

WELLINGTON, KS WATER STORAGE TANK

In 1997, an inspection revealed that the 1 MMG water tank in the center of Wellington, KS had extensive rusting, blisters and scaling, and the tank's aluminum silver coating tested positive for the presence of lead. In August 2001, the city of Wellington hired an engineering firm to determine what was more feasible: repainting the existing tower or constructing a new one.

The coatings consultant on the project evaluated the existing coating and recommended against overcoating the tank. "The analysis confirmed a high-risk factor in overcoating, which could result in premature failure of the coating system," said Rick Penner, Tnemec coatings consultant.

Deciding against overcoating as well as demolishing the tower, the city elected to remove the lead paint and repaint. Due to summer's peak demands, the project had to be completed by June 1, 2002, so the city could refill the tank and place it back in service.

Lead abatement and interior painting began in late February 2002. On schedule, the contractor abrasive blasted and repainted the interior using airless spray. Series 91-H₂O Hydro-Zinc, a zinc-rich urethane primer, was followed by an intermediate and topcoat of Series 20 Pota-Pox, a polyamide epoxy.

Given the lead content of the existing exterior paint, the contractor was required to contain the surface preparation work. A complete scaffolding system surrounding the circumference of the tower structure was chosen because it would allow work to be performed on the exterior simultaneously with the interior. To meet the tight deadline, shrinkwrap was applied to the outside of the framed scaffold.

On May 7, 2002, a tornado blew out the shrinkwrap on the northeast side and damaged the scaffold. The contractor removed the dangling shrinkwrap and determined the entire scaffold system had to come down and be reinstalled. Instead of shrinkwrap, 30 large grommeted tarps were installed.

Having lost six weeks of work to reconstruct the containment, the city agreed to extend the final completion date to September 30, 2002. The contractor believed his crew could repaint the tower with water stored inside and still meet the deadline.

Daily abrasive blasting, blow down and repainting was scheduled early in the day in order to complete all painting long before the dew point would drop within 5 degrees F of the surface temperature. The exterior received a prime coat of Series 91-H₂O, followed by an intermediate coat of Series 26 Ty-Cryl, an acrylic, and a topcoat of Series 30 Spra-Saf EN, a hydrophobic acrylic polymer. The contractor completed the project ahead of the extended schedule and the final inspection was conducted on August 27, 2002.

"The success of this project was due to the close cooperation between all parties involved," said city engineer Larry Mangan.

FEATURED PRODUCTS

- Series 91-H₂O Hydro-Zinc
- Series 20 Pota-Pox
- Series 26 Ty-Cryl
- Series 30 Spra-Saf EN
- Series 76 Endura-Clear
- Series 1075 Endura-Shield II



PROJECT INFORMATION

Project Location
Wellington, Kansas

Project Completion Date
August 2002

Owner
City of Wellington

Engineer
Professional Engineering Consultants
Wichita, Kansas

Lead Abatement & Recoating
J. R. Stelzer Company
Lincoln, Nebraska

Coatings Inspection
Integrated Solutions
Wichita, Kansas

The logo on the Wellington, KS water tank was applied using Series 1075 Endura-Shield II, an aliphatic acrylic polyurethane, and Series 76 Endura-Clear, a clear aliphatic acrylic polyurethane.

