



City of Austin

AUSTIN WATER UTILITY
Facilities Engineering Division
625 E 10th St, Austin, TX 78701

Date September 30, 2016

PROJECT: Taylor Lane 0.1 MGD Wastewater Treatment Plant Project

CIP ID: 3353.095

IFB# IFB6100 CLMC600

SUBJECT: Answers to Bidders' Questions

The following are answers to Bidders' questions received on the above project. These answers do not modify the Bid Documents. Any modifications to the Bid Documents will be through an Addendum.

- Q-1: As part of Section 11500 Item 1.6, consider adding a requirement for drawings and hydraulic calculations to be signed and sealed by a professional engineer licensed in the State of Texas.
- A-1: This will be addressed by Addenda. Submittals shall be provided in accordance with specification 11500 item 1.6.A Submittals.
- Q-2: In lieu of Performance Data required as part of Section 11500 Item 1.6(A)(c), consider revising this requirement to providing a Reference List with a list of engineering firms and operating companies who have experience with the installations, as well as intimate knowledge concerning operations.
- A-2: Performance data requirement modified by Addenda.
- Q-3: The requirement for an ISO 9001 Certificate imposes an economic and logistical burden, especially for manufacturers who rely on multiple fabricators to promote quality and economic competition. In our 40+ years of experience manufacturing and installing package WWTPs, this requirement has been nonexistent in bid specifications or waived due to its potentially adverse implications.
- A-3: This will be addressed by Addenda.
- Q-4: Typical warranty terms are for 12 months from substantial completion or 18 months from date of shipment, whichever comes first, and does not cover damage resulting from misuse, accident, neglect, or improper maintenance. Since certain circumstances have the ability to influence the achievement of final acceptance—e.g. availability of electrical service, completion of site work, General Contractor delays—, issuing a warranty for an unknown period is not practical and can have negative economic implications. This is particularly problematic since certain equipment, pumps, motors, drives, components are sourced from other manufacturers, each with their own standard warranty terms.
- A-4: This will be addressed by Addenda.
- Q-5: Hydraulic loading:
- A. Section 11500 Item 2.2(A)(b) lists a “maximum daily flow rate” of 0.4 MGD. Is this intended to be the peak 2-hr flow rate defined in 30 TAC §217.2(53) and also referenced in the permit? Please note that the term “maximum daily flow rate” and “peak flow” are two different parameters, the former meaning the largest volume of flow anticipated to occur during a one-day period, and the latter meaning the maximum anticipated instantaneous flow.

A-5: This will be addressed by Addenda.

Q-6: Influent wastewater quality

- A. Section 11500 Item 2.2(B)(a) provides a range of 250-400 mg/L for BOD5 and 15-75 mg/L for NH3-N. These ranges correspond to the values listed in Table B.1 of 30 TAC §217.32(a)(3) for design loadings for new WWTPs. We respectfully request that the Engineer establish specific values for BOD5 and NH3-N. As soon as the plant is online and treating flow, influent data can be gathered and analyzed for the next expansion, at which time the existing plant can be re-rated and the expansion can be sized adequately based on historical data.
- B. Providing a range carries both economic and process implications. Manufacturers may elect to furnish a plant to handle an organic load anywhere from 250 mg/L or 400 mg/L BOD5. Basin volumes, tank footprints, and associated costs will vary widely among the various bids, making it difficult to properly evaluate each bid. The manufacturers who err on the conservative side may be unintentionally penalized. Furthermore, if the actual influent values are lower than anticipated and the plant is oversized, there may be process issues, such as a low f:m, that will impact the plant's ability to meet permit.

A-6: This will be addressed by Addenda

Q-7: Effluent Limitations - TPDES Permit No. WQ0010543014 referenced in Section 11500 Item 1.3(B) includes effluent limitations of 5 mg/L cBOD5, 5 mg/L TSS, 5 mg/L NH3-N, 1 mg/L Total Phosphorus, and 120 E.coli CFU or MPN/100 mL. However, the effluent quality listed in Specification 11500 Item 2.2(B)(b) shows a different limit for TSS and excludes the limits for Total Phosphorus and E.coli.

A-7: This will be addressed by Addenda

Q-8: Preliminary Treatment – Section 11500 Item 2.2(C)(b) & Section 11330

- A. Headworks
 - i. A layout of the headworks structure, including the automatic screen, manual coarse screen, and screenings conveyor/chute would be beneficial to review alongside the specifications.

A-9: This will be addressed by Addenda

Q-10: Bar screen is sized for a flow rate of 4.0 MGD (2,778 gpm), or 40 times the average daily flow rate of this Phase.

A-10: This will be addressed by Addenda

Q-11 Engineer to indicate the Model Name/Number of the automatic screen from Ovivo/Enviroquip.

A-11: This will be addressed by Addenda

Q-12: Is a conveyor/compactor required? If so, please specify Model Name/Number.

A-12: Conveyor/compactor not required.

Q-13: Flow Equalization

Is an equalization basin required for this project? For typical municipal WWTPs that adhere to diurnal flow variations and 2-hour peak events, flow equalization is not required, unless an evaluation has concluded that it would be more advantageous (economic or otherwise) to construct an equalization basin instead of furnishing a clarifier, chlorine contact basin, filter(s), etc. that are sized for the peak 2-hr flow.

A-13: Flow equalization basin is not mandatory.

Q-14: Aeration Basin – Section 11500 Item 2.2(C)(c)

a. Plans should indicate location for the installation of the analyzer(s). Engineer to indicate whether the manufacturer shall furnish both the probe and the controller, as well as any other accessory, such as a mounting kit and spare wiper blades.

A-14: This will be addressed by Addenda

Q-15: Engineer to indicate the desired variation, or operating mode, of the activate sludge process, e.g. plug flow, extended aeration, etc. Each variation has different design process requirements that will impact the aeration basin volume, clarifier diameter and volume, and process air requirements.
The wastewater treatment system shall be of the activated sludge type, specifically known as "Complete Mix/ Extended Aeration Activated Sludge.

c. 30 TAC §217.153(b)(1) specifies that an aeration basin must have a minimum freeboard of 18 inches at peak flow.

A-15: This will be addressed by Addenda

Q-16: Mechanical Clarifier – Section 11500 Item 2.2(C)(d)

a. Clarifier sizing will be dictated by the design peak 2-hr flow rate (See Item 6 above) and the activated sludge variation selected (See Item 10 above).

A-16: Acknowledged

Q-17: Air Diffusers – Section 11500 Item 2.3(D)

a. Would Engineer consider alternate diffusers, including AUC standard's SP coarse bubble diffusers? Testing data indicating diffuser efficiency and air output can be provided for your consideration.

A-17: Air diffusers are to be provided as specified in Section 11500, 2.3(D)

Q-18: Coating and Corrosion Control

a. The requirements for protective coatings are outlined in multiple locations throughout the specifications listed below. Please indicate the appropriate section.

i. Section 11500 Item 2.3(F)

ii. Section 722S Item 4(B)(2)(b)

iii. Section 09900

A-18: This will be addressed by Addenda

Q-19: Disinfection Chamber

A. Since the permit lists bacteria limitations, what is the method of disinfection proposed? Section 11500 Item 2.3(H) lists that a disinfection chamber is not required.

A-19: Reference drawings M-4 and M-5

Q-20: Disk Filter

a. Will the unit installed for Phase I have to accommodate additional disks to be installed to meet the Phase II requirements?

A-20 Yes

Q-21 Disk Filter

b. Or will a separate disk filter unit be provided in Phase II?

A-21 The addition of a separate filter will be determined by the owners at a later date

Q-22 Disk Filter

- c. In Section 11393 Item 1.5(A), the effective filter surface area per unit (sf) shown in the Phase I column will result in a hydraulic loading rate of 1.19 gpm/sf at peak flow, which is significantly below the TCEQ requirement of 6.5 gpm/sf. Please verify if the surface area value is correct.

A-22 This will be addressed by Addenda

Q-23 Disk Filter

- d. Can the Engineer consider a cloth-media disk filtration system that uses an “outside-in” flow pattern?

A-23 Filter shall be provided as specified in specification 11393, Disk Filter

Q- 24: Chemical Feed Systems

- a. Please indicate the chemical storage tank sizes and required accessories.

A-24: Reference drawings M-6 and M-7



FABRICATED BOX FOR AUTOMATIC SCREEN UNITS



AUTOMATIC SCREEN UNITS INSTALLED



SUNSHADE FOR ANALYZER

