Alligator Energy

# ASX Announcement

25 August 2025

# Samphire Field Recovery Trial PEPR Approved – Construction Phase Commences

**Alligator Energy (ASX: AGE, 'Alligator'** or 'the **Company')** is pleased to confirm that the final approval has been obtained for conducting the in-situ **Field Recovery Trial (FRT) at the Samphire Uranium Project, near Whyalla, South Australia.**

**Highlights:**

- **SA Department for Energy and Mining (DEM) and co-regulators have approved the operating plan for commencement of the FRT (the Program for Environment Protection and Rehabilitation or PEPR). This provides the 'green light' to commence on-ground activities associated with the FRT.**
- **The construction contract for the site-works with Whyalla based contractor Ahrens Group will now be executed and mobilisation of work crews will commence shortly. The schedule envisages completion of all work packages within an approximate eight-week period from first mobilisation to site (Figure1).**
- **Separately, Alligator's drilling contractor, Watsons Drilling, is mobilising to site to commence production well drilling, an activity which is on the critical path.**
- **Our Technical team will be monitoring construction progress to ensure a smooth transition from practical completion to the three-to-four-week plant commissioning phase.**
- **The Ahrens Group is drawing on a range of locally based sub-contractors for specialised work packages during construction.**
- **Expression of Interest documents for the planned Samphire Feasibility Study consultant selection are in full draft ready for distribution.**
- **The FRT will test areas across the most recent Blackbush Deposit Mineral Resource Estimate (MRE) announced in May 2025, comprising a Total MRE of 18.0Mlbs (14.2Mlbs Indicated, 3.8Mlbs Inferred) at an average grade of 676ppm U3O8.[1] Refer Table 1. This MRE comprises 78% Indicated Resource ready for wellfield design work during the Feasibility Study.**

**Alligator's CEO Andrea Marsland-Smith stated:** *"This approval marks a pivotal milestone in progressing the Samphire Project toward its next phase of development. The commencement of the trial represents the culmination of 3 years working with DEM and co-agencies, rigorous technical design, testing and collaboration with technology and engineering partners. It will allow*

[1] *AGE ASX Release 6 May 2025: Increased Mineral Resource Estimate Blackbush Deposit*

*us to validate ISR performance in real-world conditions, gather critical information as backbone to a Definitive Feasibility Study and future mining lease approval. I want to thank our dedicated Alligator team, Ammjohn Solutions, Adelaide Control Engineering and the Whyalla community and businesses for their support as we remain focused on delivering value through advancing the Samphire Project."*

**Recap of work to date on Samphire Uranium Project:**

- The Samphire Uranium Project (comprising the Blackbush Resource and the Plumbush Prospect) was acquired in Oct 2020. *(refer ASX: 8 Oct 2020: Alligator Completes Samphire Project Acquisition)*
- Additional EL to the south of Samphire containing substantial uranium intersections acquired from Stellar Resources in Sep 2021 *(refer ASX: 22 Sep 2021: Alligator completes acquisition of EL6350 – Samphire Project)*
- Initial Blackbush deposit mineral resource (first for Alligator's ownership) released in Sep 2022 *(refer ASX: 1 Sep 2022: Initial Mineral Resource at Blackbush targeting ISR)*
- Substantial bench-scale pilot process work undertaken on full cores of mineralised sands extracted from within the Blackbush ore zones, using a large-scale lab test rig at ANSTO in NSW, utilising existing saline ground water, which had very positive test results at a range of key parameters. These results were reported in an ASX release in Dec 2022 *(refer ASX: 9 Dec 2022: Highly successful U leach and extraction tests - Samphire)*
- These bench-scale results were used in an initial Scoping Study, with results released in Mar 2023 *(refer ASX: 14 Mar 2023: Scoping Study – Samphire Uranium Project)*, and in an Updated Scoping Study based on a higher production rate with results released in Dec 2023 *(refer ASX: 14 Dec 2023: Scoping Study Update – Samphire Uranium Project)*
- Detailed and close spaced drilling (down to 50 to 25m spacing) continued through 2024 on the Blackbush deposit, with identification of uranium roll fronts and zones of higher grade, resulting in release of an updated Blackbush resource in May 2025 *(refer ASX: 6 May 2025: Increased Mineral Resource Estimate – Blackbush Deposit)* - refer to CP statement for confirmation of ongoing resource validity.

**Recap of the objectives of the Field Recovery Trial (FRT)**

1. Designed to confirm key parameters of a future production operation and marks an important step toward development.
2. Parameters to be assessed include in-situ chemistry, hydrogeology, uranium recovery, reagent usage, and other environmental and economic factors.
3. Data and learnings further de-risk the Project and provide the necessary inputs to a Definitive Feasibility Study and Mining Lease Application to be commenced in early 2026 (Figure 1).

The FRT project will involve establishing three well-field patterns and placement and construction of the containerised pilot processing plant and associated equipment, followed by wellfield operations (Figures 2 and 3). The containerised prefabricated pilot processing plant is already in Alligator's Whyalla yard.

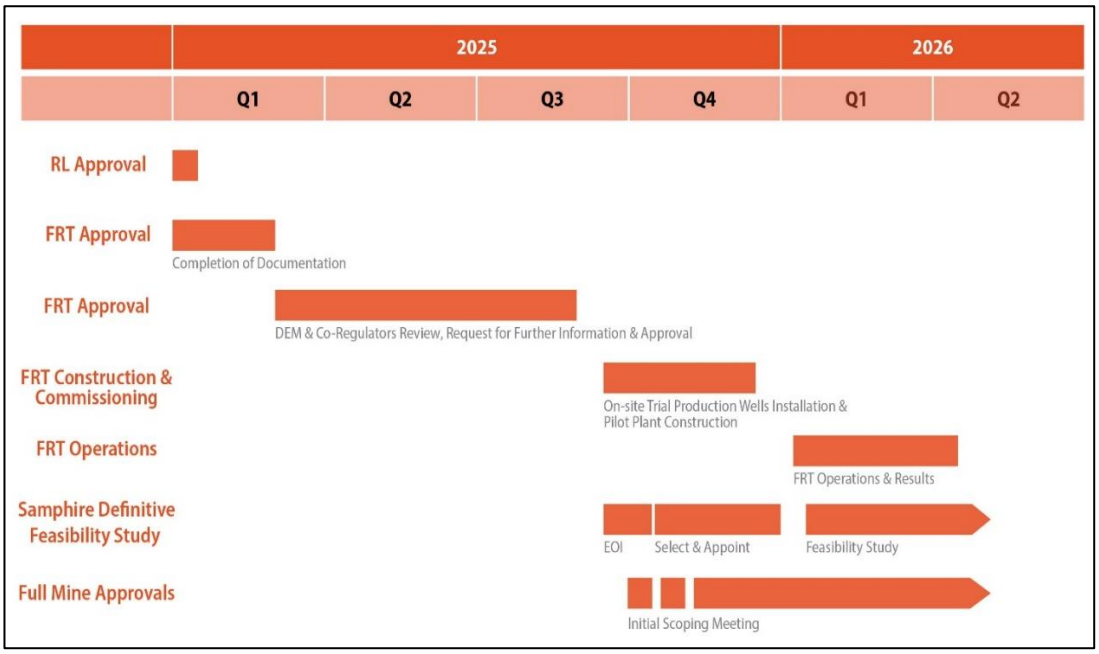


*Figure 1 – Samphire Uranium Project (Blackbush Deposit) – approx. timeline for key activities*

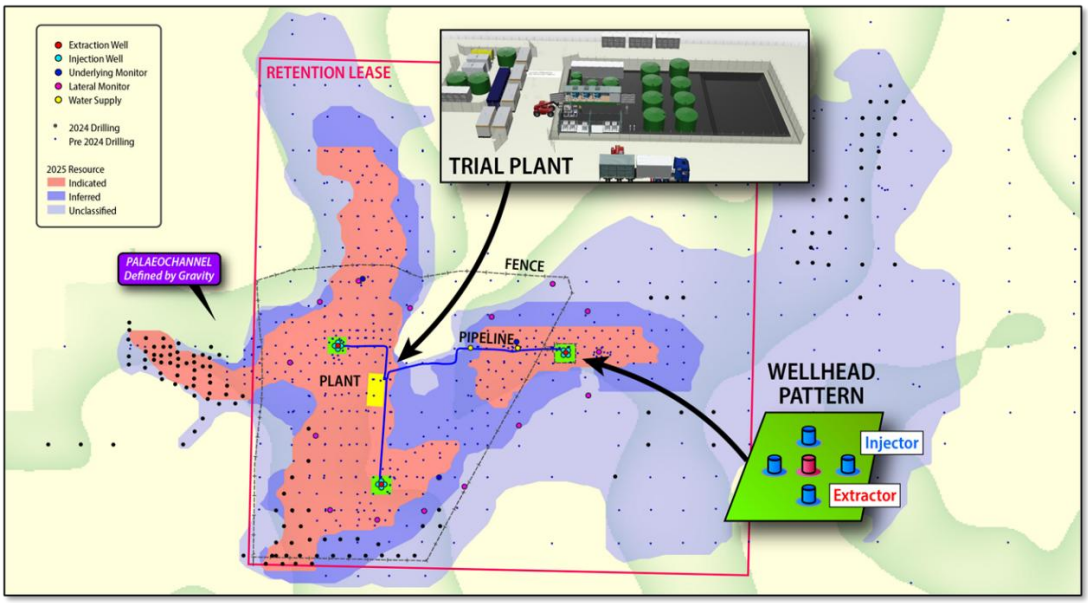


*Figure 2 – Layout of the FRT production wellfields and pilot plant site.*


*Figure 3 – Ion exchange module; Wellhouse (pipe room) module; Reverse Osmosis plant – currently situated in Alligators Whyalla yard*

The construction contract with the Whyalla based Ahrens Group for the civil works, installation of the pilot plant, RO plant, operations / laboratory and change room units, and associated tanks and pipework is now in the process of being executed. The Ahrens Group has an approximate 2-to-6-week mobilisation period for key staff and contractors, depending on other current work underway.

The construction schedule envisages completion of all work packages within an approximate eight-week period from first mobilisation to site. This timeframe is before any allowance for agreed extensions of time associated with matters such as inclement weather and latent conditions. This will be followed by an approximate 3-to-4-week commissioning period.

The FRT operations, involving sequential testing of three rings of wells, will be conducted over a period of three to four months, with inline analysis and onsite lab testing as results come to hand. Post completion of the FRT operations, and any additional testwork identified, the pilot plant and wellfields will be removed and the area rehabilitated.

This announcement was authorised for release by the CEO and Board.

**Table 1:** Blackbush Mineral Resource Estimate reported above a 250ppm $U_3O_8$ cut-off.

| JORC Category | Mt | Grade ($U_3O_8$ ppm) | $U_3O_8$ Metal (Mlbs) |
|---|---|---|---|
| **Indicated** | 8.2 | 786 | 14.2 |
| **Inferred** | 3.9 | 443 | 3.8 |
| **Total** | 12.1 | 676 | 18.0 |

The model is reported unconstrained and above a 250 ppm U3O8 lower cut-off grade for all zones in consideration of potential for recovery by in situ leach processes.

There is no historical depletion by production within the model area.

Estimation of the disequilibrium factored and topcut gamma data (feU3O8c) is by ordinary kriging using dynamic anisotropy for the mineralised zone.

Density is estimated by nearest neighbour estimation within the Kanaka Beds on the basis of logged geology as either 1.79 t/m3 for lignitic material or 1.92 t/m3 for other sediments; other paleochannel stratigraphies had a default of 1.90 t/m3 assigned; saprolite capping the basement granite was assigned a bulk density of 2.16 t/m3 and the primary basement granite was assigned a nominal bulk density of 2.70 t/m3.

The model assumes agglomeration of 12.5mE x 12.5mN x 1mRL parent blocks for definition of well fields for production.

The model does not account for dilution, ore loss, hydrogeology, or recovery issues. These parameters should be considered during the mining study as being dependent on the ISL treatment process.

Classification is according to JORC Code Mineral Resource categories.
Totals may vary due to rounded figures.

# Contacts

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## Forward Looking Statement

This announcement 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

Information in this report that 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 on a full-time basis with Alligator Energy as Chief Executive Officer, and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration (including 21 years in ISR uranium mining operations and technical work) and to the activity she is undertaking 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 the Mineral Resource Estimates in the ASX release of 6 May 2025 '*Increased Mineral Resource Estimate and Upgrade of Indicated Resource for the Blackbusg Deposit, Samphire U Project*', 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.

## About Alligator Energy

Alligator Energy Ltd is an Australian, ASX-listed, exploration company focused on uranium and energy related minerals, principally cobalt-nickel. Alligator's Directors have significant experience in the exploration, development and operations of both uranium and nickel projects (both laterites and sulphides).

### Projects