Zinc Discharge Treatment for Metalplate Galvanizing

CASE STUDY

Location	Atlanta, GA
Client	Metalplate Galvanizing
Year	2014
Industry	Industrial
Application	Stormwater
Contaminants	Zinc
Solution	WaveIonics Electrocoagulation Enhanced Filtration

Innovative Solutions in Atlanta

Metalplate Galvanizing has specialized in hot-dip galvanizing for over sixty years. From their origins in the 1930's as a small metal finishing shop in Montgomery, AL, they've grown to six modern plants located in steel and transportation centers all across the southeastern United States. Metalplate reached out to WaterTectonics for assistance in coming up with a cost-effective, long-term solution to meet dissolved Zinc discharge requirements at their Atlanta, GA plant.

DESIGN & ENGINEERING

WaterTectonics designed and engineered a treatment system that would meet regulatory discharge requirements. The engineering department provided comprehensive conveyance and treatment system packages including: process flow diagrams (PFDs), piping and instrumentation drawings (P&IDs), operation & maintenance (O&M) manuals, electrical load calculations and electrical schematics.

TREATMENT SOLUTION

WaterTectonics provided and commissioned a 100gpm WaveIonics treatment system that included electrocoagulation, clarification and media filtration to meet the dissolved Zinc benchmark. An Automated Operator system incorporated control and adjustment of all system processes to a single touch-screen interface, and a water quality discharge valve was utilized to ensure that all effluent water met operator-defined standards prior to final discharge. In addition, Metalplate staff received on-site training from the WaterTectonics Field Technician team. To date, Metalplate has been successful in their system operation and have reduced dissolved zinc to below their requirement.

	Units	Average Result Prior to Treatment	Average Result After Treatment Installed
Dissolved Zinc	µg/L	17,450	77

> "WaterTectonics' electrocoagulation equipment was the only technology able to treat the volume of water we were expecting, down to the limit we were given, at an affordable price. There was really no comparison."
>
> - Adam Brown, Vice President of Technical & Environmental Affairs, Metalplate Galvanizing

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