

LYONS WET WELL

As regulations change and new technologies emerge in the treatment of wastewater, many municipalities across the country are recognizing the need for a protective coating system that can perform under increased levels of biogenic sulfide corrosion caused by elevated hydrogen sulfide (H_2S) concentrations. More effective odor control measures, increased wastewater detention times and separating the flows of rainwater versus wastewater are just a few of the changes that have led to a stronger presence of H_2S gas and sulfuric acid (H_2SO_4) in collection system wet wells. When the Village of Lyons, New York, discovered a serious level of concrete corrosion in the lower section of their lift station wet well, Tnemec's Perma-Shield coating system, designed specifically for severe wastewater environments, answered the call.

"We found through a lot of research and development work that this high-build, moisture- and vapor-resistant lining system is able to protect the concrete for a long period of time in this particular kind of exposure," said Tnemec coating consultant Carl Bye.

After pressure washing to decontaminate the surface and dry abrasive blasting the affected areas, Series 219 MortarCast and Series 218 MortarClad were trowel-applied to patch the deep holes and resurface the areas. Both mortars are high-performance, cementitious epoxy resurfacers. Series 434 Perma-Shield H_2S , a 100% solids hybrid epoxy mortar, was then trowel-applied at 1/8" thickness and rolled out with a 3/8" nap roller to smooth and tighten the surface. Series 435 Perma-Glaze, a 100% solids epoxy lining, was then roller-applied as a glaze coat at 15.0 to 20.0 mils DFT.

"This Perma-Shield system continues to be used more and more, and it works," noted Bye. "We had our first follow-up inspection with the Village of Lyons and after one year of exposure, everything remained in perfect shape."

FEATURED PRODUCTS

Series 218 MortarClad

Series 219 MortarCast

Series 434 Perma-Shield H_2S

Series 435 Perma-Glaze



PROJECT INFORMATION

Project Location

Lyons, New York

Project Completion Date

December 2005

Owner

Village of Lyons

Engineer

MRB Group
Rochester, New York

Field Applicator

LeClaire-Fleming
Rochester, New York

Tnemec's Perma-Shield System, designed specifically for severe wastewater environments, protects the lift station wet well in Lyons, NY from biogenic sulfide corrosion.

