

ONEIDA WASTEWATER TREATMENT PLANT

FEATURED PRODUCTS

Series 446 Perma-Shield MCU

When do one and one equal three? At the Oneida Indian Reservation in Wisconsin, engineers for a new wastewater treatment plant (WWTP) project were able to achieve the same dry film thickness (DFT) using two coats of a moisture-cured urethane as three coats of a polyamine epoxy.

“The project was originally specified for three coats of epoxy at 4.0 to 6.0 mils DFT per coat,” according to Tnemec coating consultant John Laird. “The change was approved to use two coats of Series 446 Perma-Shield MCU at 7.0 to 9.0 mils DFT per coat. They were able to achieve the same thickness because the product is a little higher build, so we were able to give them a better system and save them money because we dropped from three coats down to two.”

The Oneida project consisted of seven new concrete tanks and basins which were dry abrasive blasted in accordance with SSPC-SP13/NACE 6. Nearly 600 gallons of the single-component, moisture-cured urethane was spray-applied to the tanks and basins, providing superior resistance to H₂S permeation compared to traditional thin-film epoxies and coal tar products.

“The engineer had used the same coating on an influent channel for the Heart of the Valley WWTP in Kaukauna, Wisconsin, and was familiar with this technology,” Laird noted. “Three coats of epoxy had been specified for that project, too, but were changed to two coats of Perma-Shield MCU.”

“This product has been formulated to withstand wastewater immersion and H₂S exposures,” Laird added. “The elevated H₂S levels experienced in wastewater collection and treatment have proven to be detrimental to traditional thin film coatings, so Perma-Shield MCU is a definite upgrade to these coatings.”

The Oneida Reservation is located southwest of the city of Green Bay and west of the Fox River. It straddles the boundary of Brown and Outagamie counties and includes all or portions of the City of Green Bay, villages of Ashwaubenon and Howard, and the Towns of Hobart, Oneida and Pittsfield. The Oneida Nation is one of the largest employers in northeastern Wisconsin with more than 3,000 employees, including 975 people in Tribal government. The Tribe’s new wastewater treatment plant has an average wet weather design flow of 300,000 gallons per day.

PROJECT INFORMATION

Project Location

Oneida Indian Reservation, Wisc.

Project Completion Date

October 2006

Owner

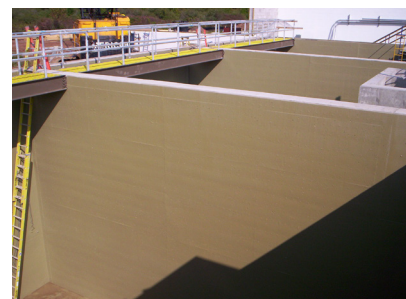
Oneida Tribe of Indians of Wisc.

Architect/Engineer

McMahon Associates
Neeneh, Wisconsin

Contractor/Applicator

Quality Sandblasting
Green Bay, Wisconsin



Two coats of a moisture-cured urethane was spray applied to the tanks and basins at the Oneida Wastewater Treatment Plant, providing superior resistance to H₂S permeation compared to traditional thin-film epoxies and coal tar products.