

**Metropolitan Domestic Water Improvement District  
Board of Directors Meeting**

**October 16, 2019**

**Approval and Award for Storage Tank Coating**

**Synopsis**

The Board is requested approve the internal tank coating of the Hardy storage tank and award the work to AO Painting.

**Background**

The District operates 21 active steel storage tanks and two large concrete reservoirs. The tanks allow the District to meet the daily and hourly peak water demands as a staging location between water production and distribution to customers. The 21 steel storage tanks are internally coated with a potable coating to provide a barrier between the water and the steel. The barrier protects the steel from corrosion due to contact with the water. Over time the coating will fail permitting corrosion to start. American Water Works Association (AWWA) notes the life of an epoxy coating, which the District uses, can be up to 20 years. The life of a coating is dependent on the environment it is exposed to and how well it was applied during installation, both factors can contribute to longer or shorter life spans.

**Issues**

The Hardy storage tank has a capacity of 432,900 gallons and was constructed in 1970. The last interior coating replacement was in 2000 (19 years). Replacement of the internal coating system is being recommended by staff to extend the life of the storage tank. To replace the interior coating the contractor will sand blast the interior of the tank to a near white metal. The sand blasting will remove all the existing coating and any corrosion. Once the tank is sand blasted, it will be inspected for pitting and any required repairs to the steel. The coating system will be applied following any repairs.

The District requested quotes from both vendors listed on the City Tucson Cooperative Purchasing Contract: Painting and Other Related Services. The request for quotes (RFQ) included two alternatives for the tank coating. Alternative 1 was a high solids and standard epoxy hybrid, while Alternative 2 was strictly standard epoxy. The high solids and standard epoxy hybrid consists of having the high solids product applied to all areas below the water line. Since it is a high solids content, it has very low volatile organic compounds (VOCs). Standard epoxy is higher in VOCs and has provided challenges in curing before the tank can be placed into service. The hybrid version has the standard epoxy on the roof and rafters that are above the water line. The standard

epoxy is easier to apply to the sharp corners of the rafters and provides a better coverage in tight places being a thinner material. Since it is applied above the water line, there should not be any VOC issues. This hybrid version has been applied to a few of the District tanks, including the most recent Hub Reservoir.

Alternative 2 consists of three coats of standard epoxy applied to all interior surfaces. This has been the traditional coating system that was applied to the tanks. Pricing for Alternative 2 was requested for a pricing comparison. Traditionally the higher solids products and their applications were much higher in cost. This trend has reversed with better availability of the spray equipment, the labor costs is reduced with less coats needed for the hybrid alternative.

AO Painting Inc. was the only respondent to the request for quotes. Wiese Painting Contractors Inc. did not respond. AO Painting's quote for Alternative 1 was \$124,848.00 and \$128,618.00 for Alternative 2. The cost of the performance and payment bonds are 3.5% bringing the total costs to \$129,217.68 and \$133,119.63 respectively.

Staff is recommending Alternative 1, the high solids and standard epoxy hybrid, as it is a low cost, lower VOCs, and is applied in a thicker coat. Additional costs may be incurred for pitting and other repairs needed that will not be identified until after the sandblasting is completed. Staff is recommending an additional \$1,000.00 for any necessary repairs that may be required. The District's Storage Tank Rehabilitation budget line item is \$130,000.

### **Staff Recommendation**

It is recommended by staff the Board Approve the internal coating of the Hardy Storage Tank and award the work to AO Painting in the amount of \$129,217.68 and authorize the General Manger to approve up to an additional \$1,000 for any necessary repairs that may be required.

### **Suggested Motion**

I move to approve the internal coating of the Hardy Storage Tank and award the work to AO Painting in the amount of \$129,217.68 and authorize the General Manger to approve up to an additional \$1,000 for any necessary repairs that may be required.

Respectfully submitted,

Steven D. Shepard  
Utility Superintendent

I concur with the above-noted recommendation.  
Respectfully submitted,

Joseph Olsen, P.E.  
General Manager