

Background

In 2003, an aggregate products manufacturer contacted Purifics to purify and control the water used during the manufacturing process. At this site, stone cutting operations utilized up to 100m³/day of water for tool cooling and dust suppression, and spent water contained high concentrations of aggregate fines, dust, and other workplace debris which was drained into the lay down yard. This created a wet, untidy work environment and runoff (discharge) issues. The water discharge had the attention of the Environmental Regulatory Authority who was mandating corrective action. The client then began the process of engineering an expensive settling pond until Purifics offered a cost-effective alternative solution.

Challenge

The client required a simple, variable flow water reuse system that would reduce water consumption as well as reclaim water and sub-micron fines. For reuse, the water had to be free of any particulate and color that could wear or jam the nozzles on the cutting equipment or have color carry-over that could foul other architectural stone. Purifics proposed a novel **Cuf** system that would fit the existing plant operations while allowing the client to cut costs and reduce waste.

TREATMENT REQUIREMENTS	Influent	Effluent
Nominal Flow Rate	100m ³ /shift	On demand
Peak Flow Rate	1m ³ /min	On demand
Solids	Debris and micron size	< 1 micron size
Colour	Variable	No Colour



Cutting machinery utilized water for coolant and dust suppressant



Beveling Line with Collection Trench and Water Distribution Line

