

CASE STUDY

PROJECT POTABLE AND DEMINERALISED WATER FOR SULPHATE OF POTASH (SOP) PROJECT

PRODUCT Brackish Water Reverse Osmosis (BWRO)

INDUSTRY Mining

LOCATION Goldfields-Esperance Region, Western Australia



BACKGROUND

The EPCM contractor of the of process plant for a sulphate of potash (SOP) project in the Pilbara region of Western Australia required both potable water for human consumption and demineralised water for a steam boiler.

MAK Water's innovative water treatment plant design was selected to treat the available bore water, incorporating a single plant with 2 separate run modes, producing maximum capacity for both streams of product water.

MAK Water worked closely with the client to deliver a reliable, compact and economical solution that achieves compliance with both the Australian Drinking Water Guidelines for potable water, and the steam boiler specification for demineralised water.

SOLUTION

Containerised Brackish Water Reverse Osmosis (BWRO) plant to produce up to 61 m³/day of either potable water or demineralised water, or a combination of both.

MAK WATER KEY SOLUTIONS

- Single plant with 2 separate run modes for potable water and demineralised water, producing maximum capacity for both streams
- High salt rejection RO membranes to meet demineralised water specification
- Potable water remineralisation (Langelier Saturation Index correction)
- Potable water tank recirculation and monitoring of free chlorine
- Safety shower and eyewash station
- Containerised (1 x 40') solution for easy installation
- Compliance with client specifications: container paint specification, documentation package
- Transport to site, onsite plant commissioning and operator training



MAK Water containerised BWRO plant installed onsite

RESULTS AND BENEFITS

- **Innovative Design** economical single plant design with compact footprint and maximum capacity for both streams
- **Compliance** Achieves both potable water and demineralised water specification
- **Technical Support** Expert advice and consultation with EPCM contractor throughout the process to provide the best possible solution



Internal view of the containerised BWRO plant