

CASE STUDY



PROJECT PROCESS AND POTABLE WATER FOR COPPER MINE DEVELOPMENT

PRODUCT Lamella Clarification, Multimedia Filtration, UV

INDUSTRY Mining

LOCATION Donoso, Colon Province, Panama

BACKGROUND

MAK Water was engaged to deliver the process water and potable water treatment plants for the Cobre Project, one of the larger copper mine developments in Central America.

As this was a Greenfield project and the exact feed water quality was uncertain, MAK Water proposed a robust process incorporating:

- Chemical flocculation to improve efficiency of solids separation
- Lamella clarification as pre-treatment to account for spikes in suspended solids, and
- Media filtration in order to achieve the final quality of process and potable water for the site.

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

SOLUTION

Two plants were built, one for process water and one for potable water. Each plant was designed to produce 60 m³ per hour. The potable water treatment plant also incorporated UV sterilisation.

CONTAINERISED FOR HARSH CONDITIONS

- Air conditioned with wall and ceiling insulation, for protection from harsh operating environment
- Client specific customised electrical specifications, including rodent proof cabling

FLOCCULATOR TUBE & CLARIFICATION SYSTEM

- Less complicated system with minimal moving parts
- Simple operation with minimal maintenance requirements

MODULAR APPROACH

- Media filters, polymer make-up unit, control system and pipework all fabricated in MAK Water's workshop saving installation time on site
- Filtration, dosing and control equipment installed within standard sea containers, for ease of international shipping
- Factory acceptance testing witnessed by the client, enables efficient reassembling and commissioning on site

RESULTS AND BENEFITS

- **Project specifications.** Plants supplied with project preferred electrical equipment
- **Lower operating costs.** MAK Water supplied a powdered polymer make-up/batching unit to reduce OPEX
- **Plug and play.** Pre-tested, containerised/modular design for fast and easy installation onsite



Two off Lamella Clarifiers to produce 60 m³/hr each



Two off skid mounted tube flocculators and containerised multimedia filtration plants