarantees of future performance of the Company. These risks and uncertainties could cause actual results and the Company's plans and objectives to differ materially from those expressed in the forward-looking information. Actual results and future events could differ materially from anticipated in such information. These and all subsequent written and oral forward-looking information are based on estimates and opinions of management on the dates they are made and expressly qualified in their entirety by this notice. The Company assumes no obligation to update forward-looking information should circumstances or management's estimates or opinions change.

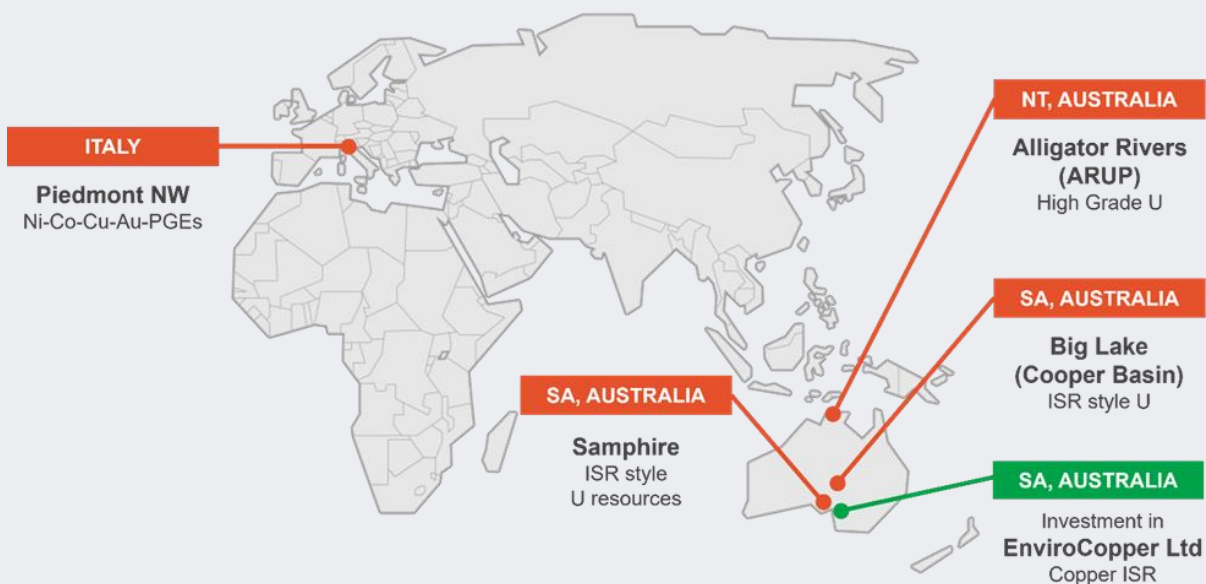
## Competent Person's Statement – Uranium and Previously Reported Information

Information in this report is based on current and historic Exploration and Resource Drilling Results compiled by Dr Andrea Marsland-Smith, who is a Member of the AusIMM. Dr Marsland-Smith is employed by Alligator Energy as Chief Operating Officer (COO) and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity she is undertaking (including 21 years working with ISR uranium development and operations) to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Marsland-Smith consents to the inclusion in this release of the matters based on her information in the form and context in which it appears.

In relation to Exploration results and Mineral Resource estimates referred to in the announcements referred to on slides 3,6,7,8,9 the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. In relation to production target referred to on slide 6, the Company confirms that all material assumptions underpinning the production target, and the forecast financial information derived from the production target, in the initial announcement continue to apply and have not materially changed.



# Company Snapshot – Alligator Energy Limited (ASX: AGE)



## Tier One uranium location

Samphire ISR Uranium Project in South Australia, tier one location with ~40 years of uranium mining and production

## Experienced Team

Experienced ISR exploration, development and production Management team, uranium mining experienced Board, uranium marketing expertise, future offtake from late this decade

## Significant resource with expansion potential

18 million pounds of  $U_3O_8$ , second satellite deposit to drill, and additional exploration target up to 75 million pounds  $U_3O_8$  with potential beyond

## Trial Production

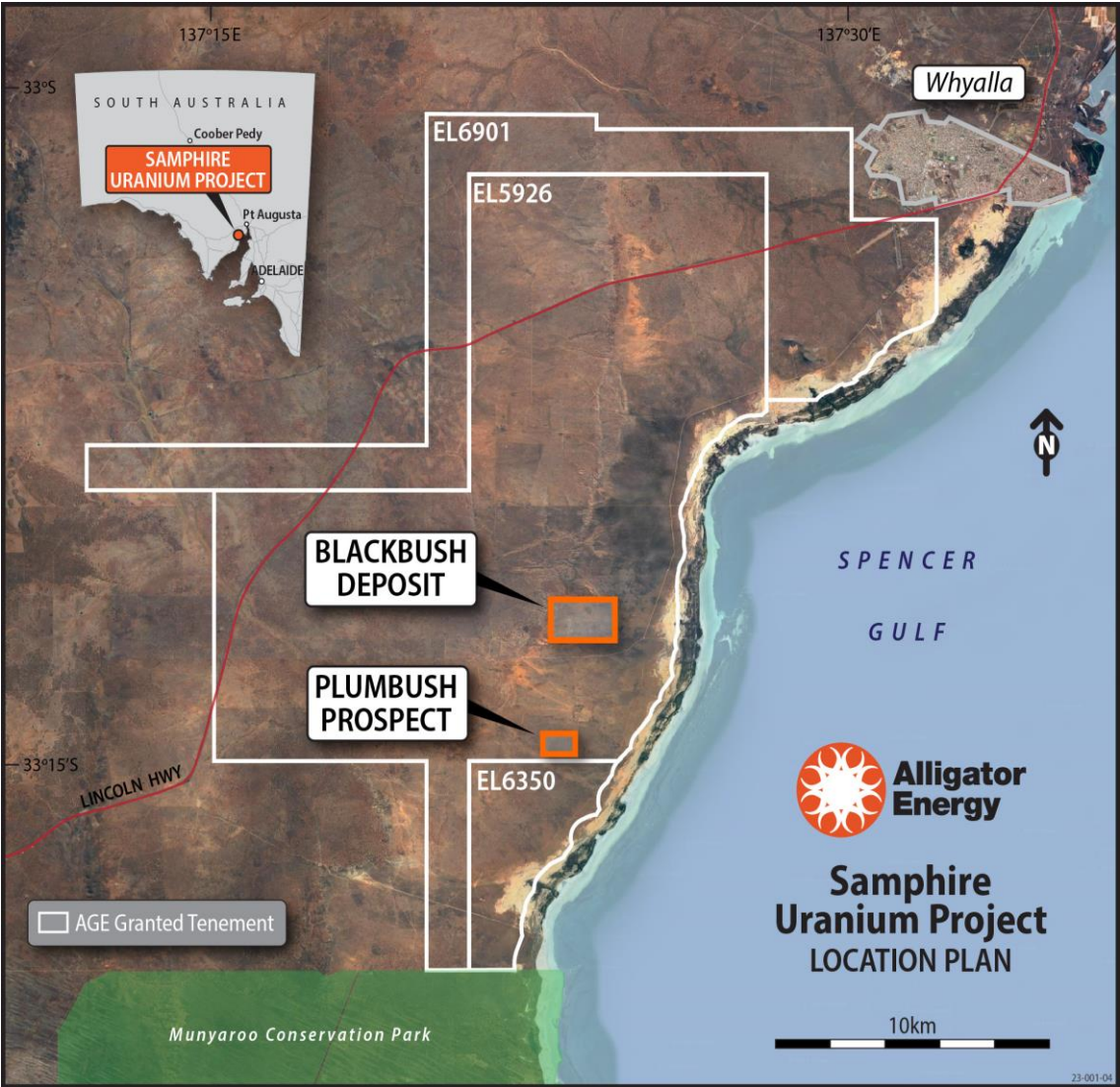
ISR Field Recovery Trial planned for H2 2025 will derisk project, inform the feasibility study, and position Samphire to be SA's next uranium mine

## New uranium discovery

Big Lake Project in Lake Eyre Basin (above Cooper Basin) in SA - a new ISR uranium discovery in a previously untested region



# Samphire Uranium project: South Australia – Experience in Uranium



# Environment Social Governance (ESG) in practice: Operating philosophy

- We aim to add value in all of our decision-making for **shareholders**.
- We wish to provide an engaging, challenging, enjoyable and respectful workplace for our **employees**.
- We respect the rights of **landowners** and **communities** and seek to collaborate for our mutual benefit.
- We respect the cultural heritage and connection to country of **Traditional Owners** and wish to create mutually beneficial opportunities.
- We aim for a low impact on the **environment**, through innovation, use of latest technology, and responsible land management techniques.



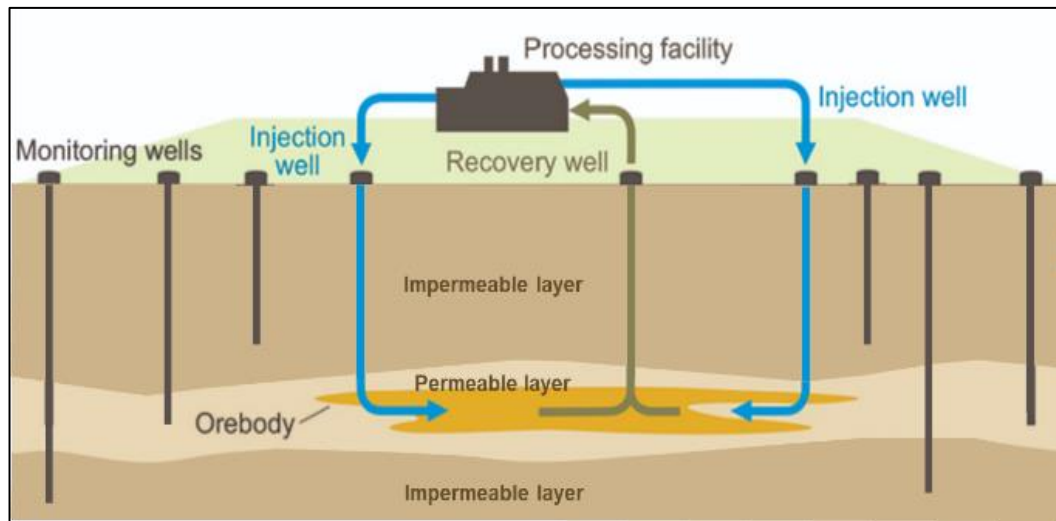
***Our aim is to discover, source and economically extract these needed commodities with an innovative approach, with either zero or minimal impact, and with positive value and experience for our stakeholders and communities.***





# Samphire Uranium project: A highly competitive In-Situ Recovery project

## Conceptual Model of ISR



At 250ppm cut-off grade the Blackbush MRE now stands at an Indicated Mineral Resource of 14.2Mlbs at 786ppm and an Inferred Mineral Resource of 3.8Mlbs at 443ppm, totalling 18.0Mlbs at 676ppm  $U_3O_8$ <sup>1</sup>

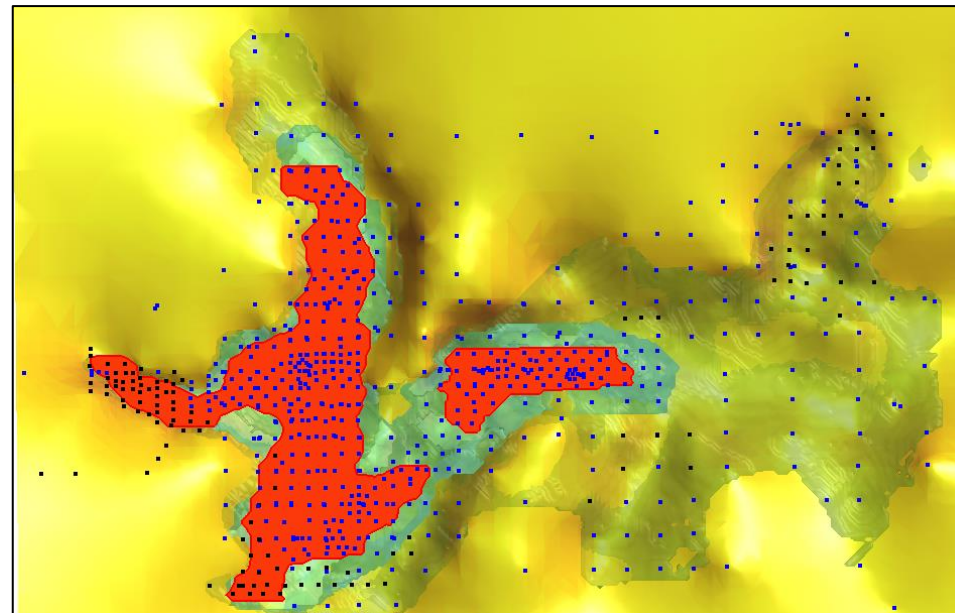
**Robust scoping study at 1.2 Mlbs pa  
A\$131m capex, 42% IRR, and 2.45 yr payback <sup>2</sup>**

<sup>1</sup> AGE ASX release 6 May 2025, Increased Mineral Resource Estimate and Upgrade of Indicated Resource for the Blackbush Deposit, Samphire U Project. [02943740.pdf](https://www.sec.gov/edgar/disclosure/cfs/2025/000119312525000001/000119312525000001.pdf)

<sup>2</sup> AGE ASX release 14 December 2023

<https://www.sec.gov/edgar/disclosure/cfs/2023/000119312323000001/000119312323000001.pdf>

80m  
(260ft)  
deep  
ISR



Plan view of Blackbush channel - Collar locations (pre 2024 blue dots, 2024 in black dots) and current Indicated (red shell), Inferred (green shell) and Unclassified (pale green shell) MRE .

## Blackbush Deposit Indicated Mineral Resource highlights:

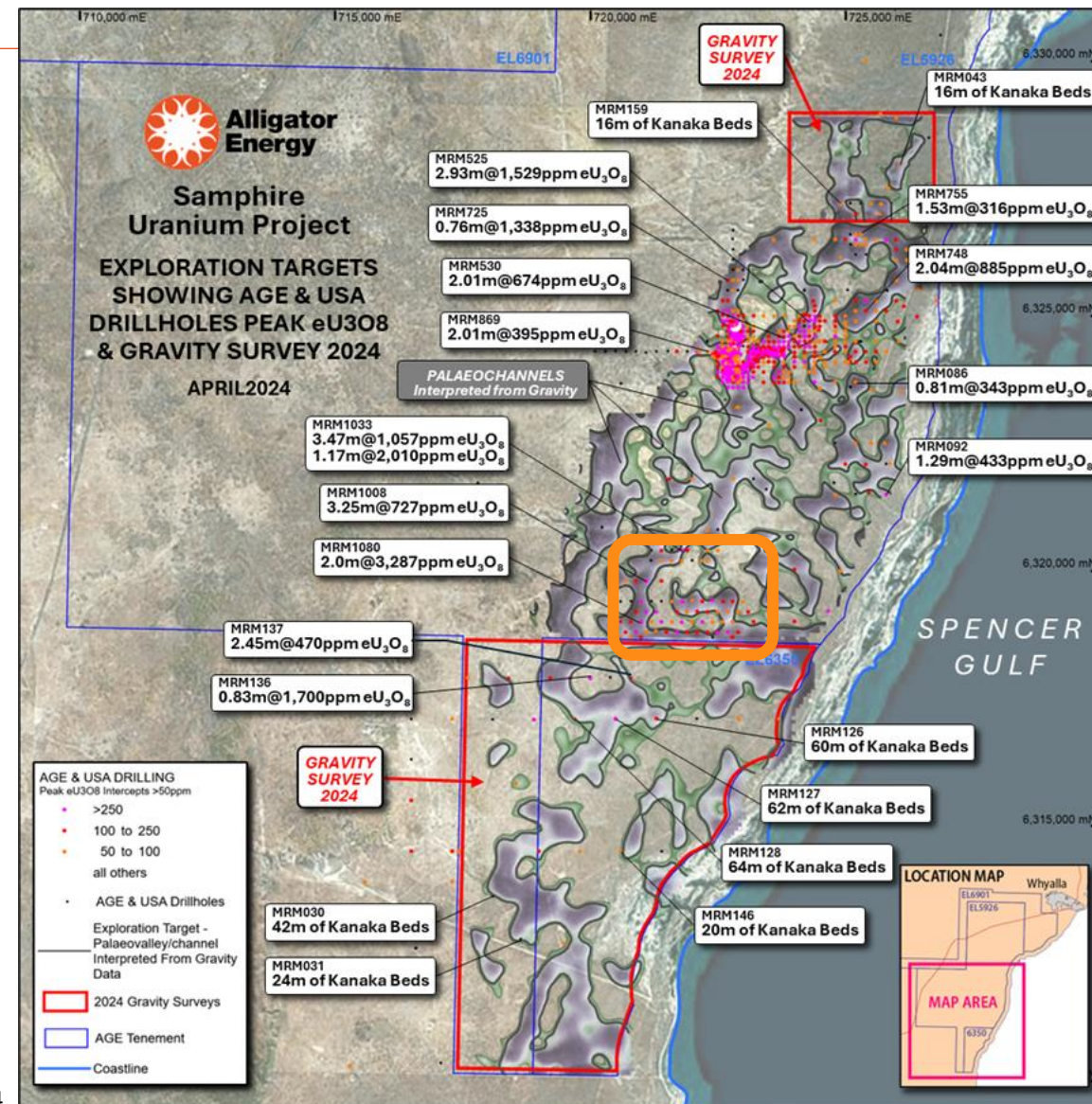
- Increased by 10% to 14.2Mlbs at an average grade of 786ppm  $U_3O_8$
- 135% increase since commencement of AGE's resource drilling at Blackbush in 2022<sup>1</sup>.
- 78% of the metal in the total MRE is now classified as Indicated
- Indicated Resource now of a **size and integrity ready for detailed well field designs and may allow an increase in the production rate upwards from 1.2Mlbs pa** (Updated Scoping Study<sup>2</sup>) to be targeted during Feasibility Study



# Further Extensions outside the Exploration Target Range Envelope

- Pink drilled area is 18 Mlbs resource at Blackbush
- Second satellite deposit at Plumbush (orange rectangle) already established – requires closer spaced drilling to become a potential resource.
- Exploration target range – additional 14 to 75 Mlbs
- Ground gravity data shows outstanding continuity of the Samphire palaeochannel – recently increased to total length of ~over 90kms of channels.
- Historical drillholes confirm that extensions contain the same thick sequences of Kanaka Bed sands which host the Blackbush Mineral Resource.
- 72% of the prospective areas of the entire Samphire palaeochannel system remain completely untested by drilling. Significant potential for new discoveries and resource growth in the Project area.

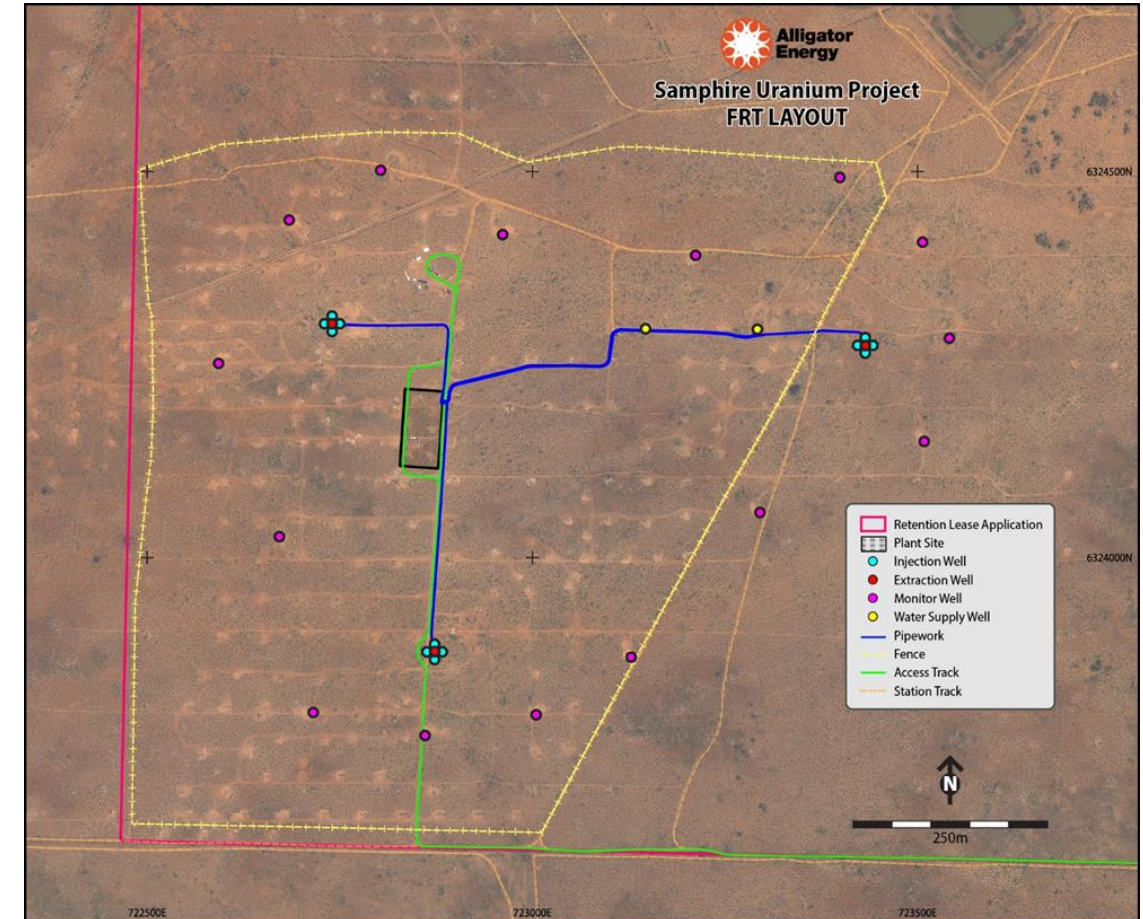
Refer ASX Announcements 7 December 2023 and 2 May 2024





# Samphire Uranium Project – Field Recovery Trial (FRT)

- Field Recovery Trial (FRT) construction targeted for July / August pending PEPR (operating plan) regulatory approval. Plant fully fabricated and delivered to AGE's Whyalla yard.
- FRT operation for 3+ months from ~September to November 2025 and consists of three producing well patterns and a containerised pilot plant.
- FRT is designed to confirm key operating parameters and marks an important step toward development.
- Parameters to be assessed include in-situ chemistry, hydrogeology, uranium recovery, reagent usage, and other environmental and economic factors.
- **Data and learnings further de-risk the Project and provides the necessary inputs to a full feasibility study and full Mining Lease Application to commence during 2H 2025.**
- Expression of Interest mid 2025 to select engineering firms for definitive feasibility study commencing late 2025.





# Samphire Uranium Project – Field Recovery Trial Plant

- Fabrication of the containerised FRT processing plant completed - delivered to AGE's Whyalla yard.
- Whyalla based contractor, Ahrens Group Pty Ltd, selected for the on-site construction of the pilot plant, contract being finalized.
- **Plant control system set up and tested. Commissioning and operating plans being finalised for initiation.**
- Post-FRT and subject to any further testing, well infrastructure and plant to be removed, and area rehabilitated – pilot plant available for future satellite field testing.
- Samples of final clean eluate solution containing extracted uranium oxide to be further processed into  $U_3O_8$  concentrate offsite for Converter quality samples.

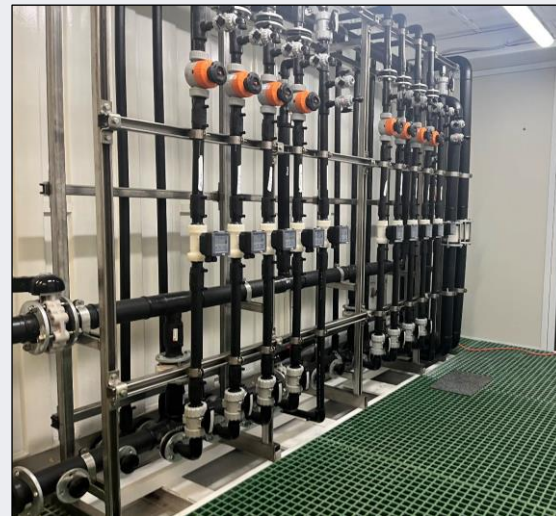
Pilot plant layout



Ion Exchange Module



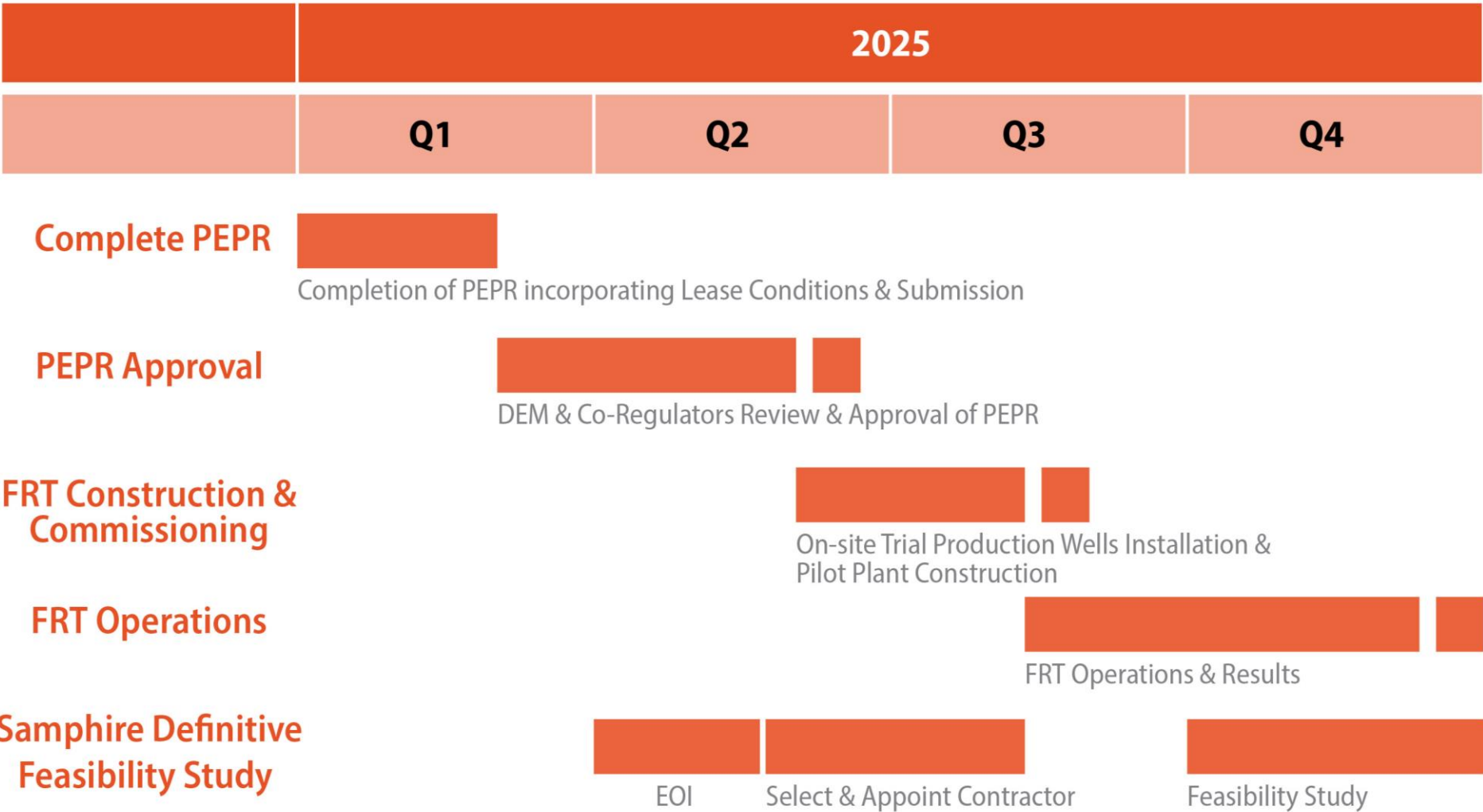
Wellhouse Module (pipe room)



Delivered to site



# 2025 Year Plans and Targets



25-001-01



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