



Mining industry

Modular Water Treatment Plant - 1.5MLD

exxaro



Problem Statement

The mine has a positive water balance and therefore needs to discharge water from the mine into the river.

The water must be treated to comply with discharge limits as conductivity, total dissolved solids and sulphate levels are high.

Solution

A modular water treatment plant to treat approximately 1.5MLD per day. The plant will use existing pontoon pumps to feed a tank.

The tank will feed:

1. Container with an Evoqua Water Technologies VAF automatic self-cleaning filter.
2. Ultrafiltration containers with 2 x UF skids
3. Reverse Osmosis containers x 2
4. Electrical control centre



Concentrate losses

- The UF units will run at an average overall recovery of approximately 92% and the RO units will operate at an average recovery of 75%. The waste produced is recycled back in the process.



Performance Target

- Production of approximately 1.5MLD of product water with conductivity of <40 mS/m; TDS of <100mg/l and Sulphate of <200mg/l



Process

- Dewatering process using ultrafiltration and reverse osmosis (UF-> RO)