

# Advanced Fly Ash Inhibitor



## CLIENT PROFILE

A leading supplier of energy products and services to wholesale, retail electric and natural gas customers, and a major generator of electricity with a diversified fleet of generating units strategically located throughout the United States and Canada, totaling approximately 9,000 megawatts of generating capacity.

## OPERATIONAL CHALLENGE

As the vendor servicing the facility's slag water recirculation system, Kroff Chemical Company, Inc. was notified that recirculation water was dirty and also the domestic waste water treatment plant at the site was not functioning well due to clarifying basin solids not settling. The issues created a potential compliance issue and environmental hazard due to direct waste water discharge to a local watershed.

Kroff discovered the slag recirculation system was clean but the water was stained, and that the cause was a fly ash transportation inhibitor/crystallizer being offered by another company. In fact, all process water at the plant was contaminated even though the product had a containment tank. This chemical had spilled on the ground and found its way to into the waste water system, the cooling tower recirculation water, and the slag recirculation system.

## CHEMICAL SOLUTION

Kroff developed a strategy to precipitate solids in the plant's waste water clarifying basins. The result was a system that settled the solids necessary to provide the plant enough room in the basins to discharge water and allowed the plant to continue operations. Kroff also developed a permanent plan and system to remove solids in the clarifying basins in the future. The stain in the water created by the fly ash inhibitor had to be removed via carbon filtration prior to discharge to the watershed.

- Kroff then solved the problem at the source by providing a much less viscous, non-staining, easier to manage, eco-friendly alternative fly ash inhibitor.

## BOTTOM-LINE RESULTS

- Due to the uncontrollable spills of the previous fly ash inhibitor, spills had to be contained and then vacuum-trucked off site with each occurrence. This happened each time the plant needed to truck fly ash off site. This added greatly to the cost of disposal. The plant has saved up to \$5,000 per fly ash hauling since making the change. With the new fly ash inhibitor, usage is down, and spills are easily controlled with no environmental hazard or stains occurring to the plant process water systems.



*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 operation.*

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

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