

Contract 10-C-00020; Biosolids Management Facility Supplemental RFQ Information 12-14-2009

The following supplemental information is provided in response to questions raised during and after the pre-submission meeting:

1. What is the capacity of the digesters at the HFC AWTP?

There are 7 anaerobic digester located at the HFC AWTP with the following volumes:

| Digester # | Volume (gallons) |
|--------------|------------------|
| 1 | 837,760 |
| 2 | 837,760 |
| 3 | 837,760 |
| 4 | 860,000 |
| 5 | 1,600,000 |
| 6 | 2,450,000 |
| 7 | 2,450,000 |
| Total | 9,873,280 |

However, please be advised that currently Digesters #1 and #5 are out of service. Therefore, the total volume currently in use is 7,435,520 gallons.

2. What is the average gas production from the digesters at the HFC AWTP?

Based upon data from 2008, the HFC AWTP generates an average of 141,827,752 cubic feet of digester gas per month, which is currently used in cogeneration engines to create electricity used within the HFC AWTP.

3. What are the average values for BOD, TSS, and N in the water returned to the AWTP from the existing Sludge Dewatering Building?

Based upon an average of data from the year to date for 2009:

BOD - no data available
TSS - 1,716 mg/L
Total Nitrogen - 363 mg/L

4. What is the typical composition of the wood waste that may need to be disposed of by this facility in the future?

A rough estimate is; grass & leaves 35%; branches 50%; and wood 15%. The composition varies greatly by season. Spring has a lot of oak leaves, summer a lot of grass and more branches in winter.

5. What is the source and quantity of fats, oils, and greases that may need to be disposed of by this facility in the future?

Based upon an average of data from the year to date for 2009 the City of Tampa generates an average of 364,000 gallons of fats, oils, and greases per month (primarily from restaurants

and food service facilities) which is currently disposed of by private grease haulers and processors.

6. How many drying beds will be available for use in processing biosolids and what are their physical dimensions?

The Department does not anticipate permitting the use of any of the existing drying beds as part of this contract.

7. Is the digester gas production metered? If so, please provide production quantities for the 1/2007 through 9/2009 period.

Digester gas production is metered and the requested data can be provided. However, the purpose of this RFQ is to determine qualifications to select a vendor and technology to negotiate a more detailed contract, not to establish a detailed design. Furthermore, the RFQ asks that the proposed technology be capable of being easily retrofitted to accept gas produced in the anaerobic digesters as a supplemental fuel source should the Wastewater Department decide to decommission its cogeneration facilities in the future. Use of the digester gas as a supplemental fuel source is neither anticipated nor expected to be part of the initial contract. However, for your general use, based upon data from 2008, the HFC AWTP generates an average of 141,827,752 cubic feet of digester gas per month.

8. What odor control requirements will be imposed on the biosolids contractor?

Specific odor control requirements are not included as part of this RFQ. However, it should be noted that the successful vendor shall be required to demonstrate that they have satisfied all requirements outlined by the FDEP, including those associated with the potential need for any air permitting.

9. At what point in the process and existing facilities will the biosolids be turned over to the contractor for processing?

The biosolids will be turned over to the contractor for processing immediately downstream of the existing sludge storage tanks.

10. What is the overall efficiency of the engines from the gas btu value to electrical production?

The cogeneration system includes five, 12-cylinder, 500KW, sludge gas fueled engines. The efficiency of the cogeneration engines can be provided. However, the purpose of this RFQ is to determine qualifications to select a vendor and technology to

negotiate a more detailed contract, not to establish a detailed design. Furthermore, the RFQ asks that the proposed technology be capable of being easily retrofitted to accept gas produced in the anaerobic digesters as a supplemental fuel source should the Wastewater Department decide to decommission its cogeneration facilities in the future. Use of the digester gas as a supplemental fuel source is neither anticipated nor expected to be part of the initial contract.

11. What is the heat demand (btu/day or btu/month) on the digesters by month or seasonal?

The heat demand on the digesters can be determined and provided. However, the purpose of this RFQ is to determine qualifications to select a vendor and technology to negotiate a more detailed contract, not to establish a detailed design. Furthermore, the RFQ asks that the proposed technology be capable of being easily retrofitted to accept gas produced in the anaerobic digesters as a supplemental fuel source should the Wastewater Department decide to decommission its cogeneration facilities in the future. Use of the digester gas as a supplemental fuel source is neither anticipated nor expected to be part of the initial contract.

12. Alternatively what is the incoming flow and temperature to the digesters in a specific time period?

The influent and effluent temperature data from the cogeneration engine generators jacket water cooling system used in conjunction with the heat exchangers to heat the digesters can be provided. However, the purpose of this RFQ is to determine qualifications to select a vendor and technology to negotiate a more detailed contract, not to establish a detailed design. Furthermore, the RFQ asks that the proposed technology be capable of being easily retrofitted to accept gas produced in the anaerobic digesters as a supplemental fuel source should the Wastewater Department decide to decommission its cogeneration facilities in the future. Use of the digester gas as a supplemental fuel source is neither anticipated nor expected to be part of the initial contract.

13. Is the digester gas composition available?

Digester gas composition can be determined and the requested data can be provided. However, the purpose of this RFQ is to determine qualifications to select a vendor and technology to negotiate a more detailed contract, not to establish a detailed design. Furthermore, the RFQ asks that the proposed technology be capable of being easily retrofitted to accept gas produced in the anaerobic digesters as a supplemental fuel source should the Wastewater Department decide to decommission its cogeneration facilities in the future. Use of the digester gas as a supplemental fuel source is neither anticipated nor expected to be part of the initial contract.

14. What is the overall SRT for the digesters? What per cent of solids or VM reduction occurs in the digesters?

The permit required minimum sludge retention time in the digesters is 15 days. However the average retention time for 2009 is approximately 23 days. The average % volatile solids destroyed for 2009 is 53.83%.

15. Please characterize the nature of wood waste including composition, heat value, and delivery schedules?

Based upon information provided by the Solid Waste Department, the composition of wood waste is estimated at: grass & leaves 35%, branches 50%, and wood 15%. Heat value of this waste has not been determined. The composition and delivery schedules varies greatly by season. Spring has a lot of oak leaves, summer a lot of grass and more branches in winter with total quantities varying between 700 tons per month in the winter to 1900 tons per month in the spring.

16. What is the current price for natural gas for the plant?

\$5.80 per deca-therm

17. Can we contact the FL DEP about the air permits?

We have no objection to contractors contacting the FDEP to inquire about air permitting requirements.

18. Is there an elemental analysis (beyond metals content) of the biosolids available? Has the calorific value been measured?

An elemental analysis of the biosolids beyond what has been provided in the Design Criteria is not available and the caloric value has not been measured.

19. Can the due date be extended due to the short time provided to develop a thorough response for a complex project of this nature?

The City of Tampa believes that sufficient time has been provided for vendors to adequately prepare documentation to demonstrate their qualifications as they relate to this RFQ and since a detailed design proposal is not required at this time, an extension is not necessary.

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12-14-2009