



MEGA-DRAIN™

THE MEGA-DRAIN™ INTEGRATED WATER MANAGEMENT AND PRESS-LESS DRY STACK TAILINGS MANAGEMENT SOLUTION

Background

The Mega Drain Corporation is delivering full-project lifecycle, process water recovery and *press-less* dry-stack tailings management systems. The solution allows mine operators to use less water and to dry stack tailings without the use of mechanical filter-presses. This proprietary patent-pending, energy efficient system is modular, configurable and scalable. It can be installed as a total dry stack solution or as a dynamically managed proportional dry stack solution. The proportional solution provides optionality and balances the water intake and outflow requirements against the stacking requirements over the mine life in response to changing water supply and production levels as impacted by storms, production scheduling and other market driven events.

The MEGA-Drain™ Underflow Water Management and Overflow Dry-Stack Solutions

The system as implemented in hard rock mining and milling operations has two parts: 1) the capture of the coarser sand size particles and recycling of water contained in the sand size Underflow feed from the cyclones using a Water Storage Vault (UWSV), and 2) the capture of the finer size particles (slimes) and process water for recycling in the Overflow using Geotextile Filtration Tubes (OGFT).

Overflow Treatment (~ 23.0% Moisture)



Underflow Treatment (~ 5.5% Moisture)



MEGA-Drain™ can reduce both permitting times & reclamation costs as well as increase project sustainability

MEGA-Drain™ UWSV is proven & commercially tested; showing sub 6.0% moisture levels in less than 36 hours

MEGA-Drain™ OGFT drains the solids from the overflow tailing slurry, with major side benefits of reinforced dam stability and increase water recoveries

MEGA-Drain™ reduces water makeup demand on par with moisture levels and costs of mechanically pressed dry-stack at projected 25 -30% PV8 savings

Improves ESG acceptability increases water reuse rate, lowers dam failure risk; "Good For Everyone"

WATER IS AN ASSET, NOT A LIABILITY

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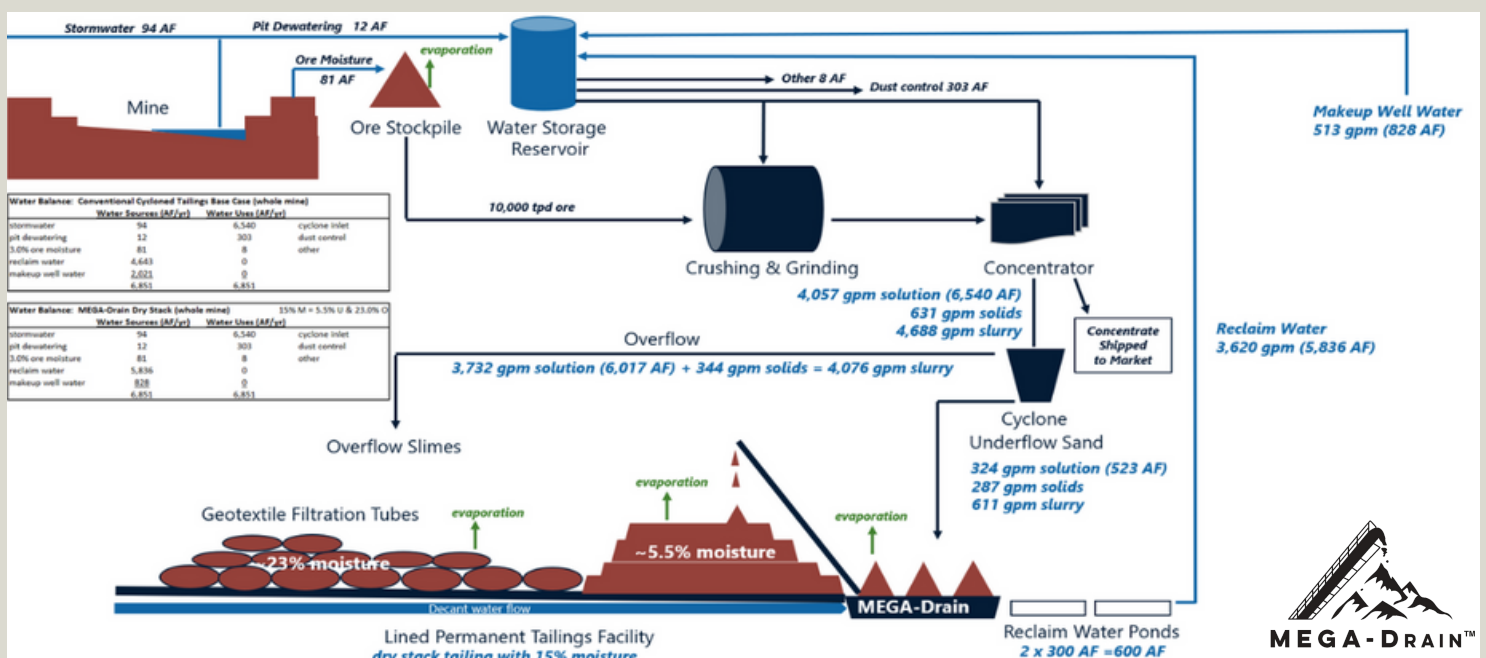


Geotextile Filtration Tubes Stabilize Stored Tailings and Increase Tailings Storage Facility Sustainability

Mine tailings dams are failing at a rate at least ten times higher than that of conventional water storage dams and recent dam failures have caused significant loss of life, and environmental damage. Notwithstanding the significant monetary losses, TSF failures have greatly damaged the reputation of the mining industry and affected the industry's social license to operate. The MEGA-Drain™ tailings solution captures: 1) the coarser sand size particles and water contained in the UWSV on a decant pad and 2) the finer size particles (slimes) and process water in the OGFT using engineered, geotextile filtration tubes which are stacked in a lined permanent TSF. MEGA-Drain's™ integrated dam-less or proportionately dammed TSF solutions are less expensive to install and operate than mechanical pressed dry-stack scenarios, and are more scalable, configurable, robust, and sustainable. Decanted water is collected and reused as makeup water. An entire tailings storage facility can be simply and progressively reclaimed by spreading native soil and planting vegetation on top. The MEGA-Drain™ solution lowers tailing heights, requires no dams to hold back slurries, and is simpler, easier, and safer to construct, operate, maintain, and reclaim than alternative TSF configurations.

MEGA-Drain 10,000 TPD Example Reducing Makeup Water Demand by 55 -65% and PV8 Costs by 25 -30%

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