

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

**February 8, 2021**

**Approval and Award for Storage Tank Coating**

**Synopsis**

The Board is being requested approve the internal tank coating of the E&T 22 25,000 gallon storage tank and award the work to AO Painting.

**Background**

The District operates eight active steel storage tanks in the Metro Southwest service area. 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 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. The 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 western most storage tank at E&T 22 has a capacity of 25,000 gallons. The District acquired the site in December of 2009; the age of the tank and last interior coating is unknown. The District has previously replaced the internal coatings on the other three tanks on that site. All of those tanks were in need of the coating replacement. The 25,000 gallon tank is the oldest of the four tanks on the site. 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 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) requested a high solids and standard epoxy hybrid allowing the high solids product to be 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. The quote also requested an option for an NSF-61 Zinc primer to be installed under the high solids product. The Zinc has a better bond to the steel and has an unlimited recoat time. After sand blasting there is a short window to apply a coating to the freshly blasted surface to prevent rusting. Additionally, the Zinc is a natural corrosion inhibitor that will further extend the life of the tank.

AO Painting Inc. was the only respondent to the request for quotes. Wiese Painting Contractors Inc. did not respond. AO Painting's quote including bonds and the Zinc option was \$31,732. Depending on the condition found after the sand blasting, some welding and patching may be required. The Southwest Budget for storage tank rehabilitation is \$47,000. Staff plans to have exterior painting performed on the site later in the year. The costs for the exterior painting should be less than \$10,000.

### **Staff Recommendation**

It is recommended by staff the Board approve and award the E&T 22 25,000 gallon storage tank internal coating work to AO Painting Inc. for the amount of \$31,732. It is also recommended that the Board authorize up to an additional \$3,000 for unforeseen work related to tank repairs.

### **Suggested Motion**

I move to approve and award the E&T 22 25,000 gallon storage tank internal coating work to AO Painting Inc. for the amount of \$31,732 and to authorize additional funds up to \$3,000 for unforeseen tank repairs.

Respectfully submitted,

Steven D. Shepard  
Utility Superintendent

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

Joseph Olsen, P.E.  
General Manager