

TAMPA BAY SWTP

Tampa Bay Water (the Utility) developed a \$610 million Master Water Plan blueprint to meet the long-term drinking water needs for more than two million customers in the Tampa Bay region. In 1998 the first configuration of projects was approved, including a phase one strategy to deliver a surface water treatment plant (SWTP).

In March 2000, the Utility entered into a \$144 million, 15-year design/build/operation (DBO) agreement with USFilter Operating Services to carry out the design and construction of the new state-of-the-art SWTP and to provide for its day-to-day operation. The plant is among the most technologically sophisticated in the world and is also the nation's largest DBO water project.

USFilter partnered with CDM to produce complete design drawings. During construction, CDM turned to Tnemec for solutions to the challenges of protecting diverse plant operation surfaces and substrates spread over 20 acres, including carbon steel, concrete (both pre-cast and poured-in-place), concrete masonry units (CMU), ductile iron and alloy steel.

Tnemec consultants specified four categories of coatings systems needed to protect the wide variety of substrates throughout the treatment plant, including protective linings, exterior masonry and steel coatings, corrosion resistant coatings and floor coatings and overlayment systems. Protective linings were specified for the interior of the settling, maturation, coagulation and injection tanks, and on submerged concrete in the gravity thickener tank, recycle surge basin and influent box.

Exterior masonry and steel coatings were specified for all piping and pumps, exterior concrete, CMU, containment areas and in the maintenance and storage buildings.

Corrosion resistant coatings were specified for all interior and exterior pipe galleries, filters, submerged steel, walls and ceilings of the operations building. Floor coatings and overlayments were applied to the maintenance area, chemical storage area, gravity thickener room, control rooms and bathrooms.

All piping and valves throughout the plant were also coated with a tough polyurethane for UV protection. "Because of the plant's enhanced coagulation treatment process, it was extremely important to have the right coatings to protect the extensive concrete and steel substrates against this low pH water environment, which is aggressive and borderline corrosive," US Filter Plant Manager David Hackworth said.

FEATURED PRODUCTS

Series 20 Pota-Pox
Series 66 Hi-Build Epoxoline
Series 104 H.S. Epoxy
Series N140 Pota-Pox Plus
Series 73 Endura-Shield
Series 61 Tnemec-Liner
Series 201 Epoxoprime
Series 280 Tnemec-Glaze

Series 264 Elasto-Shield
Series 6 Tnemec-Cryl
Series 130 Envirofill
Series 113 H.B. Tnemec-Tufcoat
Series 90-97 Tnemec-Zinc
Series 607 Conformal Stain
Series 632 Prime-A-Pell H₂O



PROJECT INFORMATION



Project Location
Tampa, Florida

Project Completion Date
Fall 2002

Owner
Tampa Bay Water

Engineer
CDM
Tampa, Florida

Applicator
Universal Painting
Lakeland, Florida

DBO
US Filter Operating Services
Houston, Texas

Tnemec specified coating systems to protect the wide variety of substrates throughout the entire treatment plant, including protective linings, exterior masonry and steel coatings, corrosion resistant coatings and floor coatings & overlayment systems.

