



REQUEST FOR PROPOSALS

WASTEWATER TREATMENT BIO-CATALYST MEDIA BID NO: 19-19162

ADDENDUM 1

BIDS DUE: January 17, 2020 @ 3:00 PM Central Time

To report suspected ethics violations impacting the San Antonio Water System, please call 1-800-687-1918.

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This Addendum 1 provides the questions asked and the responses to those questions.

1. What is the total number of anaerobic digesters in operation? I noted 10 on the satellite images but want to ensure how many are actually operated?

Response: *We have 9 digesters and 1 holding tank. Of the 9 only 7 are currently in operation.*

2. What is the total volume capacity of the anaerobic digesters? Is the operating volume measured for each anaerobic digester?

Response: *2.2M gals*

3. What is the expected average daily flow to the individual test anaerobic digester?

Response: *We are hoping to have 8 digesters back in operation during the pilot phase so flow should be between 75,000 and 100,000 gpd.*

4. What are the average percent TS and VS of solids to that test anaerobic digester?

Response: *3.4%TS and 77% VS*

5. Can SAWS provide the liquid and solids analytical data of the anaerobic digester system influent?

Response: *See attachments.*

6. Can SAWS provide the historical annual production of solids from the anaerobic system? Is this measured for each anaerobic digester?

Response: *Historically we produce 165,000 wet tons or around 41,000 dry tons*

7. Does each digester measure the biogas or is it a central meter?

Response: *Only 5 of the 9 digesters are individually metered, but there is also a central meter.*

If an individual meter can the historical volumes of biogas be provided for the period of January 1, - December 31, 2019??

Response: *See attachments.*

- a. Does SAWS analyze the biogas composition? For each digester? Or in aggregate?

Response: *Gas composition analysis is done on the combined gas flow.*

8. Influent sludge

- a. Total Flow (confirm value of 700,000 gpd given in proposal)

Response: *2019 average is approx.. 675,000 see DIG:FLOW on Digester VS reduction pdf*

- b. TS – 3.4% (proposal puts range at 4%-8% TS – pg. 1)

Response: *2019 average is 4.91% DGIN:TS on Digester VS reduction pdf*

- c. VS – 77%

Response: *2019 average is 77.15% DGIN:VS on Digester VS reduction pdf*

2. Biogas

- a. Total biogas generation – ft³/day (1 year)

Response: *2019 average is 1,109 (kCF/day) DIG: PANAM on Digester Gas Report pdf*

- b. Biogas generation for 5 individual metered digesters (1 year is sufficient)

Response: *2019 average is on Digester Gas Report pdf DIG1:GAS, DIG2:GAS, DIG3:GAS, DIG4:GAS & DIG10:GAS (We will use digester #1 as the pilot digester.*

- c. Biogas composition (1 year) – CH₄, H₂S, others
Response: See attached 2019 COA Digester_Gas_Sampling report

3. Digestate

- a. TS, VS – for combined digesters
Response: 2019 average us 3.46% TS BPIN:TS and 77.15 & VS BPIN:VS on Digester VS reduction pdf.
- b. TS, VS for control digester
Response: 2019 average for pilot digester is 3.45 %TS on Digester TS pdf and 67.45 %VS on Digester VS pdf

4. Digester

- a. Volume – 2.2 MG per digester (confirm that this is the actual liquid volume)
- b. Temperature
Response: Temperatures are currently averaging 85 – 89 degrees F.

5. Sludge handling

- a. Polymer costs - \$/month
Response: Dewatering \$43000
- b. Hauling costs - \$/month
Response: We do not have a breakdown of hauling cost. Disposal covers loading and transportation.
- c. Hauled solids – wet tons
Response: 165,000 wet tons
- d. Dewatered (hauled) solids - % TS
Response: BFP cake is about 17.10 % in 2019

This Addendum does not need to be returned with your proposal.