

LITCHFIELD WATER TREATMENT PLANT

The City of Litchfield, Illinois, is a nostalgic stop for travelers along the original Route 66, but when it came to designing the city's new water treatment plant project engineers specified state-of-the-art filtration technology protected by high-performance coating systems from Tnemec. "The plant is designed in two phases," according to Tnemec coating consultant Erik Otten. "Phase 1 involved construction of a new four million gallons per day treatment plant with two steel ClariCone® solids contact clarifiers for potable water. Phase 2 will involve installation of a membrane filtering system, expanding the capacity of the plant."

Surface preparation on exterior steel was in accordance with SSPC-SP6/NACE No. 3 Commercial Blast Cleaning. For immersion service and interior high humidity applications, steel was prepared in accordance with SSPC-SP10/NACE No. 2 Near-White Metal Blast Cleaning. Cast/ductile iron was prepared in accordance with the National Association of Pipe Fabricators (NAPF) 500-03 Surface Preparation Standard for Ductile Iron Pipe. Cast in place concrete walls and floors were prepared in accordance with SSPC-SP13/NACE No. 6 Surface Preparation of Concrete.

More than 1,750 gallons of coatings were applied at the plant including:

- Series 1 Omnithane, a moisture-cured aromatic polyurethane coating containing micaceous iron oxide and zinc, which was used as a field primer for miscellaneous piping, valves and support structures.
- Series N140 Pota-Pox Plus, a polyamidoamine epoxy that was applied to the ClariCone® hydraulic cone clarifiers and to a pair of welded steel clear wells.
- Series 1077 Enduralume, an acrylic polyurethane containing a sparkle aluminum pigment that creates an aesthetic metallic finish which was applied as the finish coat for the interior structural steel.
- Series 66 Hi-Build Epoxoline, a polyamide epoxy, and Series N69 Hi-Build Epoxoline II, a polyamidoamine epoxy, were used as intermediate coating for exterior steel and interior finish coating on process vessels, pipes and valves.
- Series 201 Epoxoprime and Series 280 Tneme-Glaze, both modified polyamine epoxies, were used on the floor of the Chemical Feed Room. Epoxoprime and Series 282 Tneme-Glaze, a polyamine novolac epoxy, were also used.
- Series 1075 Endura-Shield II, an aliphatic acrylic polyurethane used for exterior steel.

"The field applicator did a fantastic job of applying Enduralume," Otten acknowledged. "That's an architectural coating and it looks awesome. Aesthetics were important with this designer. All of their plants are impressive projects."

The new plant treats water from Lake Lou Yaeger to be used by Litchfield, the Three County Water District, the Village of Butler, the Rocky Hollow Water District, the Stage Coach Junction Water District and the Cedar Grove Water Association.

FEATURED PRODUCTS

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| Series 1 Omnithane | Series 280 Tneme-Glaze |
| Series 66 Hi-Build Epoxoline | Series 282 Tneme-Glaze |
| Series N69 Hi-Build Epoxoline II | Series 1075 Endura-Shield II |
| Series N140 Pota-Pox Plus | Series 1077 Enduralume |
| Series 201 Epoxoprime | |



PROJECT INFORMATION



Project Location
Litchfield, Illinois

Project Completion Date
March 2009

Owner
City of Litchfield

Engineer
Crawford, Murphy, & Tilly - Springfield, Illinois

Field Applicator
RP Coatings - Troy, Illinois

Shop Applicator
Walker Sandblasting - Girard, Illinois

The interior structural steel at the City of Litchfield, Illinois WTP was coated using Series 1077 Enduralume because of its aesthetic values.

