September 14, 2021

Standard Lithium Initiates Arkansas Carbon Capture Project

HIGHLIGHTS

- Objective to minimize CO_2 emissions from future operations and related supply-chain activities
- Regionally sourced CO_2 may be utilized to optimize the flowsheet, reduce reagent costs, as well as potential sequestration
- Aligns with recent White House Carbon Capture, Utilization and Sequestration announcement
- Aims to make the Gulf Coast region an industry leading producer of sustainable lithium chemicals

EL DORADO, Ark., Sept. 14, 2021 (GLOBE NEWSWIRE) -- **Standard Lithium Ltd.** ("Standard Lithium" or the "Company") (TSXV: SLI) (NYSE American: SLI) (FRA: S5L), an innovative technology and lithium project development company, announced that it is undertaking a pilot project in southern Arkansas to test a novel carbon capture technology. The pilot project will be undertaken in collaboration with the owner of the technology, Aqualung Carbon Capture AS ("Aqualung"), and will be installed at a natural gas processing site in southern Arkansas owned and operated by Mission Creek Resources LLC ("Mission Creek").

Standard Lithium's ongoing operations lead the industry in advancing sustainability and circular economy. By funding this project, Standard seeks to build on its science-based strategy for sustainable development and continuous improvement at its Arkansas lithium projects. The Company is focused on minimizing all CO_2 emissions that may result from its future operations and related supply-chain activities. The Company has identified several areas where CO_2-rich gas streams may be used to optimize its process and reduce reagent costs, as well as potentially sequester CO_2.

Dr. Andy Robinson, President and COO of Standard Lithium commented, "*We are very pleased to be working in partnership with Aqualung and Mission Creek on this exciting project; the future of the lithium industry rests on being able to produce sustainable battery-quality chemicals with the lowest carbon footprint in jurisdictions where their production is wanted and needed. We feel that successful proof of this carbon capture technology in Southern Arkansas may demonstrate another important technological step towards making the Gulf Coast region an industry-leading producer of sustainable lithium chemicals.*"

Standard Lithium's current and planned expansion of its production of a key battery metal advances the U.S. goal to "*secure an end-to-end domestic supply chain for advanced batteries*", as well as support the "*sustainable domestic production and processing of critical minerals.*" Today's announced pilot project builds on and aligns with the White House's Carbon Capture, Utilization and Sequestration (CCUS) announcement on June 30, 2021,

which seeks to develop and deploy CCUS technologies to improve industrial processes.

Aqualung, a Norwegian technology company, is the sole license owner of the patent-protected technology, which was developed by the Norwegian University of Science and Technology ("NTNU"), and results from over 20 years of research at NTNU into membrane separation of gasses. The technology is based on a membrane system that selectively extracts CO_2 from a wide range of CO_2 sources emitted by hydrocarbon-burning energy sources. It produces a high purity CO_2 gas stream that can either be sequestered or reused. The technology has been successfully piloted in Europe, where it has been shown to effectively extract CO_2 from carbon gas streams.

Erik Mathiesen, CEO of Aqualung carbon capture, commented *"We are very pleased to partner up with Standard Lithium and Mission Creek on this important pilot project. Aqualung seeks to take an active role in the industrial energy transition with our high-performing, low cost, light footprint all-natural process for capturing* CO_2*. This project will prove the unique second-generation membrane technology's contribution within an important business area in the circular economy."*

The pilot project will be located at Mission Creek's Dorcheat Macedonia facility and will take a slipstream of flue gas for processing through the Aqualung pilot unit. The resulting concentrated CO_2 stream will be utilized in Standard Lithium's ongoing R&D activities to investigate the utilization of southern Arkansas sourced CO_2 for process and reagent optimization. Manufacturing of the pilot unit is expected to begin in Q4 2021, and, pending permitting and finalizing of other agreements, to be installed at the project site in Q1/2 2022.

About Standard Lithium Ltd.

Standard Lithium is an innovative technology and lithium development company. The company's flagship project is located in southern Arkansas, where it is engaged in the testing and proving of the commercial viability of lithium extraction from over 150,000 acres of permitted brine operations. The company has commissioned its first-of-a-kind industrial-scale direct lithium extraction demonstration plant at Lanxess's south plant facility in southern Arkansas. The demonstration plant utilizes the company's proprietary LiSTR technology to selectively extract lithium from Lanxess's tail brine. The demonstration plant is being used for proof-of-concept and commercial feasibility studies. The scalable, environmentally friendly process eliminates the use of evaporation ponds, reduces processing time from months to hours and greatly increases the effective recovery of lithium. The company is also pursuing the resource development of over 30,000 acres of separate brine leases located in southwestern Arkansas and approximately 45,000 acres of mineral leases located in the Mojave Desert in San Bernardino county, California.

Standard Lithium is jointly listed on the TSX Venture and the NYSE American Exchanges under the trading symbol "SLI"; and on the Frankfurt Stock Exchange under the symbol "S5L". Please visit the Company's website at www.standardlithium.com.

On behalf of the Board of Standard Lithium Ltd.

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Source: Standard Lithium