

27 April 2017

Quarterly Activities Report – March 2017

Clean TeQ Holdings Limited
ACN: 127 457 916
CLQ:ASX
CTEQF:OTCQX

Corporate Information:

572.0M ordinary shares
47.2M unlisted options
4.9M performance rights
\$92.7M cash at bank

Co-Chairman
Robert Friedland

Co-Chairman
Jiang Zhaobai

Managing Director
Sam Riggall

Executive Director
Peter Voigt

Non-Executive Director
Li Bingham

Non-Executive Director
Eric Finlayson

Non-Executive Director
Roger Harley

Non-Executive Director
Ian Knight

Non-Executive Director
Mike Spreadborough

Company Secretary
Melanie Leydin

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Highlights

- **Syerston Nickel / Cobalt Definitive Feasibility Study progressing as planned**
 - **Nickel/Cobalt Sulphate offtake discussions ongoing**
 - **Refining of customer samples well progressed**
 - **\$81 million placement to Pengxin to fund Syerston Nickel Cobalt Scandium Project DFS and early works**
 - **Key appointments to board and senior management to bolster project development and operational capability**
- CLQ listed on OTCQX® Best Market in the United States and admitted to S&P Dow Jones All Ordinaries Index**

Clean TeQ Overview

Our vision is to create a globally significant business which is focused on providing specialty materials and clean solutions to a range of industries using our proprietary Clean-iX® continuous ion exchange technology.

Metals – Clean TeQ owns the Syerston Nickel, Cobalt and Scandium Project in NSW. Syerston's unique mineral resource, when combined with Clean TeQ's proprietary ion-exchange extraction and purification processing technology, provides Clean TeQ with the opportunity to become a leading global supplier of nickel and cobalt sulphate to the lithium-ion battery industry, as well as providing scandium for production of the next generation of lightweight aluminum alloys for key transportation markets.

Water – Clean TeQ's Continuous Ionic Filtration & Exchange (CIF®) technology provides the basis for cost effective water treatment solutions to the power, mining, oil and gas and municipal industries. Our technologies are designed to cope with the most demanding waters to provide best in class performance in water recovery and operability.

Syerston Nickel Cobalt Scandium Project

During the quarter Clean TeQ continued to make good progress on the Definitive Feasibility Study (DFS) for the Syerston Nickel Cobalt Scandium Project. The DFS will be used to assess the definitive economics of the Project for financing as well as providing the plan for the implementation of the Project.

The Project team is being progressively built up to provide the breadth and depth of skills required to complete the DFS and to prepare ultimately for the transition into construction and operations.

Mr Scott Magee was appointed Project Director and commenced working with the company during the quarter. Scott will lead the Syerston team through the completion of the DFS and into project construction and operations. Scott is project management executive with 28 years' experience in project development, delivery and governance. Prior to joining Clean TeQ Scott worked for BHP Billiton as Vice President Projects where he was responsible for establishing best practice systems that improved predictability and capital effectiveness across the group's \$15Bpa capital projects portfolio.

In earlier roles with BHP Billiton, Scott was Project Director for the Worsley Alumina business and Project Development Manager for the Stainless Steel Materials business where he played a key role in the recovery of the Ravensthorpe Nickel Project, ahead of the successful sale to a new operator. Prior to BHP Billiton Scott held engineering and project management roles with Hatch and operational roles with Alcoa. Scott holds a Bachelor of Chemical Engineering degree from Curtin University in Perth.

Figure 1: Clean TeQ Pilot Plant: Mixed Nickel/Cobalt Sulphate Eluate Solution



As part of the DFS activities the Company re-commissioned its Resin-in-Pulp (**RiP**®) pilot plant at ALS Metallurgy in Perth. The purpose of the pilot campaign was to generate samples of nickel and cobalt sulphate eluate solution for further testing to confirm the flow sheet design for the refinery section of the processing plant and to provide samples of nickel sulphate and cobalt sulphate for potential offtake customers.

The pilot campaign successfully processed a bulk sample of approximately 20 tonnes of Syerston ore to produce a batch of high purity nickel and cobalt sulphate eluate solution (see Figure 1 above).

This solution is currently being further refined into samples of high purity nickel sulphate and cobalt sulphate which will be sent to potential offtake customers in the second quarter of 2017 for product testing and qualification.

Refining of the samples is progressing well. The mixed nickel/cobalt eluate has been separated into nickel sulphate solution (see Figure 2 below) and cobalt sulphate solution (see Figure 4 below). The nickel sulphate solution has been processed to upgrade its purity and is in the process of being crystallized into nickel sulphate salts (see Figure 3 below), the final high value product which will be sold to manufacturers of lithium ion battery cathode precursor material.

Figure 2: Nickel Sulphate Solution



Figure 3: Nickel Sulphate Salt Crystals



The cobalt sulphate solution is currently being processed to reject impurities prior to being crystallized into salt form.

The DFS is progressing well and remains on schedule for completion in the fourth quarter of 2017.

Key activities currently underway include:

Geology – the Nickel/Cobalt and Scandium resources were previously modelled separately. Both resource models are being combined into one geological model to allow for more efficient mine scheduling.

Mining – Nickel grade is reasonably evenly distributed throughout the orebody, however, several areas of higher grade cobalt mineralisation exist. As part of the optimisation process being run in parallel with the DFS, the team is assessing the potential to adopt a more selective mining method than was assumed in the Pre-Feasibility Study. The objective of this exercise is to determine the extent to which cobalt production can be increased in the early years of operation within the existing planned 2.5Mtpa ore throughput rate.

Figure 4: Cobalt sulphate solution with cobalt sulphate crystals visible at the base of container



Processing – the data from the pilot plant operation is being utilised for the design of the refinery area of the plant. Detailed mass balance modelling, from the ore leaching circuit through to resin-in-

pulp extraction and refining, is also underway. This will allow for confirmation of key technical parameters including metal recoveries and reagent consumption.

Infrastructure – detailed studies and costings are being undertaken to confirm the Project site layout and the key infrastructure components including gas and water pipelines and a rail siding for loading and unloading of containers which will be transported along the nearby rail line.

Logistics – a detailed logistics study is underway to confirm the optimal methodology for bringing in plant and equipment during the construction phase, bringing in consumables, and shipping out product during operations.

Personnel – a personnel plan is being undertaken to determine optimal arrangements for contracting, accommodating and transporting staff to and from site during the construction and operational phases. The peak construction workforce is currently estimated at 850 people, and steady-state operational workforce at 335 people.

Environment and permitting – base line environmental monitoring studies have been undertaken, as well as an indigenous heritage survey. The Project has already received an approved EIS and development consent for a 2.5Mtpa ore mining and processing operation. A modification to the development consent has been sought to allow for the recovery of scandium oxide as a byproduct. Approval for that modification is expected to be received in Q2 2017. If it is determined that cobalt production can be increased in earlier years of operation, a further modification to the development consent will be sought to allow for this and for the increased consumption of certain reagents that may be required.

Offtake Marketing

Clean TeQ's objective is to agree binding long term nickel and cobalt sulphate sales contracts with a small number of high calibre counterparties during 2017 while the DFS is being completed. Clean TeQ has met with numerous companies in the LiB cathode supply chain from traders and cathode makers through to electric vehicle manufacturers. The Company has received strong expressions of interest for offtake of the Syerston nickel and cobalt sulphate materials from a number of these parties. A number of potential offtake counterparties visited the pilot plant in Perth and the site in NSW during late 2016 and Q1 2017. Discussions are ongoing.

The Company also continues to progress a range of activities which are aimed at facilitating and promoting the use of scandium aluminium alloys for high strength light weight applications with the ultimate aim of securing offtake contracts for scandium oxide, given the highly value accretive impact of producing scandium as a by-product to nickel and cobalt sulphate production.

Clean TeQ Water

The Clean TeQ Water Division continues to promote and demonstrate our Continuous Ion Exchange Technology (**CIF®**) with a particular emphasis on the Chinese water market, the largest and most rapidly growing water treatment market in the world. CIF® provides a water treatment solution to many Chinese industries including power, mining, oil and gas and municipal.

Clean TeQ has formed a Chinese incorporated joint venture (**JV Company**) with Jinzhong Hoyo Municipal Urban Investment & Construction Co., Ltd (**Hoyo**) to pursue water treatment opportunities in China's Shanxi Province utilising Clean TeQ's water purification technology.

As previously announced, the JV Company has been awarded an initial contract to build, own and operate a Clean TeQ CIF® water treatment plant to treat up to 13,000 tonnes of effluent per day for a 20 year period at a waste water treatment plant owned by Hoyo. The proposed project contract provides for the JV Company to be paid a service fee of 1RMB per tonne of water treated, subject to a minimum payment for 9,000 tonnes per day. Clean TeQ has actively pursued a build, own and operate business model, targeting generation of long term sustainable cashflows and favourable economic returns.

Design and engineering of the plant has been completed and the plans have been submitted to the Shanxi Urban & Rural Planning Design Institute for approval. The Design Institute has provided an initial indication that approval of the plans will be forthcoming, allowing for an environmental impact assessment to be commenced. Final formal approval of the plans and approval of the environmental impact assessment is anticipated to be received in Q2 of 2017, with construction to commence in Q3.

The Company has also been contracted on commercial terms to perform feasibility and engineering for three other ion exchange water treatment systems:

- 1) A CIF® wastewater treatment solution to treat wastewater from a flue gas desulphurisation scrubber at a minerals processing plant in the Middle East. The technology removes toxic pollutants sulphate, antimony and arsenic from the waste water stream;
- 2) A CIF® wastewater treatment solution to treat tailings water to a standard to allow discharge at a gold mining operation in Australia. The technology removes toxic pollutants sulphate, antimony and arsenic from a waste water stream; and,
- 3) A Clean-iX® uranium recovery plant to remove low concentrations of uranium from process liquors at a copper/cobalt processing operation in Africa.

Upon delivery of the feasibility and engineering, the Company is confident that at least one of these opportunities will result in a commercial supply contract to deliver a Clean TeQ water treatment solution.

Clean TeQ Technology

During the quarter Clean TeQ agreed a partnership with Ionic Industries Ltd for the development and commercialisation of graphene-oxide based water filtration technologies. Ionic is a commercialisation partner of Monash University and has secured a licence from Monash for intellectual property relating to a range of graphene oxide based technologies.

Graphene oxide (**GO**) is regarded as a highly versatile industrial material with its ability to form super-strong ultra-thin 2-D matrices. Researchers at Monash University have developed a method of producing GO which is suitable for the production of water and wastewater filtration products. The method has the potential to be readily and economically scaled to meet commercial needs.

The partnership will see Clean TeQ funding a \$200,000 programme of works for product development and testing with the Monash research team and at Clean TeQ's facilities. Subject to Clean TeQ successfully completing this product development and testing phase prior to 30

September 2018, Clean TeQ may, at its election, form a joint venture with Ionic (75/25 Clean TeQ/Ionic) for the purpose of bringing the products to market in the field of water purification. The joint venture will be funded by the parties according to their pro-rata equity share.

Over the past 6 years, Ionic together with a dedicated research team at Monash University has been developing several graphene-based technologies with enormous potential in the application of water treatment and filtration. The aim of the Clean TeQ partnership is to:

- Incorporate graphene-coated sand technology into new low cost water treatment solutions and to substitute for activated carbon in current markets; and
- Incorporate graphene membrane technology into nano-filtration membrane products for use in water and wastewater filtration applications in industrial and municipal markets.

The partnership is consistent with Clean TeQ's strategy of developing and acquiring complementary intellectual property in order to broaden and enhance the core Clean TeQ technology. Many of the technologies under development have significant potential in some of the world's largest water markets – such as China and the Middle East – where increasingly stringent water discharge requirements can no longer be met by conventional technologies or systems.

Clean TeQ and Ionic have also been awarded a grant under the second round of the Cooperative Research Centre's Project (CRC-P) program. Government funding of \$632,285 has been approved for the project which is scheduled to commence in April 2017.

The funding is provided by the Department of Industry, Innovation and Science to develop energy efficient wastewater treatment technology using graphene oxide technology. The technology development will be undertaken in association with Ionic Industries Ltd and Monash University.

Corporate

As announced on 28 February 2017, Clean TeQ placed 92,518,888 new shares at an issue price of \$0.88 per share to raise proceeds of approximately \$81 million to Pengxin International Mining Co. Ltd. (**Pengxin Mining**), part of the Shanghai Pengxin Group Co. Ltd (**Pengxin Group**), to facilitate the development of the Company's Syerston Nickel Cobalt Scandium Project in New South Wales, Australia. The issue price represented a 17% premium to the 20-day volume-weighted-average ASX quoted price of Clean TeQ shares up to and including 28 February 2017 of A\$0.75 per share.

Mr Jiang Zhaobai, Chairman of Pengxin Group, has joined the Clean TeQ board as Non-Executive Co-Chairman, alongside existing Co-Chairman Robert Friedland. Mr Li Binghan, Director of the Risk Control & Legal Department of Pengxin Mining, has also joined the board as a Non-Executive Director.

The subscription proceeds will be used to complete the Syerston Project DFS and additional general working capital. While the DFS is being completed the Company will be undertaking a range of activities to secure the financing required for the development of the Project, including progressing a range of options in relation to offtake finance, project level financing and debt financing.

In addition to the share placement, Pengxin Mining has also agreed to use its best endeavours to assist the Company to procure Chinese project financiers to participate in the financing of the Syerston Project for a significant proportion of the capital cost of the Project. As previously

advised, Clean TeQ is currently in discussions with a number of potential debt providers, both in Australia and off-shore, to secure a project debt package for the Syerston Project.

On 13 February 2017 Clean TeQ commenced trading on OTCQX® Best Market in the United States under the symbol CTEQF. The company's ordinary shares will also continue to trade under the symbol CLQ on the Australian Stock Exchange. To qualify for the OTCQX market, companies must meet high financial standards and follow best practice corporate governance.

On 10 March 2017 Clean TeQ qualified for inclusion in the S&P Dow Jones All Ordinaries Index. The S&P Dow Jones All Ordinaries Index consists of the 500 largest eligible companies listed on the Australian Securities Exchange.

As at 31 March 2017 available cash at bank was \$92.67 million with \$0.2 million additional cash on deposit securing performance guarantees.

For more information about Clean TeQ contact:

Sam Riggall, MD and CEO or Ben Stockdale, CFO +61 3 9797 6700

About Clean TeQ Holdings Limited (ASX: CLQ) – Based in Melbourne, Clean TeQ, using its proprietary Clean-iX® continuous ion exchange technology, is a leader in metals recovery and industrial water treatment.

About the Syerston Project – Clean TeQ is the 100% owner of the Syerston Project, located in New South Wales. The Syerston Project is one of the largest and highest grade scandium deposits in the world and one of the highest grade and largest nickel and cobalt deposit outside of Africa.

For more information about Clean TeQ please visit the Company's website www.cleanteq.com.

This release may contain forward-looking statements. The actual results could differ materially from a conclusion, forecast or projection in the forward-looking information. Certain material factors or assumptions were applied in drawing a conclusion or making a forecast or projection as reflected in the forward-looking information.

Appendix 4C

Quarterly report for entities subject to Listing Rule 4.7B

Introduced 31/03/00 Amended 30/09/01, 24/10/05, 17/12/10, 01/09/16

Name of entity

CLEAN TEQ HOLDINGS LIMITED

ABN

34 127 457 916

Quarter ended ("current quarter")

March 2017

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	74	519
1.2 Payments for		
(a) research and development	(38)	(133)
(b) product manufacturing and operating costs	-	(335)
(c) advertising and marketing	(80)	(303)
(d) leased assets	(78)	(160)
(e) staff costs	(799)	(2,330)
(f) administration and corporate costs	(189)	(849)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	33	45
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)	-	-
1.9 Net cash from / (used in) operating activities	(1,077)	(3,546)
2. Cash flows from investing activities		
2.1 Payments to acquire:		
(a) property, plant and equipment	(38)	(124)
(b) businesses (see item 10)	-	-
(c) investments	(274)	(803)

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
(d) intellectual property	-	-
(e) other non-current assets	(3,314)	(7,492)
2.2 Proceeds from disposal of:		
(a) property, plant and equipment	-	20
(b) businesses (see item 10)	-	-
(c) investments	-	-
(d) intellectual property	-	-
(e) other non-current assets	-	-
2.3 Cash flows from loans to other entities	-	-
2.4 Dividends received (see note 3)	-	-
2.5 Other (provide details if material)	-	-
2.6 Net cash from / (used in) investing activities	(3,626)	(8,399)

3. Cash flows from financing activities	-	-
3.1 Proceeds from issues of shares	81,417	96,417
3.2 Proceeds from issue of convertible notes	-	-
3.3 Proceeds from exercise of share options	362	882
3.4 Transaction costs related to issues of shares, convertible notes or options	-	(220)
3.5 Proceeds from borrowings	-	-
3.6 Repayment of borrowings	-	-
3.7 Transaction costs related to loans and borrowings	-	-
3.8 Dividends paid	-	-
3.9 Other (provide details if material)	128	301
3.10 Net cash from / (used in) financing activities	81,907	97,380

4. Net increase / (decrease) in cash and cash equivalents for the period		
4.1 Cash and cash equivalents at beginning of quarter/year to date	15,471	7,226
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(1,077)	(3,546)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	(3,626)	(8,399)
4.4 Net cash from / (used in) financing activities (item 3.10 above)	81,907	97,380

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	14
4.6	Cash and cash equivalents at end of quarter	92,675	92,675

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	92,675	15,471
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	92,675	15,471

6. Payments to directors of the entity and their associates

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

Current quarter \$A'000
213
-

Director's fees paid for the March 2017 quarter.

7. Payments to related entities of the entity and their associates

- 7.1 Aggregate amount of payments to these parties included in item 1.2
- 7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

Current quarter \$A'000
-
-

-

8. Financing facilities available <i>Add notes as necessary for an understanding of the position</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
8.1 Loan facilities	-	-
8.2 Credit standby arrangements	-	-
8.3 Other (please specify)	-	3,000
8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

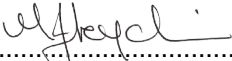
The amount in 8.3 is made up of a \$3,000,000 zero coupon promissory note payable to Australia Nickel & Platinum Holding Company Ltd which is due in March 2018. The note was issued to Nickel & Platinum Holding Company (a subsidiary of Ivanhoe Mines Inc.) by a Clean TeQ Holdings Limited group company as part consideration for the acquisition of Ivanplats Holding Company Pty Ltd, which holds 100% title to the Syerston exploration licences.

9. Estimated cash outflows for next quarter	\$A'000
9.1 Research and development	(131)
9.2 Product manufacturing and operating costs	(517)
9.3 Advertising and marketing	(36)
9.4 Leased assets	(62)
9.5 Staff costs	(666)
9.6 Administration and corporate costs	(497)
9.7 Syerston Project Costs	(8,722)
9.8 Working Capital Costs	(1,850)
9.9 Total estimated cash outflows	(12,481)

10. Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)	Acquisitions	Disposals
10.1 Name of entity	N/A	N/A
10.2 Place of incorporation or registration	N/A	N/A
10.3 Consideration for acquisition or disposal	N/A	N/A
10.4 Total net assets	N/A	N/A
10.5 Nature of business	N/A	N/A

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Sign here:  Date:27 April 2017
(Company secretary)

Print name: ...Melanie Leydin

Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.