



Water Treatment System Goonyella Riverside Mine

Customer: Downer EDI Mining

Location: BMA Coal Goonyella Riverside Mine camp

Case Study ID: CS-69

Date: April 2012

Overview

Dowdens Pumping and Water Treatment installed and commissioned a potable water treatment plant at the BMA Goonyella Riverside coal mine for Downer EDI Mining.

Downer EDI Limited provides engineering and infrastructure management services to the public and private rail, road, power, telecommunications, mining and resources sectors in Australia, New Zealand, Asia and the Pacific. Downer provides rolling stock services, drilling services for the exploration industry, mine planning and management services and highway maintenance.

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The Problem

Downer EDI Mining needed the water quality to conform with the Australian NHRMC Guidelines for potable water as it is to be used as potable grade water for drinking, cooking, washing and showering requirements throughout the mine site. The mine site needed 25 KL of treated water per day.



Our Solution

Dowdens Pumping and Water Treatment decided on a containerised 'plug and play' automatic high purity water treatment plant that is comprised of duty/standby raw water feed pumps, strainer filters for coarse filtration, ultrafiltration (UF) for filtration to <0.2 microns, carbon filtration for taste, odour and organic removal, and chlorine dosing for disinfection.

Key Components

- Refurbished shipping container to house water treatment plant
- Level switches for raw and potable water storage tanks
- Screen filtration prior to UF plant
- Duty and stand-by raw water feed pumps
- 21" automatic carbon filter
- Ultrafiltration Unit with PLC control
- Raw water and potable water in-line flowmeters
- Packaged air compressor unit for air scouring of the WTPs membranes
- 550L CIP/feed tank
- 5000L break tank
- Level regulators for feed and backwash tanks
- Chlorine disinfection with sodium hypochlorite dosing into the potable water line
- Duty and stand-by treated water pumps

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Project Design Philosophy

Dowdens Pumping & Water Treatments design philosophy was to design a cost-effective system with ease of installation, simple, reliable plant operation that reduces ongoing maintenance costs for Downer EDI Mining.



Brands used in this project



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