

ENGINEERING APPLICATIONS – PROJECT DESCRIPTION

SEQ Water – Beaudesert Water Treatment Plant Upgrade

Client: SEQ Water

Project: Beaudesert Water Treatment Plant Upgrade

Duration: August 2014

Description of ENAP's Scope:

SEQ Water appointed ENAP as the principal contractor for this environmentally sensitive project. Several facets of the plant required upgrading or rebuilding and the project encompassed filter media replacement, fluoride flow metering, UV Filter disinfection plant, clear water tank baffle, elimination of the WTP bypass network and a control building treated water connection.

Due to the impact that the upgrades had on the existing landscape, it was important for ENAP to ensure that all stakeholders were aware of the construction methodology. Design drawings and relevant ENAP construction contact details were provided so that transparent communications were maintained throughout the construction phase of works.

Filter Media Replacement

The WTP has two Bobby pressure filters, each divided into four cells. The eight cells required the top 200 mm depth to be refurbished with new fine filter sand.

Fluoride Flow Metering

The discharge pipeline from the media filters required rebuilding due to the non-compliance of the original assembly. The rebuilding included relocating the existing dosing point to downstream of the flow meters and separating the flow meters. All new pipework and associated fittings were supported on the new concrete slab.

UV Disinfection Plant

The UV disinfection plant consists of two automatic broad spectrum ultra-violet light disinfection devices. The units in the design are Trojan Swift SC D18 as recommended and supplied by Aquatec Maxcon. This recommendation is designed to achieve a 4-log inactivation of Cryptosporidium at a peak flow rate of 387 m3/h with a UVT >85%.

The units each have their own individual control panel and all equipment is located on a concrete slab with an overhead awning for weather protection.

New underground pipework from the flow meter has been installed and a manifold is in place to direct the water above ground into the UV units and return below ground to connect with the existing pipeline to the Clear Water Tank.

