

12 November 2020

## Clean TeQ Water Successfully Completes Nitrate Removal Trial in China

### Discussions Commenced on Projects for Large Scale Implementation

MELBOURNE, Australia – Clean TeQ Holdings Limited ('Clean TeQ' or 'Company') (ASX:CLQ & OTCQX:CTEQF) Managing Director and CEO, Mr Sam Riggall, is pleased to announce the successful completion of a nitrate removal trial in China for Tianjin Xinda Environmental Protection Company ('Xinda'). Xinda is a waste water treatment company with fifteen plants located throughout Tianjin municipality, an area containing the fourth largest urban population in China.

The aim of the trial was to demonstrate the cost effectiveness of Clean TeQ's BIONEX system to reduce nitrate levels in wastewater in order to meet China's increasingly strict waste water disposal regulations. Successful completion of this trial is important because it provides Clean TeQ with independently verified confirmation of the efficacy of the BIONEX technology in the very large Chinese nitrate removal market.



Clean TeQ's BIONEX manufacturing and pilot plant in Tianjin

Nitrate water pollution is a major problem throughout the world. Elevated nitrate levels in waste water can lead to eutrophication of natural water bodies which causes algal blooms which severely harm water quality. Nitrate in drinking water has also been linked to Infant Methemoglobinemia (blue baby syndrome) and increasingly to various forms of cancer. For that reason, there are strict nitrate limits for wastewater treatment plants throughout the world.

Traditional nitrate removal plants use bacteria to break down nitrates in waste waters. These biological systems are typically suitable for removing high concentrations of nitrate but are often not able to meet the strictest (<5 ppm) nitrate effluent concentrations which are required for disposal of water into sensitive environments including certain rivers, lakes and drinking water catchments. This challenge is even greater during colder weather months when bacteria are less active.

Clean TeQ's BIONEX system utilises ion exchange resins to extract nitrate from waste water streams into a highly concentrated, nitrogen-rich brine product. This brine is then treated with our BIOCLENS encapsulated bacteria technology which converts the nitrate into harmless nitrogen gas. The flow rate of the concentrated brine product stream is typically only around two percent of the main flow, delivering substantial water treatment cost-savings.

Clean TeQ's BIOCLENS technology – bacteria encapsulated in polyvinyl alcohol (PVA) lenses – offers significant advantages in water treatment applications given bacteria's ability to break down and remove very high proportions of harmful nitrates and ammonia from wastewater. The bacteria are encapsulated in a PVA polymer in the shape of a lens. Lens shape and size are critically important as they ensure maximum biological activity while protecting the bacteria from potentially harmful environmental conditions. BIOCLENS also has promising applications in the food and pharmaceuticals industries.

During the demonstration plant trial in Tianjin, our BIONEX system was used to treat 95m<sup>3</sup>/day of effluent from a wastewater treatment plant by consistently reducing the influent nitrate concentration from 30 ppm down to 0 ppm. Using BIOCLENS to treat the brine confirmed that no nitrate would need to be discharged to the environment.

With this trial Clean TeQ has demonstrated that BIONEX can eliminate nitrate at very low cost (below A\$0.20/m<sup>3</sup> for this application, and even less for removal of nitrate in lower concentrations) while significantly reducing waste (brine) production. The BIOCLENS lenses used in the process are manufactured by Clean TeQ in our 100% owned factory in Tianjin.

**Clean TeQ is actively promoting the BIONEX and BIOCLENS technology with two further demonstration trials which are scheduled to commence in China over the coming weeks (in aquaculture and another municipal project). The Company is also negotiating with several parties who are interested in projects for large scale implementation. Clean TeQ is also working with partners in the US to introduce our BIONEX technology for removal of nitrate from ground water sources of drinking water.**

**For more information, please contact:**

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This announcement is authorised for release to the market by the Board of Directors of Clean TeQ Holdings Limited.

**About Clean TeQ Holdings Limited (ASX/TSX: CLQ)** – Based in Melbourne, Australia, Clean TeQ is a global leader in metals recovery and industrial water treatment through the application of its proprietary Clean-iX<sup>®</sup> continuous ion exchange technology. For more information about Clean TeQ please visit the Company's website [www.cleanteq.com](http://www.cleanteq.com).

**About the Clean TeQ Sunrise Project** – Clean TeQ is the 100% owner of the Clean TeQ Sunrise Project, located in New South Wales. Clean TeQ Sunrise is one of the largest cobalt deposits outside of Africa, and one of the largest and highest-grade accumulations of scandium ever discovered.

**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 and 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).

#### FORWARD-LOOKING STATEMENTS

Certain statements in this news release constitute "forward-looking statements" or "forward-looking information" within the meaning of applicable securities laws. Such statements involve known and unknown risks, uncertainties and other factors, which may cause actual results, performance or achievements of the Company, Clean TeQ Water, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. Such statements can be identified by the use of words such as "may", "would", "could", "will", "intend", "expect", "believe", "plan", "anticipate", "estimate", "scheduled", "forecast", "predict" and other similar terminology, or state that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved. These statements reflect the Company's current expectations regarding future events, performance and results, and speak only as of the date of this new release.

Statements in this news release that constitute forward-looking statements or information include, but are not limited to, statements regarding: the effectiveness and cost effectiveness of Clean TeQ's proprietary water treatment processes; the potential for the Company to expand its sales of water treatment plants. Readers are cautioned that actual results may vary from those presented. All such forward-looking information and statements are based on certain assumptions and analyses made by Clean TeQ's management in light of their experience and perception of historical trends, current conditions and expected future developments, as well as other factors management believe are appropriate in the circumstances. These statements, however, are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking information or statements including, but not limited to, unexpected changes in laws, rules or regulations, or their enforcement by applicable authorities; the failure of parties to contracts to perform as agreed; changes in commodity prices; unexpected failure or inadequacy of infrastructure, or delays in the development of infrastructure, and the failure of exploration programs or other studies to deliver anticipated results or results that would justify and support continued studies, development or operations. Other important factors that could cause actual results to differ from these forward-looking statements also include those described under the heading "Risk Factors" in the Company's most recently filed Annual Information Form available under its profile on SEDAR at [www.sedar.com](http://www.sedar.com).

Readers are cautioned not to place undue reliance on forward-looking information or statements.

Although the forward-looking statements contained in this news release are based upon what management of the Company believes are reasonable assumptions, the Company cannot assure investors that actual results will be consistent with these forward-looking statements. These forward-looking statements are made as of the date of this news release and are expressly qualified in their entirety by this cautionary statement. Subject to applicable securities laws, the Company does not assume any obligation to update or revise the forward-looking statements contained herein to reflect events or circumstances occurring after the date of this news release.