

Case Study: Specialty Chemical Solution: Treatment of High-Strength, High-Saline Chemical Wastes

Challenge

A specialty chemical manufacturer expanded production and was faced with \$2.7 million per year for off-site disposal (\$0.5/gal) of high-strength wastewater with high brine (8% salt) and high COD (130,000 mg/L). Corporate staff decided to evaluate the AFC process to reduce off-site disposal costs.

Solution

Bench testing, field pilot, and engineering analyses indicated that significant cost savings would be achieved with the BCS AFC process. A full-scale system startup was completed in early 2001.

Result

Total AFC O&M costs were about \$0.7 million/year or 25% of the cost for hauling the untreated waste for disposal. Some wasting was necessary for blowdown of minerals. Over 15,000 tons of COD have been treated with zero excess biosolids production at a cost savings of about \$2 million/year.

