

Precipitation Alternative

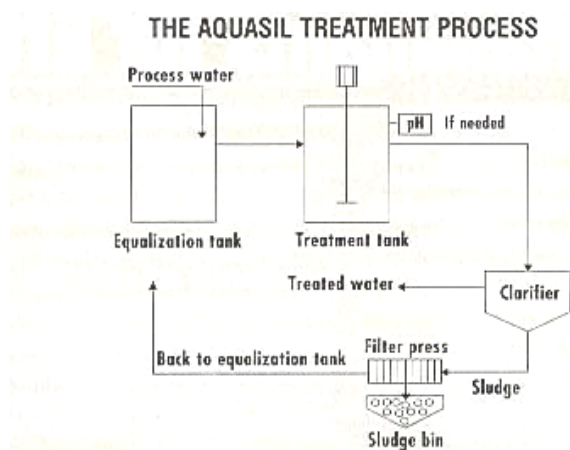
Kelly Kratch, Water Environment Federation

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A new wastewater treatment process removes contaminants from industrial effluent, reduces equipment and labor costs, eliminates maintenance requirements, and generates non-hazardous waste, according to Sultan Amer, owner of **AQUACHEM INC.** in Canton, Mich., the company that developed and markets the nonhazardous mineral-based products used in the **AQUASIL**[®] process.

Product configurations are available to treat various types of wastewater in batch or continuous mode and flow rates up to several hundred gallons per minute. The process treats wastewater that has low, neutral, or moderately high pH and overcomes problems associated with hardness and the presence of complexing and chelating agents, surfactants, and detergents. The primary benefit of the process, Amer says, is that customers use only one product, whereas conventional techniques require several chemicals that are prone to clogging, freezing and other maintenance problems.

The proprietary natural additive comes in an easy-to-use powder formula, Amer says. For batch processes, the powder is poured directly into wastewater; for continuous processes, either a volumetric or gravimetric feeder must be used or the powder must be slurried first, he says. No additional equipment is required.



The additive, which has a 5-year shelf life, costs less than its main competitors (chemical feeds) when reduced labor and waste disposal costs are figured into the equation, Amer says. "We sell it at a comparable price to other chemical feeds." He says, but using our system reduces waste disposal costs by 70% because waste generated by the **AQUASIL**[®] process passes toxicity characteristics leaching procedure test.

The AQUACHEM additive treats wastewater from various industries, including metal finishing, wood preserving and tannery facilities. After the additive is poured into a tank of agitated wastewater, flocs form and settle quickly - usually within 3 to 10 minutes - and require no additional

treatment or stabilization. The quality of treated effluent is high enough that it can be recycled. In contrast, metal hydroxide precipitation, which is a common way to treat metal finishing wastewater, is time consuming, requires separate precipitation, flocculation and settling tanks; and generates hazardous sludge that is expensive to treat and dispose, Amer says.

AQUASIL[®] products are used to treat effluents containing suspended solids, oil and grease, and heavy metals and can lower levels of hexavalent chromium, arsenic, selenium, phosphate, fluoride, chemical oxygen demand, biochemical oxygen demand, total dissolved solids, and phenol. For more information, contact AQUACHEM, INC. at 832-539-1020.