

CASE STUDY

PROJECT	FACILITIES MANAGEMENT: OPEN CUT COAL MINE
PRODUCTS	Multimedia Filtration, Brackish Water Reverse Osmosis, Gravity Clarification, Chlorination, Moving Bed Bioreactor
INDUSTRY	Mining
LOCATION	Bowen Basin, Central Queensland



BACKGROUND

The owner of a metallurgical coal mine undergoing expansion near Blackwater in Central Queensland required the expertise of a specialist water and wastewater treatment contractor to manage its water treatment assets and guide the operations through a capital upgrade path to accommodate the mine life extension.

Covering an area of 12,600 hectares, and with a production capacity of 7Mt per annum of high grade coking coal required for steel production, this mine is currently sitting on an estimated 90 million tonnes of high grade coking coal, making it one of the largest of its kind in the world. Recent expansion to operations and processing capability will see the mine life extended to 2030 and beyond.

MAK Water was engaged by the owner to operate and maintain multiple potable water and wastewater treatment plants and replace an existing sewerage plant onsite. MAK Water was awarded a 3-year Operations Agreement to provide an operational team to maintain and operate all the water treatment plants onsite.

The Operations Agreement is for the provision of plant operation, technical support, onsite maintenance (both planned and emergency), and the supply of consumables required for normal plant operation.

PLANT OPERATION

Site based Plant Operators to take responsibility for daily plant operation and maintenance.

Additional potable tanker driver covering remote locations on site not serviced by the site's reticulation network.

Services include:

- Operate and maintain the WTP & STP to achieve agreed KPI's
- Set process and discharge monitoring & analyses warning and action levels
- Water and wastewater sampling and EPA management reporting
- Assist client in the preparation of annual capital and operational cost estimates
- Assist client facilities and utilities staff in emergency situations and shutdowns
- Propose process design changes to improve performance, reliability and operating cost
- Review process design to ascertain KPI performance indicators
- Implement operating, training and development procedures



24/7 site coverage provided using two (2) Plant Operators

CASE STUDY

PROJECT	FACILITIES MANAGEMENT: OPEN CUT COAL MINE
PRODUCTS	Multimedia Filtration, Brackish Water Reverse Osmosis, Gravity Clarification, Chlorination, Moving Bed Bioreactor
INDUSTRY	Mining
LOCATION	Bowen Basin, Central Queensland



SITE MANAGEMENT & PERFORMANCE REPORTING

Operations Supervisor/Manager to monitor performance, including:

- Consultancy services including overview for WTP and STP operations, collection, collation, assessment and reporting of plant performance data
- Development and implementation of detailed Drinking Water Management Plan (DWMP) along with Asset Management Plan (AMP)
- Quarterly operational audit reviews and produce audit reports with proposed corrective and preventive actions
- Provide cost estimating for any capital expenditures proposed for the WTP and STP.
- Support the client in interacting with the environmental agencies on water matters related to the WTP and STP including permits, and collaborate with the client on overall environmental liability management.
- Adopt and improve where possible, the existing operating procedures
- Assist in the preparation of a long-term treatment strategy for the plant



Metallurgical coal mine undergoing expansion near Blackwater, QLD

PLANNED MAINTENANCE

Site-based Plant Operator will schedule and execute routine plant maintenance with the scope of work dependent on whether the maintenance includes monthly, quarterly, six monthly or annual servicing.

OPERATIONAL EQUIPMENT

Additional equipment provided by MAK Water to support facilities management includes:

- Office and laboratory
- Laboratory equipment and instrumentation
- Spare parts storage container
- Mine spec site vehicles including mine spec potable water tanker



*Site-based Plant Operator:
Schedule and execute routine plant maintenance*