

# CASE STUDY

PROJECT	FACILITIES MANAGEMENT FOR LITHIUM MINE
PRODUCT	Ultrafiltration (UF), Seawater Reverse Osmosis (SWRO), Dissolved Air Filtration (DAF), Multimedia Filtration (MMF)
INDUSTRY	Mining
LOCATION	Goldfields-Esperance Region, Western Australia



## BACKGROUND

The owner of a lithium mine undergoing expansion near Kalgoorlie in Western Australia required assistance with upgrade of the existing water infrastructure to provide a reliable supply of water for the new processing plant. With the water source being both variable and of limited availability, the focus was on a design that was also capable of treating process wastewater for reuse.

MAK Water was engaged by the owner to design and construct multiple water treatment plants and upgrade an existing plant onsite. MAK Water was also awarded a 3 year Operations Agreement to provide plant operators to maintain and operate all of 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.

## OPERATIONAL SUPPORT

Operational Specialist to provide operational support during the project implementation phase, including:

- Installation and commissioning assistance
- Onsite test work
- Plant performance optimisation
- System integration
- Site procedures

## PLANT OPERATION

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

24-7 site coverage provided using two (2) Plant Operators each doing 12 hour shifts (day/night).

Services include:

- Operate and maintain the WTP to achieve agreed KPI's
- Set process and discharge monitoring & analyses warning and action levels
- 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



*Onsite installation assistance and commissioning*



*Night Shift: 24/7 Operational Coverage*



*Long term Operations Agreement for all plants onsite*

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## SITE MANAGEMENT & PERFORMANCE REPORTING

Operations Supervisor/Manager to monitor performance, including:

- Consultancy services including overview for WTP operations, collection, collation, assessment and reporting of plant performance data
- 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
- Support the client in interacting with the environmental agencies on water matters related to the WTP 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

## 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



*Containerised (2 x 40') solution for easy installation*



*Premium instrumentation package with ClearAccess™ Remote Monitoring*



*Onsite installation assistance and commissioning*