

Standard Lithium Completes Fabrication of Phases 1 & 2 and Begins Mobilisation of Its "LiSTR" Direct Lithium Extraction Demonstration Plant to the Arkansas Project Site

- Targeted to Produce 100-150 Tonnes per Annum of Lithium Carbonate
- First-of-a-kind direct lithium extraction demonstration plant, being deployed in Southern Arkansas

VANCOUVER, British Columbia, Aug. 22, 2019 (GLOBE NEWSWIRE) -- **Standard Lithium Ltd.** ("Standard Lithium" or the "Company") (TSXV: SLL) (OTCQX: STLHF) (FRA: S5L), is pleased to announce that the fabrication of Phases 1 & 2 of the Company's "LiSTR" direct lithium extraction Demonstration Plant are complete, and that the initial modules are currently being transported to the project location at Lanxess' South Plant facility in southern Arkansas (the "Site"). Standard Lithium is also pleased to confirm that all the Site construction works are on-schedule, and the concrete slab and foundations required to locate the Demonstration Plant have been completed.

Fabrication and initial QA/QC testing of Phases 1 & 2 of the Demonstration Plant have been completed (see press release dated 2nd June 2019) and the modules (9 modules in Phases 1 & 2) have been separated, and prepared for overland shipment. The first modules are currently in transit and expected to arrive at the Site next week. A still-frame from the disassembly video is shown in Figure 1 below.

All of the enabling works required at the project location at Lanxess' South Plant facility in southern Arkansas are on-schedule (see press release dated 26th June 2019) and the required site drainage, foundations and concrete slab required to locate the first-of-a-kind direct lithium extraction demonstration plant have been completed. A crane has been mobilised to the Site in order to move the modules from the flat-bed trucks to their final installed location, and current image of the Site is provided in Figure 2 below.

The Demonstration Plant is designed to continuously process an input tailbrine flow of 50 gallons per minute (gpm; or 11.4 m³/hr) from the Lanxess South Plant, which is equivalent to an annual production of between 100-150 tonnes per annum Lithium Carbonate Equivalent (LCE). The Demonstration Plant is based on Standard Lithium's proprietary LiSTR technology, that uses a solid sorbent material to selectively extract lithium from Lanxess' tailbrine.

The environmentally friendly process eliminates the use of evaporation ponds, reduces processing time from months to hours and greatly increases the effective recovery of lithium.

Dr Andy Robinson, Standard Lithium President and COO, commented, "The Standard Lithium team and our partners continue to execute on our strategic plan to timely advance our project in Southern Arkansas. Over 2 years of disciplined process design and engineering work has brought us to this point, and we look forward to announcing more real milestone completions in the near-future."

About Standard Lithium Ltd.

Standard Lithium (TSXV: SLL) is a specialty chemical company focused on unlocking the value of existing large-scale US based lithium-brine resources. The Company believes new lithium production can be brought on stream rapidly by minimizing project risks at selection stage (resource, political, geographic, regulatory & permitting), and by leveraging advances in lithium extraction technologies and processes. 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 is currently installing a first-of-its-kind Demonstration Plant that will use the Company's proprietary technology to selectively extract lithium from LANXESS' tailbrine. This Demonstration Plant will be used to prove commercial feasibility. The 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 listed on the TSX Venture Exchange under the trading symbol "SLL"; quoted on the OTC - Nasdaq Intl Designation under the symbol "STLHF"; 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,

Standard Lithium Ltd. Robert Mintak, CEO & Director

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Photos accompanying this announcement are available at:

https://www.globenewswire.com/NewsRoom/AttachmentNg/7ab38850-504c-44c0-b37b-f4d277142aa9

https://www.globenewswire.com/NewsRoom/AttachmentNg/372772a4-82c0-499c-b9b9-f03b6bdc7dee

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Figure 1



Phase 1 & 2 Modules Being Disassembled and Prepared for Trucking – clip from video taken Aug 06th, 2019

Figure 2



Project Site Location Showing Completed Foundations and Mobile Crane Ready to Install Modules – Image taken Aug 21st, 2019

Source: Standard Lithium