

# FORT SMITH 7.5 MILLION GALLON WATER TANK

After more than 15 years of specifying urethane coatings for the exterior of its potable water tanks, the City of Fort Smith, Arkansas, switched to fluoropolymer technology from Tnemec to achieve long-term performance for an aging 7.5 million gallon ground storage tank.

"They upgraded from a urethane to fluoropolymer exterior finish for this large tank to extend its repaint cycle," recalled Tnemec coating consultant Myron McWherter. "The tank was in horrible condition with mold and mildew all over its exterior. But fluoropolymer technology provides such a smooth, slick finish, so mildew and mold has a hard time attaching to the coating. HydroFlon has been used on many tanks in the area for several years and you would be hard pressed to see mildew on any of the tanks that are coated with it."

Prior to coating, both the interior and exterior of the tank was prepared in accordance with SSPC-SP10/NACE No. 2 Near-White Metal Blast Cleaning to create a surface free of all visible dirt, rust, paint, and other foreign matter. "The old coating had lead in it, so the project required containment," McWherter noted.

For the tank's interior steel, applicators spray-applied more than 400 gallons of Series 91-H<sub>2</sub>O Hydro-Zinc, a moisture-cured, zinc-rich urethane primer. Two coats of Series FC20 Pota-Pox, a fast-curing polyamide epoxy, were spray-applied to complete the interior coating system.

The exterior steel was primed with 300 gallons of Hydro-Zinc, which was spray-applied. Next, an intermediate coat of Series 1075 Endura-Shield II, a semi-gloss aliphatic acrylic polyurethane, was roller-applied, followed by a topcoat of Series 700 HydroFlon, an advanced thermoset fluoropolymer. In addition to its long-term gloss and color retention, HydroFlon offers outstanding resistance to ultraviolet light degradation, abrasion, and chalking.

"After it was finished, everyone really liked the outcome," McWherter added. "The Fort Smith Utility Department specified the same coating system for a second 7.5 million gallon tank in 2008, as well as a new composite water tank in 2009."

The Fort Smith Utility Department delivers an average of 23 million gallons of water a day to the City of Fort Smith and several cities and rural areas in western Arkansas and eastern Oklahoma. In 2009, the Arkansas Water Works Association judged Fort Smith's drinking water to have the best taste, appearance, and quality in Arkansas.

## FEATURED PRODUCTS

- Series FC20 Pota-Pox
- Series 91-H<sub>2</sub>O Hydro-Zinc
- Series 700 HydroFlon
- Series 1075 Endura-Shield II



## PROJECT INFORMATION

### Project Location

Fort Smith, Arkansas

### Project Completion Date

July 2007

### Owner

Fort Smith Utility Department

### Engineer

Fort Smith Utility Department

### Field Applicator

Utility Service Company, Inc., - West Memphis, Tennessee

The 7.5 Million Gallon water tank in Fort Smith, AR received a high-performance coating system from Tnemec to protect it from mildew as well as UV light degradation, abrasion, and chalking.

