

**EL PASO WATER  
PURCHASING DEPARTMENT  
1154 HAWKINS BLVD.  
EL PASO, TEXAS 79925**

**Antiscalant and Clean in Place Chemicals**

**BID NUMBER 05-18**

**ADDENDUM NUMBER 1**

**March 07, 2018**

**Delete and replace:** Delete page 9 of 28 and replace with attached page 9 of 28 Revision 1

**Attention of all bidders is directed to the following addendum to this Bid Proposal:**

A. Response(s) to Bidder's question(s):

(1) Is the UTILITY under any current mandate or vision to either minimize or eliminate the use of phosphorus-containing chemicals in their RO Treatment Program? **Currently no such mandate exists**

(2) KBHDP is reported to have a capability of producing 15 MGD permeate with (5) RO Trains:

a. What was the average MGD in 2017? **6 mgd of permeate**

b. What is the average GPM for each RO Train? **1997 gpm**

(3) Is there a specific MGD value that should be used to establish annual treatment costs if NOT 15 MGD? **Estimated 6 MGD for 320 days and 15 MGD for 45 days**

(4) When was the last CIP conducted for each RO Train? **2017 (once a year)**

a. When is the next scheduled CIP for each RO Train? **2018 (once to twice a year)**

(5) What is the target pH for RO Feedwater? **7.8 (what the wells produce)**

a. What was the average pH for 2017? **7.8**

b. What was the total gallons used for Hydrochloric Acid used in 2017 for RO Feedwater pH control? **None**

(6) Has biological fouling ever been (in the life of the current membranes) a condition for poor RO performance? **No**

(7) What are the current procedures for any extended off-line RO Trains? **RO rotation and permeate flush every 3 days**

(8) What was the average salt rejection rate percentage for 2017? **95.02%**

(9) What was the average permeate conductivity of the permeate for 2017? **402µs**

(10) Is the data listed in #6 and #7 trended and will it be made available prior to the 12-Week Pilot and/or Contract Start Date? **No, this data is not trended**

(11) Are trend lines available for normalized differential pressure and specific flux available for review? **Yes, they will be made available to view only by those conducting pilot testing**

(12) What is the expected on-site service requirement by the Provider during the 30-day Demonstration Test? **Monitor, record and service their own equipment, operations personnel will not be responsible for pilot plant malfunctions, loss or insufficient data.**

(13) What is the expected on-site service requirement by the Provider during the 12-Week Pilot Study? **Same as #12**

(14) What is the EXPECTED START DATE of the Contract once awarded? **October 1, 2018**

(15) Incumbent Information:

a. Name of Current Provider: **King Lee Technologies**

b. Name of RO Antiscalant product and CIP Products

**King lee Y2K PRE-TREAT PLUS Antiscalant**

c. Actual amount used for each in 2017 **10,492 gallons**

(16) Per Product Requirement Section 7 (page 7), can you confirm the total CIP batch volume size for one cleaning (i.e. gallons of water in tank, piping, membranes for one cleaning batch)?

**4700 gal tank**

**8" PVC line**

**Approx. 116 ft. of main pipe from pump to the furthest RO unit**

(17) Current chemical vendor? **King Lee Technologies**

(18) Antiscalant dosage: **4.5 mg/l**

(19) Cost of antiscalant per lb, antiscalant name, volume: **\$1.11/lb, Pretreat Plus Y2K antiscalant, approximately 1100 gallons per year**

(20) Lbs. of CIP chemicals used per CIP:

**585 lbs/CIP- KL 1000**

**585 lbs/CIP- KL 2000**

(21) Cost of CIP chemicals per lb.:

**\$156.45/ 45 lb. pail of KL 1000 cleaners**

**\$175.29/ 45 lb. pail of KL 2000 cleaners**

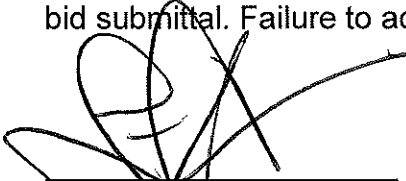
(22) Name of CIP chemicals used: **KL 1000- Low pH- Scale, Inorganics and KL 2000- High pH scale, Organics**

(23) Per Product Requirement Section (page 7) Section 2.b, can you confirm the concentration of aluminum present in the feedwater. Such information is not provided in Appendix A (page 25):

**Aluminum is non-detect or < 0.020 mg/L in all wells in KBHDP feedwater**

(24) Would the utility prefer a Letter of Compatibility from the membrane manufacturer that states that the CIP chemicals are compatible with the membrane and will not void the membrane warranty? **Yes, a letter of compatibility would be acceptable.**

Bidder shall acknowledge receipt of this addendum and submit this acknowledgment with their bid submittal. Failure to acknowledge addendum(s), may result in rejection of bid.




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Levi Chacon  
Purchasing Agent

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**BIDDER'S ACKNOWLEDGEMENT OF RECEIPT**



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R. Guevara

- b. Dose Predictions: Provide summary sheets of SUPPLIER'S dose projection program outputs or hand calculations describing how the design dose of hydrochloric acid and Antiscalant was selected.
- c. Projected Daily Consumption: Based on the dose projection software use the following equations to develop projected consumption for each facility:

Maximum Daily Consumption (lb/day) = Dose (lb/gal) \* Max Permeate Flow (15 million gallons per day)/Design Recovery (%)

2-Skid operation Daily Consumption (lb/day) = Dose (lb/gal) \* 2-skid Permeate Flow (6 million gallons per day)/Design Recovery (%)

- d. Projected Maximum Daily Cost:

- i. Based on the consumption calculations above, provide a summary calculation for the maximum daily consumption using the following equation:
- ii. Maximum Daily Cost (\$/day) = [Contract Price of Delivered Antiscalant (\$/lb)\*Maximum Daily Consumption of Kay Bailey Hutchison Desalination Plant (lb/day)] + [Hydrochloric Acid Cost (\$0.45/lb) \* Projected Maximum Hydrochloric Acid Consumption (lb/day)]

- e. Projected 2-skid Operation Daily Cost:

- iii. Based on the consumption calculations above, provide a summary calculation for the 2-skid operation daily consumption using the following equation:
- iv. 2-skid Operation Daily Cost (\$/day) = [Contract Price of Delivered Antiscalant (\$/lb)\*2-Skid Operation Daily Consumption of Kay Bailey Hutchison Desalination Plant (lb/day)] + [Hydrochloric Acid Cost (\$0.45/lb) \* Projected 2-Skid Operation Hydrochloric Acid Consumption (lb/day)]

- 4. SUPPLIER shall submit testing procedures that are followed in determining the concentration of the offered product (i.e. viscosity, total solids, etc.) prior to Demonstration Testing.
- 5. Provide a reference list for a minimum of five (5) facilities using the proposed Antiscalant. At a minimum, one shall be a facility with 3 MGD or greater RO permeate production capacity, include:
  - a. Facility Name
  - b. Location/Facility Address
  - c. Point of Contact
  - d. Average Consumption: mg/L and lb/day

**WARRANTIES AND GUARANTEES:**

- 1. The Antiscalant shall be fully compatible with the reverse osmosis (RO) membrane elements listed in the SUPPLEMENTAL INFORMATION: Process Description section. When the Antiscalant is used in accordance with the SUPPLIER'S recommendations it shall not cause permanent deterioration of membrane performance. Under no circumstances shall use of the supplied product in accordance with SUPPLIER'S recommendations cause SUPPLIER'S warranty provisions to be voided. If such an event occurs, the UTILITY shall be responsible for identifying the loss in RO membrane performance and providing testing as required for identification of the cause of the deterioration.