Brisbane Airport Corporation Water Quality Improvement Project

(Reference site only)

TRILITY®

Design, manufacture and installation of a water quality improvement plant to ensure future chlorination demands can be met with minimal modifications

A mobile chemical dosing unit (CDU) was constructed to allow offsite testing and to minimise site-based construction. The CDU included multiple rooms to ensure compliance with relevant Australian Standards

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TRILITY was the principle contractor to design, construct, install and commission a fully-functional inline chloramine dosing system that can be remotely operated and monitored.

The Brisbane Airport Corporation (BAC) engaged TRILITY to maintain a constant disinfection residual throughout their water supply network. and high-water age within the network.

The project included an in-line chloramine dosing (boosting) system with caustic soda dosing to increase the pH and improve the chloramine residual stability. A building was designed to house the dosing equipment, including chemical storage tanks, bunds, chemical dosing skids, analytical equipment and switchboards in two separate chemical rooms.

Sodium hypochlorite was in one room and ammonium sulphate in the other, as it is unsafe to have these chemicals in the same room. These two chemicals are mixed in the pump room, creating a chloramine solution which is carried out to the dosing point 200 meters away using a new flexible double-contained dosing hose with integral leak detection, for a neat uncomplicated installation.
Wallace and Tiernan analysers were also installed to control the pH levels by communicating with the sodium hydroxide system.

Civil works included concrete pads for the building and tanker unloading area and excavations for an underground spill tank and dosing lines that were run underground from the CDU to the dosing points.

Who

Brisbane Airport Corporation (BAC) is the operator of Brisbane Airport (BNE). It is a suburb in its own right and is the largest airport in Australia by land size.

What

TRILITY designed, manufactured, supplied, constructed, installed, tested and commissioned a chlorination system to meet the future chlorination requirements, with the view of simplifying operations and bringing down cost.

Where

The facility is located in BAC's site on the corner of Lomandra Drive and Sugarmill Road adjacent to the existing BAC Recycled Water plant.

Why

The purpose of the project is to improve the minimum residual disinfection throughout the BAC network. The project also had to deliver a fully functional inline chloramine dosing system that could be remotely operated and monitored.

Snapshot

Client	Brisbane Airport Corporation
Type of Contract	Modular solutions
Facilities	Mobile chemical dosing unit
Technology	Chloramine and caustic soda dosing
Design Capacity	8.3 ML/d

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For further information

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