

## **Case Study: Pharmaceuticals**

### ***Solution: Treatment of High-Strength Contaminated Groundwater***

#### **Challenge**

A hazardous waste site had groundwater with COD values ranging from 80,000 to 200,000 mg/l with high TDS. An estimated 4 million gallons needed to be treated. With an off-site disposal cost over \$1/gallon, an on-site treatment approach was needed.



#### **Solution**

BCS evaluated a conventional aerobic treatment, anaerobic treatment, and an AFC system. The BCS AFC technology was selected to treat the groundwater, enabling the plant to minimize sludge production.

#### **Result**

- Effluent COD from the system is less than 50 mg/L with a feed COD of almost 30,000 mg/L after almost three years of operation
- Effluent BOD is non-detect with an influent BOD over 17,000 mg/L
- The full-scale system has been on-line for over 17 years achieving 99% COD removal with almost no sludge production – saving about \$1 million/year in hauling costs.

