

# Tianqi Lithium - Laboratory Wastewater System

## Client:

Tianqi Lithium

## Keywords:

Project Management, Process Engineering, Mechanical Design, Control and Instrumentation and Cost Estimation

## Background:

Tianqi Lithium was WA's first battery-grade lithium hydroxide producer in May 2022.

The facility is located in the Kwinana Industrial Area, south of Perth to supply global customers producing rechargeable batteries for electric vehicle and energy storage systems.

## Challenge

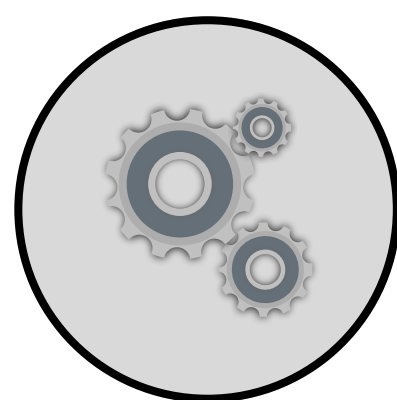
Tianqi Lithium had received approvals for their laboratory wastewater at their facility in Kwinana. Sudden change in requirements meant that they needed someone to design and construct a laboratory wastewater system in a short time-frame in order to continue operations.



## What we did

Engineered Efficiency were engaged to develop and install a system within a three-month timeframe, within the constraints of a site that was near completion and had limited space for installation and manoeuvrability.

A fully automated collection and neutralisation system for collection of laboratory waste was designed and installed to treat and store waste for collection and off-site disposal. The system included the installation of additional collection pumps, a 20,000 litre self-bunded mixing and storage tank, a pH monitoring and control system and separate annunciation of tank levels and alarms in the laboratory.



Fully Automated Process



Acids Treated and Neutralised



Regulatory Approvals Exceeded

## Results

The wastewater system we designed exceeds regulatory demands and we have continued to gain other work from Tianqi including design and online analysis of waste capture and storage systems, project management of the installation of the online analysers and also the cooling tower water treatment systems.

