

CASE STUDY:

SprayShield Green Clarifier

CLIENT

A Water Treatment Plant

PROBLEM

Deterioration of concrete in wastewater clarifier launders, caused by chemical treatments, led to exposed rebar, cracks, and extensive algae build-up, necessitating frequent and labor-intensive cleaning.

SOLUTION

SprayShield Green was applied to restore and protect the deteriorated concrete surfaces, creating a smooth, non-porous layer that prevents algae cling and reduces cleaning maintenance.

At a water treatment plant with four 60-foot clarifiers, years of chemical treatment intended to control algae growth had taken a toll on the concrete structures. The aggressive chemicals used in the treatment process led to significant deterioration, exposing rebar and causing cracks and spalling in the launders of these wastewater clarifiers. Plant employees faced the arduous task of power washing the launder areas weekly to manage algae build-up, a time-consuming and inefficient process.

SOLUTION

Conco Spray Solutions was tasked with rehabilitating the clarifier troughs to restore their functionality and durability. The solution began with high-pressure cleaning of the concrete surfaces using a 5,000 psi washer to remove all contaminants and prepare the surface. Areas with exposed rebar were treated to address corrosion and seal any leaks. Large voids in the concrete were filled with a half-inch layer of mortar to restore the profile and create a CSP 3-4 surface texture. To further protect and enhance the durability of the clarifiers, Sprayroq's SprayShield Green polyurethane lining was applied at a thickness of 150 mils (3/16"). This lining not only repaired the concrete but also provided a smooth, non-porous surface that would prevent algae from clinging and significantly reduce cleaning efforts.

RESULTS

The application of the SprayShield Green transformed the clarifier launders, providing a durable and smooth surface that greatly alleviates the need for frequent power washing. The new lining protects the concrete from further chemical attack and prevents algae build-up, extending the lifespan of the clarifiers and reducing maintenance efforts. The successful rehabilitation has ensured that the clarifiers will remain in optimal condition for many years, benefiting from enhanced resistance to environmental stressors and reduced operational downtime.



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