

# CASE STUDY



<b>PROJECT</b>	<b>PROCESS &amp; POTABLE WATER FOR COPPER MINE</b>
<b>PRODUCT</b>	Multimedia Filtration, UV and Hypochlorite Dosing
<b>INDUSTRY</b>	Mining
<b>LOCATION</b>	Kazakhstan

## BACKGROUND

The Bozshakol Copper Project, owned and operated by KAZ Minerals (formerly Kazakhmys), is the largest single copper mine development in Kazakhstan, and one of the largest undeveloped copper deposits in the world.

A leading Australian engineering firm was engaged to provide detailed design and procurement services for the copper sulphide processing plant and associated facilities, which included process water and potable water treatment plants.

MAK Water was selected thanks to our innovative containerised design, extensive experience in delivering high quality packaged water treatment plants for remote mining projects, and our ability to customise our solution to meet the project requirements.

## SOLUTION

Multimedia Filtration (MMF) plant to produce 643 m<sup>3</sup> per hour of filtered water for use as gland seal water. A portion of this filtrate (6 m<sup>3</sup> per hour) undergoes further treatment to supply the site's potable/drinking water requirements.

## CONTAINERISED FOR COLD CLIMATE

- Air conditioned with wall and ceiling insulation, for protection from harsh operating environment
- Media filters, control system and pipework all fabricated in MAK Water's workshop saving installation time on site
- Process proving and pre-commissioning also undertaken at MAK Water factory enabling simple site commissioning

## PROCESS WATER TREATMENT PLANT

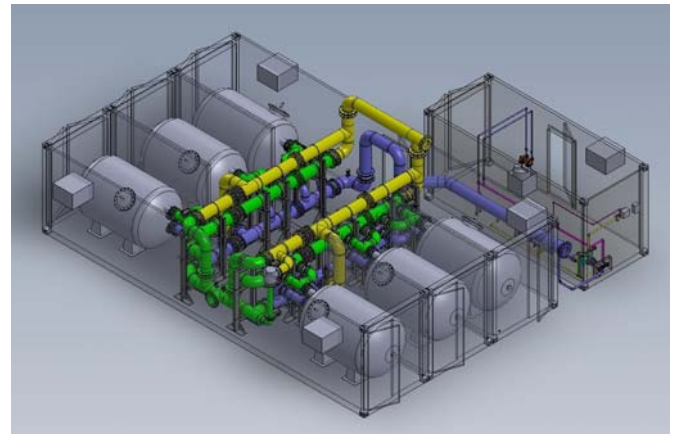
- 6 x auto-backwashing horizontal fibre-reinforced plastic (FRP) multimedia filter vessels
- Accepts pressurised feed water (pumps by client)

## POTABLE WATER TREATMENT PLANT

- Cartridge filter for polishing
- UV steriliser with UV intensity monitoring
- Residual trim hypochlorite dosing

## RESULTS AND BENEFITS

- **Integrated Plant Control System.** MAK Water provided the control philosophy to enable the client to program their control system.
- **Project compliance.** Dual language documentation (Russian & English). Obtained GOST-K certification. Complied with project specifications and preferred equipment.



*15,000 m<sup>3</sup>/day MMF plant with side stream potable water plant*



*MMF plant containers being prepared for transport to Kazakhstan by sea, road & rail*