

NORWOOD REVERSE OSMOSIS WTP EXPANSION



FEATURED PRODUCTS

Series 63-1500 Filler and Surfacer Series N140 Pota-Pox Series 156 Enviro-Crete
Series 218 MortarClad

When limited space at the Norwood Water Treatment Plant in North Miami Beach required construction of a cast-in-place concrete potable water tank inside another tank of similar design, the protective coating system from Tnemec Company was called on to do double-duty. "This was an interesting tank," acknowledged Tnemec coating consultant Mike Kendig. "Picture a concrete tank with a dome roof and inside is a separate tank. This design allows one tank to remain in operation while the other is being serviced."

Following abrasive blast cleaning in accordance with SSPC-SP13/NACE No. 6 *Surface Preparation of Concrete*, the interior of the outer water storage tank and interior/exterior of the inner tank were resurfaced using Series 218 MortarClad, an epoxy-modified cementitious mortar and Series 63-1500 Filler and Surfacer, a modified amine epoxy. Resurfacing creates a contiguous surface to which the subsequent protective coating can be applied.

After the resurfacers had properly cured, more than 1,200 gallons of Series N140 Pota-Pox Plus, a polyamidoamine epoxy, were spray-applied for barrier protection of the concrete. Pota-Pox Plus is certified by NSF International in accordance with ANSI/NSF Standard 61, which provides the criteria used to evaluate the public health safety of materials, components, products or systems that contact drinking water. In most states, an NSF-approved protective lining is required in concrete water tanks to isolate potable water from the concrete substrate.

The exterior of the outer tank was prepared to a clean and dry condition before two coats of Series 156 Enviro-Crete were roller-applied. A modified waterborne acrylic, Enviro-Crete is a flexible, breathable coating primarily used for concrete and masonry that provides the substrate with excellent protection against driving rain and UV light. "The exterior of the outer tank has ornamental features that were painted in different accent colors," Kendig added. More than 360 gallons of Enviro-Crete were required on the exterior of the outer tank.

The Norwood R.O. Water Treatment Plant Expansion Program nearly doubled the plant's production capacity from 16 million gallons per day to approximately 32 million gallons per day. The project included the construction of a 31,500-square-foot membrane water treatment process building, which houses reverse osmosis and nanofiltration membrane units and other associated buildings totaling 56,059 square feet.

PROJECT INFORMATION

Project Location

Norwood Water Treatment Plant

Project Completion Date

May 2006

Owner

City of North Miami Beach, Florida

Engineer

Tetra Tech
Orlando, Florida

Contractor

The Crom Corporation
Gainesville, Florida

Applicator

Southland Painting
Fort Lauderdale, Florida



Series 156 Enviro-Crete protects the concrete exterior of the outer tank at the Norwood Reverse Osmosis WTP in North Miami Beach, Florida, against rain and UV light.