

September 26, 2017

Amy Giannini, P.E.
City Engineer
City of Pflugerville
15500 Sun Light Near Way #B
PO Box 589
Pflugerville, TX 78691

Re: Surface Aerator Mixer Pre-purchase Bid Recommendation

Dear Ms. Giannini:

The City of Pflugerville received one bid and an alternative bid option for surface aerators from Aeration Industries, Inc. on September 13, 2017. This equipment will be installed at the Pflugerville Central WWTP. The purpose of this letter is to summarize Freese and Nichols' evaluation of the submitted proposals.

Cost Review

Table 1 shows the bid amount totals for the two bid options submitted by Aeration Industries International, Inc.

Table 1: Summary of surface aerator mixer bid totals

Aeration Industries Triton Aerator/Mixer (Bid Option #1)	Aeration Industries Aspirating Aerator/Mixer(Bid Option #2)
\$160,414.00	\$99,500.00

Submittal Review

The bids were reviewed for compliance with the requirements in Specification 46 53 61 "Surface Aerator Mixers." The specification requires the manufacturer to supply two floating surface aerator mixer units, each with 40 hp, 900 rpm motors rated for 230/460 volts, 60 hertz, 3 phase service. The units shall be supplied with a blower and the entire surface aerator mixer unit shall be 47.5 hp max and have an oxygen transfer of 83 lb/hr/unit.

Aeration Industries, Inc. Bid Option #1 (Triton)

Aeration Industries International, Inc. submitted the Triton Aerator as bid option #1. The triton aerator is a blower assisted aerator with a mixing propeller. The bid included two TR40 model units with a 40 hp, 230/460 volt, 3 phase, 60 hz, 900 RPM motor and a 7.5 hp regenerative blower.

Aeration Industries International, Inc. suggested a bid alternate for the control panels. The bid alternate would replace the control panels required in the specification with Aeration Industries' standard control

panel. The manufacturer standard control panel is a NEMA 4X in a fiberglass reinforced polyester enclosure. The specification required a NEMA 4X control panel with a 316 stainless steel enclosure. Control panel replacement at Aeration Industries' suggestion would reduce the cost by \$18,500.

Aeration Industries, Inc. Bid Option #2 (Aspirating Aerator/Mixer)

Aeration Industries submitted an alternate bid for a naturally aspirating mixer with a 40 hp, 18000 rpm motor. The unit described in the alternate bid does not include a blower. The manufacturer also took exception to the following items in the specification (exceptions noted in italics):

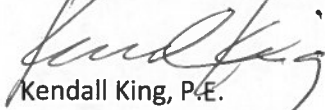
- *The manufacturer will supply an aerator drive motor with 40 horsepower at 1800 RPM.* Section 2.02 requires the motor to operate at 900 RPM.
- *A blower will not be provided.* Section 2.03 specifies the blower to be provided.
- *Blower pedestals will not be provided due to lack of blower.* Section 2.12 specifies the blower pedestal to be provided
- *Local control panels shall not control a blower due to lack of blower.* Section 2.14 specifies control panels shall control blower.

Aeration Industries International, Inc. sent Freese and Nichols, Inc. the certified oxygen transfer rate at the request of Freese and Nichols, Inc. The clean water oxygen transfer rate for the Aspirating Mixer is 2.94 lb/hp-hr. The wastewater oxygen transfer rate is equivalent to 76.44 lb/hr/aerator at 40 hp. Section 1.02.D of the specification requires 83 lb/hr/aerator.

Recommendation

Based on our review of the information presented in the bids and subsequent requested data, Aeration Industries International, Inc. Bid Option #1 (Triton Aerator) meets the requirements in the specification. Freese and Nichols does not recommend accepting the manufacturer standard control panel as a substitute for the control panel required in the specification. The polyester material will be subject to UV degradation and moisture absorption in the environmental conditions at the plant. Therefore, Freese and Nichols recommends the City of Pflugerville select Aeration Industries, Inc. Bid Option #1: Triton Aerators.

If you have any questions or need additional information or clarification, please let me know.


Kendall King, P.E.
Vice President/Principal

cc: Wiley Webb, James Wills, Coby Gee