

Residuals Management & Zero Liquid Discharge Using Ceramic Membrane DeWatering

Where: Caesars Forum, 3911 Koval Lane, Las Vegas, NV 89109

Booth Location: #205

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Common methods of managing residuals in drinking water production vary widely and include thickening tanks, drying beds, screw presses, polymer, solids handling and other hardware. These methods are routinely high in labor, chemicals, complexity, foot print and have significant capital & operating costs.

This paper will review the operational histories of an alternative dewatering process, based on ceramic membrane technology that provides complete Residuals Management and Zero Liquid Discharge without the need for chemicals or labor, at an OPEX of < \$1/day per MGD of capacity. This novel process, in use with regulatory approval for many years, permits the recovered water to be sent directly to drinking water (clear well).

The solids recovered include organics, metals, silt or biomass in any combination from which the water is removed until the solids form a sludge that will pass the paint filter test. An application case history will be presented on how the regulatory approval process was implemented and received for residual land applied for soil enhancement.