

Limiting Copper Discharge

CLIENT PROFILE

A power plant providing 450 megawatts of generating capacity from three generating units. Two units consume coal and up to seven percent tire-derived fuel, and the third unit consumes oil.

OPERATIONAL CHALLENGE

The plant was facing major surcharges as a result of the copper discharge limits for an adjacent waterway being significantly reduced. The allowable limit was dropped to 0.008 parts per billion (PPB), but the power station was releasing double that amount.

CHEMICAL SOLUTION

Kroff Chemical Company, Inc. developed a system that enabled the plant to decrease the amount of copper discharge to 0.002 PPB, well below the allowable limit of 0.008 PPB.

Kroff Chemical was the only company with the right chemistry – and application of that chemistry – to provide a solution that exceeded expectations. The solution involved modifying the power station's existing operation to include a bulk-bin feeder that introduces modified bentonite clay, which precipitates metal out of wastewater. Kroff Chemical trained the operators to work with the new feed system such that they could take ownership in the operation.

BOTTOM-LINE RESULTS

- Prior to Kroff Chemical's solution, the plant produced wastewater that often appeared cloudy. Following the introduction of Kroff's process, the wastewater is significantly clearer. Moreover,
- the power station is no longer receiving surcharges for copper violations.
- As a result of Kroff's solution, the plant has also moved away from lime and caustic additions to remove metals from the wastewater streams.



Kroff Chemical Company, Inc. provides custom-blended chemicals and specialty services that improve clients' critical water and process system performance, which helps maximize efficiency of operations and lower costs of production.

Kroff Chemical's services focus on energy efficiency, regulatory compliance, waste and water minimization and reuse, fully automated and integrated chemical applications, and a safety-conscious approach.

With the support of Kroff Chemical, facilities operate with less staff, but they operate safely, efficiently and profitably. Clients focus more on their core competencies and look to Kroff Chemical to treat, operate and maintain their critical water and process systems.