

Municipal Potable Water Tank in Louisiana

Category: Potable Water Containment, Structural Repair

Customer: Southeast Grant Water Systems

Project: Repair and protect a potable water tank that supplies drinking water to a nearby city.

Products: HiChem™ 11-70, Extreme™ HP 11-50, Rhino® 1500

Problem

A carbon steel potable water tank that supplies water to the city of Pollock, La. had not been drained for decades and had fallen into disrepair with extensive exterior rust and leaks. Southwest Grant Water Systems acquired a repair budget from the state revolving fund and was in search of an economical repair solution.

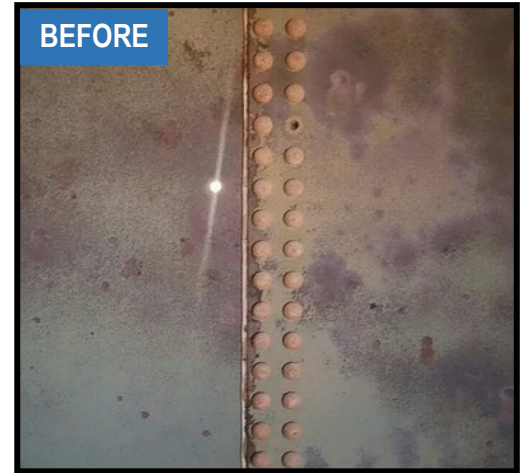
Solution

After a lengthy bid process with the Southeast Grant board, Global Coat, an authorized Rhino Linings® applicator, was awarded the contract to repair the 9-foot tall by 23-foot diameter water tank with HiChem 11-70. HiChem™ 11-70 is a two-component, 100% solids (no VOCs, no solvents), exothermic, rapid curing, elastomeric polyurea-based lining system specifically designed for excellent chemical resistance. In addition to being Rhino Linings Corporation's most chemical resistant product to date, HiChem 11-70 has passed the rigorous testing requirements of the NSF/ANSI 61 Section 5 (2012) potable water standard and is Truesdail Laboratories listed.

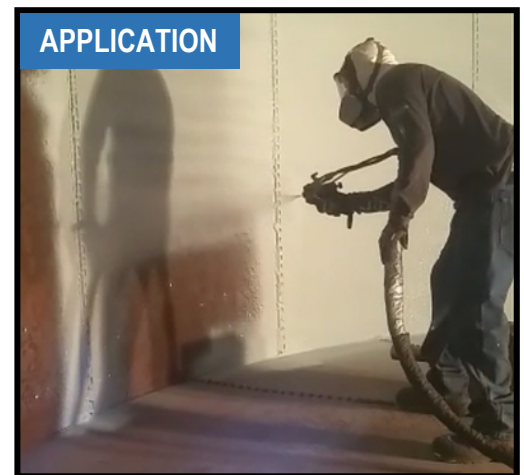
The water in the damaged tank, the primary tank for the city, was temporarily transferred to secondary tanks where it could remain for a maximum of three days, setting the clock for the Global Coat crew to complete the job.

The Rhino Linings applicator first started with extensive prep. The entire 28,000 gallon tank was carefully blasted, inside and out, to remove rust and establish a rough profile for adhesion of the lining. The crew used extreme caution during this process to avoid blowing large holes in areas weakened by rust. Even though extreme caution was taken, the tank had nearly 100 silver dollar-sized holes once prep was complete. Fortunately, the Rhino Linings products used on the job are capable of bridging and sealing holes and gaps.

The interior and exterior of the tank were primed with Rhino® 1500, a water based primer that complies with NSF/ANSI 61 potable water standard. The applicator then applied a backing on the outside of the



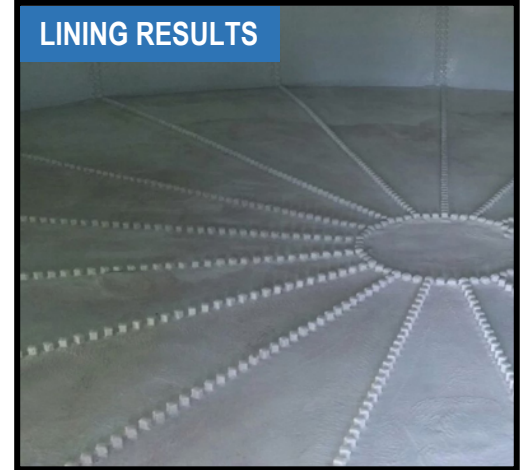
The white spot seen here is daylight showing through holes in the tank.



tank to prevent product from spraying through and so that the lining could bridge and seal the holes.

The base of the tank, where the majority of the damage and holes were present, was lined with approximately 80 mils of HiChem 11-70. The crew then spray-applied 60 mils of HiChem 11-70 to the rest of the tank's interior.

Once the interior was complete, the applicator moved to the exterior of the tank where they applied 60 mils of Rhino Extreme™ HP 11-50 in gray. Rhino Extreme HP 11-50 is a pure polyurea lining system designed to increase the service life of equipment and facilities in extreme conditions. It can be applied in adverse conditions and withstand vibration, expansion, contraction, movement, flexing, abrasion and impact. Since Rhino Extreme HP 11-50 is an aromatic product and not color stable, 3-4 mils of urethane were applied to protect the coating from UV damage. Both preparation and application were completed in two days. By the third day, the potable water tank was ready to return to service.



Results

The city was happy with this economical solution and was able to repair the water tank for a fraction of the cost of a new tank. Because this was the first water tank in Louisiana to be repaired in this manner, city districts all over the state had their eyes on this project to see if it would be a suitable solution for their aging tanks. The project received high praises and an endorsement from the state's consulting engineering and land surveying firm. Rhino Linings® applicator, Global Coat, has signed a number of additional contracts on similar tank repairs.

More About Rhino Linings® Products Used:

HiChem™ 11-70 - is a two-component, 100% solids, zero-VOC polyurea-based lining and Rhino Linings Corporation's most chemical resistant product to date. HiChem 11-70 protective lining provides excellent stability for immersion applications and complies with NSF/ANSI 61 Section 5 (2012) potable water standard.

Rhino® 1500 – is a waterborne epoxy primer that has a unique "lacquer dry" cure that allows it to be recoated quickly, but maintains a working time of up to three hours. It is frequently used as a stand-alone sealer and complies with NSF/ANSI 61 Section 5 (2012) potable water standard.

Rhino Extreme™ HP 11-50 - is a pure polyurea coating specifically formulated for extreme outdoor conditions and colder substrate applications. It is a fast-set lining with superior hardness and elongation, high tensile strength and excellent tear and abrasion resistance.

Call 858-450-0441, or visit rhinoliningsindustrial.com to learn more about becoming an authorized Rhino Linings applicator.

Industrial applications are highly specialized and specific consultation and training may be required to perform such applications. Product safety data sheets and specific chemical properties should be evaluated before undertaking any application.