

24 July 2017

## Quarterly Activities Report – June 2017

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

**Corporate Information:**

576.3M ordinary shares  
43.7M unlisted options  
4.9M performance rights  
\$88.9M cash at bank

**Co-Chairman**  
Robert Friedland

**Co-Chairman**  
Jiang Zhaobai

**Managing Director**  
Sam Riggall

**Non-Executive Director**  
Stef Loader

**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 Feasibility Study progressing as planned**
- **Nickel sulphate samples dispatched to customers**
- **Significant permitting approval received – Development Consent Modification 3**
- **Key appointments to board to bolster resources industry and project development and operational capability**
- **\$2.6 million R&D rebate received**
- **Appointment of specialist debt advisory firm for Syerston financing**

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

Production of samples of high purity nickel sulphate ( $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$ ) was finalised from the processing of Syerston ore at the company's nickel and cobalt recovery and purification demonstration plant at ALS Metallurgy in Perth. The samples were dispatched in June to a number of potential customers in the lithium ion battery supply chain for testing and analysis.

**Figure 1: Samples of high purity Syerston nickel sulphate**



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

Clean TeQ is in discussion with several companies in the lithium ion battery cathode supply chain in order to secure offtake commitments for Syerston nickel and cobalt sulphate production. The Company has received strong expressions of interest for offtake from a number of these parties.

The Company has entered into a small number of non-binding offtake Memoranda of Understanding (MoU) representing a proportion of Syerston's anticipated production over the first five years of the mine life with counterparties who are well established in the lithium ion battery supply chain. The MoU's define certain key terms of the offtake contracts including volumes and pricing structure. As the DFS is progressed, offtake discussions will continue with these parties, and others, with a view to committing a substantial proportion of Syerston production under binding off take agreements.

During the quarter the NSW Government Department of Planning and Environment approved Clean TeQ's application to modify the Development Consent for the Syerston Nickel/Cobalt Scandium Project in NSW.

The Development Consent is one of the primary instruments of authorisation issued by the NSW Government for the development of any mining project. A Development Consent requires an applicant to carry out the development generally in accordance with an approved Environmental

Impact Statement (EIS) and the conditions of the Development Consent itself. Syerston has already received approval of its EIS for the proposed operation to mine and process up to 2.5 million tonnes per annum of ore.

The Development Consent confirms the approval for the Company to carry out mining operations at the mine for 21 years from the day upon which mining operations start in order to produce and transport up to 180 tonnes of scandium oxide and up to 40,000 tonnes of nickel and cobalt metal equivalents (as either sulphide or sulphate precipitate products) from the mine.

As part of the DFS detailed testwork is underway to finalise the process flow sheet design as well as determining definitive metal recovery results. Each tube in Figure 2 below represents an ion exchange column in the Syerston Clean TeQ adsorption circuit. As the resin moves through the system (from right to left) and is contacted with the leached ore slurry (which is passing through the system from left to right), the resin loads/adsorbs additional nickel and cobalt.

**Figure 2: DFS ion exchange resin loading testwork**



## **Syerston Project 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 lithium ion battery 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 the first half of 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.

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 provided an initial indication that formal approval of the plans will be forthcoming, allowing for an environmental impact assessment to be commenced. Although formal approval has not yet been received, the Company remains confident that it will be issued in Q3 of 2017, with construction to commence in Q4.

In May Clean TeQ, via its wholly owned subsidiary Clean TeQ Water Pty Ltd, was awarded a significant contract by Multotec Process Equipment Pty Ltd (Multotec) to design, procure and commission a Clean TeQ proprietary Continuous Ionic Filtration (CIF®) wastewater treatment solution at a minerals processing plant currently being constructed in Oman (Oman Contract).

Clean TeQ also executed an exclusive Technology Distribution Agreement with Multotec for the African continent. Multotec is a leading provider of high-quality mineral processing equipment and solutions to the mining, mineral processing, petrochemical and power generation industries. Multotec has branches throughout Africa, Australia, Asia, South America and North America. Over four decades of developing, manufacturing, installing and maintaining processing equipment has made Multotec a global leader in custom, application-specific mineral processing technology.

The Oman Contract is valued in excess of US\$400,000 and includes a technology fee and payments for engineering, equipment and resin supply and commissioning support. The CIF® waste water treatment plant will treat waste water from a flue gas desulphurisation scrubber at a minerals processing plant at Port of Sohar Free Zone, Sultanate of Oman. The technology uses Clean TeQ's proprietary Continuous Ionic Filtration technology to remove toxic pollutants and in particular sulphate, antimony and arsenic from the wastewater stream. The Clean TeQ solution is being provided to Multotec as an equipment design and supply package. Multotec is the principal contractor with overall responsibility for delivering the wastewater management systems for the mineral processing facility.

Engineering of the CIF® waste water treatment plant has been completed and materials, including first fill of resin, have been procured and are in transit to the site. Multotec will construct the water treatment plant under the direction of Clean TeQ personnel. The CIF® plant is expected to be completed and commissioned in the fourth quarter of 2017.

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

- 1) 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,
- 2) 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**

Clean TeQ has 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 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 has commenced a range of preliminary investigations and testwork at Monash University and at our Notting Hill laboratory into potential new applications for the GO technology.

## **Corporate**

During the quarter the Company announced a number of changes to the board of directors.

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 Bingham, Director of the Risk Control & Legal Department of Pengxin Mining, has also joined the board as a Non-Executive Director.

**Figure 3: Clean TeQ Notting Hill Laboratory**



**Figure 4: Clean TeQ Notting Hill Laboratory**



Ms Stefanie (Stef) Loader was appointed to the Board as an Independent Non-Executive Director effective 1 July 2017. Ms Loader is a mining industry executive with broad international experience having worked in exploration, project evaluation and development, mining and corporate roles across seven countries and four continents. Residing in Central West NSW, Stef was most recently Managing Director of Northparkes Copper and Gold Mine for CMOC International. A geologist and statistician by training, Stef began her career as an exploration geologist in Western Australia and was then part of the discovery team for the Khanong copper deposit at Sepon in Laos in the late 1990s. After exploration and evaluation roles in the Americas, Stef was assigned to the office of Rio Tinto Chief Executive in London where she then worked on global exploration strategy and prioritisation as Exploration Executive. Stef also led the development of the Bunder diamond project in India for four years, including the signing of a landmark development agreement with the State of Madhya Pradesh in support of the project.

In order to maintain a majority independent Board, Mr Peter Voigt, founder and Executive Director, will resign as a Director effective 30 June 2017. Mr Voigt will remain in his executive role as Chief of Technology. Mr Voigt founded Clean TeQ in the early 1990's and led the company through its initial public offering in 2007. Mr Voigt has been instrumental in the identification, acquisition and development of Clean TeQ's suite of ion exchange technologies. The company will continue to benefit from Peter's wealth of experience and drive as we progress our various ventures across a breadth of fields including water purification, metals recovery and new developments in graphene oxide technologies.

The company received a cash payment of \$2.6 million from the Australian Tax Office (ATO) for the Research and Development (R&D) Tax Incentive. The \$2.6 million payment represents a 43.5% refundable tax offset of Clean TeQ's research and development expenditure in FY16.

During the quarter the company appointed HCF International Advisers Limited (HCF) as advisors to the Company for the arrangement of a debt financing package for the development of the Syerston Project. HCF is a leading independent boutique corporate finance advisory firm which is focused on the global natural resources and infrastructure sectors. Since it was established in 2003, HCF has successfully executed a significant number of financing transactions with a combined value in excess of USD 12 billion and gained a reputation for developing innovative solutions and providing independent and value added advice to its clients.

As at 30 June 2017 available cash at bank was \$88.86 million with \$0.2 million additional cash on deposit securing performance guarantees.

**For more information about Clean TeQ contact:**

Sam Riggall, Managing Director

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**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.

For more information about Clean TeQ please visit the Company's website [www.cleanteq.com](http://www.cleanteq.com).

**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.

**About Clean TeQ Water** – Through its wholly owned subsidiary Clean TeQ Water, Clean TeQ is also providing innovative wastewater treatment solutions for removing hardness, desalination, nutrient removal, zero liquid discharge. The sectors of focus include municipal wastewater, surface water, industrial waste water and mining waste water.

For more information about Clean TeQ Water please visit [www.cleanteqwater.com](http://www.cleanteqwater.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")**

June 2017

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	257	776
1.2 Payments for		
(a) research and development	(77)	(210)
(b) product manufacturing and operating costs	-	(335)
(c) advertising and marketing	(113)	(416)
(d) leased assets	(104)	(264)
(e) staff costs	(570)	(2,900)
(f) administration and corporate costs	(399)	(2,248)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	346	392
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	2,604	2,604
1.8 Other (provide details if material)	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>1,944</b>	<b>(2,601)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	(211)	(336)
(b) businesses (see item 10)	-	-
(c) investments	-	(803)

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
(d) intellectual property	-	-
(e) other non-current assets	(6,149)	(12,641)
<b>2.2 Proceeds from disposal of:</b>		
(a) property, plant and equipment	-	20
(b) businesses (see item 10)	-	-
(c) investments	-	-
(d) intellectual property	-	-
(e) other non-current assets	-	-
<b>2.3 Cash flows from loans to other entities</b>	-	-
<b>2.4 Dividends received (see note 3)</b>	-	-
<b>2.5 Other (provide details if material)</b>	-	-
<b>2.6 Net cash from / (used in) investing activities</b>	<b>(6,360)</b>	<b>(13,760)</b>

<b>3. Cash flows from financing activities</b>	-	-
3.1 Proceeds from issues of shares	-	96,417
3.2 Proceeds from issue of convertible notes	-	-
3.3 Proceeds from exercise of share options	604	1,486
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)	-	301
<b>3.10 Net cash from / (used in) financing activities</b>	<b>604</b>	<b>97,984</b>

<b>4. Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1 Cash and cash equivalents at beginning of quarter/year to date	92,675	7,226
4.2 Net cash from / (used in) operating activities (item 1.9 above)	1,944	(4,545)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	(6,360)	(7,399)
4.4 Net cash from / (used in) financing activities (item 3.10 above)	604	97,380

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
4.5	Effect of movement in exchange rates on cash held	-	14
<b>4.6</b>	<b>Cash and cash equivalents at end of quarter</b>	<b>88,863</b>	<b>88,863</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	88,863	92,675
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>88,863</b>	<b>92,675</b>

**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

<b>Current quarter \$A'000</b>
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230
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**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

<b>Current quarter \$A'000</b>
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-
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8. <b>Financing facilities available</b> <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.		

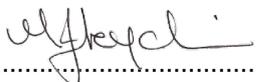
The amount in 8.3 is made up of a \$3,000,000 zero coupon promissory note payable to Australia Nickel & Platinum Holding Company Ltd which is due in March 2018. The note was issued to Nickel & Platinum Holding Company (a subsidiary of Ivanhoe Mines Inc.) by a Clean TeQ Holdings Limited group company as part consideration for the acquisition of Ivanplats Holding Company Pty Ltd, which holds 100% title to the Syerston exploration licences. 5

9. <b>Estimated cash outflows for next quarter</b>	\$A'000
9.1 Research and development <sup>5</sup>	(172)
9.2 Product manufacturing and operating costs	(351)
9.3 Advertising and marketing	(203)
9.4 Leased assets	(99)
9.5 Staff costs	(1,167)
9.6 Administration and corporate costs	(1,382)
9.7 Syerston Project Costs	(15,047)
<b>9.8. Working Capital Costs</b>	<b>(4,372)</b>
<b>9.9 Total estimated cash outflows</b>	<b>(22,793)</b>

10. <b>Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)</b>	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: 24 July 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.