TO: Mayor and City Council

FROM: Mark J. Madison, Municipal Utilities Director

SUBJECT: PROFESSIONAL SERVICES CONTRACT WITH SYNAGRO TO CLEAN AND REPAIR DIGESTERS 4 AND 5 AT THE REGIONAL WASTEWATER CONTROL FACILITY

RECOMMENDATION

It is recommended that the City Council adopt a resolution approving the findings, declaring an exception to the bid process, and authorizing the City Manager to execute a contract in the amount of $1,176,150 with Synagro of Suisun City to perform digester cleaning and repair services at the Regional Wastewater Control Facility located at 2500 Navy Drive.

Summary

The Department has an immediate need to facilitate the cleaning and repair of the sludge digesters in order to insure compliance with regulatory requirements and restore methane gas production. The City is incurring significant additional energy costs as a result of the loss of methane gas production in the digesters. Additionally, deferment of the cleaning and repair will significantly increase the project disposal costs of the waste material, and potentially result in operational fines being imposed by the regulatory agencies for noncompliance with the current permit requirements. This action will authorize Synagro to perform the work in compliance with the Municipal Code Section 3.68.070 which provides exceptions to the competitive bidding process.

DISCUSSION

Background

The Department operates two sludge digesters that were constructed in 1998. As a result of the loss of several control valves, the digesters are in need of immediate repair and cleaning. The digesters perform a critical function in the treatment of City wastewater and are vital to maintaining State regulatory compliance. Additionally, the digesters produce substantial methane gas, which is used to power other plant equipment. This loss of methane gas represents $130,000 per month expense to the City to purchase natural gas from another source. Synagro will be contracted to remove the sludge, grit, water, and other waste materials from the digesters and dispose of them off-site. Additionally, any deficient mechanical equipment such as valves, controls, and pumps will be repaired, as needed, to place the digesters back on-line in the production of methane gas. In order to avoid significant additional disposal fees of the waste material, the work needs to be performed during the summer months. Delaying the project could potentially double the project costs.

Present Situation

The Department's sludge digesters have stopped producing methane gas which is used to provide energy to other critical plant operations. As a result, the Department is
incurred additional energy costs in excess of $130,000 per month that would otherwise be produced by the digesters. The Department could be subject to fines from regulatory agencies for noncompliance as a result of the faulty digesters.

Findings

The Stockton Municipal Code Section 3.68.070 provides exceptions to the competitive bidding requirements for contracts when the City Council has approved certain findings which support and justify the exceptions to competitive bidding requirements.

The findings which support the award of this contract are as follows:

a. There is a significant risk of violating the City’s wastewater discharge permit which could result in fines if the digesters are not cleaned and repaired as recommended by a report of the facilities conducted by the City’s consultant, Eco:Logic Engineering.

b. Each month the digesters are not online producing methane gas represents an expense of $130,000 in additional energy costs.

c. The competitive bidding process will delay the start of work and increase the cost associated with disposing of the waste material in the digesters. It is in the best interest of the City to contract the work immediately and minimize construction costs.

d. Synagro is a local company that is familiar with the facility and currently mobilized onsite performing other work for the RWCF.

e. Synagro has subcontractors, suppliers, and vendors immediately available to provide specialty parts, materials, and equipment that would typically require months to procure.

FINANCIAL SUMMARY

If approved, the City Manager will be authorized to transfer and appropriate funds to complete the intent of this agenda item:

From: Wastewater Retained Earnings
Account Number 431-0000-287.00-00 $1,176,150
PROFESSIONAL SERVICES CONTRACT WITH SYNAGRO TO CLEAN AND REPAIR DIGESTERS 4 AND 5 AT THE REGIONAL WASTEWATER CONTROL FACILITY

Page 3

To: Digester Cleaning Project
Account Number 431-7709-670.20-62 $1,176,150

This project has no impact on the General Fund.

PREPARED BY: JOHN WOTILA

Respectfully submitted,

MARK J. MADISON
DIRECTOR OF MUNICIPAL UTILITIES

APPROVED BY

J. GORDON PALMER, JR.
CITY MANAGER

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June 29, 2009

Mr. Mark Madison
Director of Municipal Utilities
2500 Navy Drive
Stockton, CA 95206

Dear Mr. Madison:

Synagro WWT, Inc., a California licensed General Engineering Contractor, License #801688, is pleased to present the following proposal to provide emergency dewatering and digester cleaning services at the City of Stockton’s Wastewater Treatment Facility located at 2500 Navy Drive, Stockton, CA. The proposal elements are as follows:

**Temporary Dewatering of approximately 50% of the plant’s enhanced primary sludge from the gravity thickeners ahead of the digesters:**

1. **Scope and Description of Work** - Synagro will provide the equipment and personnel necessary to dewater approximately 60 dry tons per week of enhanced primary sludge during the digester cleaning process. This will allow the remaining 50% of the sludge to be delivered to the digester still in service without hydraulically overloading it, resulting in potential digester failure or inability for the plant to meet the requisite detention time for the digested solids to achieve 40CFR Section 503 requirements for class B pathogen reduction.

Synagro will perform the following specific tasks -

- a. Mobilize and set up 2 temporary 2.2 meter belt presses, 2 mix tanks, sludge feed line from gravity thickeners or gravity belt thickeners and pumps if necessary to deliver sludge from the thickeners to the Synagro dewatering system. Synagro will tie into the plant’s 600 amp breaker and will provide its own subpanel.
- b. Pump feed sludge from gravity thickeners (approximately 2 to 3% solids) or from the gravity belt thickeners (up to 6% solids) to the temporary dewatering facility mix tanks, dewater the thickened sludge, load, transport and compost the dewatered sludge cake and return the belt press filtrate to the plant headworks or other mutually agreeable location.
- c. Dewatered sludge cake will be composted at Synagro's Central Valley Compost Facility in Merced County, CA.
- d. Synagro will perform the above services Monday through Saturday for the duration of the project. The work will be performed during a second swing or
night shift while digester cleaning activities are underway and will be performed on a regular day shift while digester cleaning activities are not occurring. This will be done in order to utilize some of the dewatering equipment for both activities.

2. **Measurement and Payment** – Synagro will provide certified weight tickets generated at the Central Valley Compost Facility to determine the total wet weight of the material delivered to the site. Concurrent with this, Synagro will collect grab samples from each of the loads prior to transport, composite the sample for each shift, split the sample and send to a California State Certified laboratory for percent solids analysis. The sample split will be provided to the City in the event the City wishes to conduct its own percent solids analysis. The wet weight of the load will be multiplied by the derived percent solids to determine the dry tons for each shift. Synagro’s charge for the complete service is $396.00 per dry ton, which equates to $0.04125 per gallon at 2.5% solids. Synagro will adjust the rate on all tons in excess of an average of 60 dry tons per week over the duration of the project to $384.00 per dry ton. In addition, there will be a onetime charge of $4,500 for mobilization and demobilization of equipment dedicated to this service, namely the two mix tanks.

3. **Project Duration and Timetable** – The dewatering phase will begin as soon as practicable in order for the plant to take one digester out of service, thereby stopping the feed to it and allowing the solids introduced into the digester to stabilize for the requisite 15 days prior to cleaning.

The dewatering activities will continue through the complete digester cleaning process as described above in order to facilitate the cleaning of both digesters, including the performance of any maintenance or repair of the digesters that the city wishes to conduct.

**Cleaning of Digesters #4 and #5, including removal, transport and reuse or disposal of digester contents:**

1. **Scope and Description of Work** – Synagro will provide the equipment and personnel necessary to remove the contents of digesters 4 and 5, screen or grind the removed contents, dewater the sludge and grit, transport and land apply or reuse the contents as landfill alternative daily cover. In the event Synagro screens the trash and debris as opposed to grinding it, the screenings will be disposed of in a class II sanitary landfill.

Synagro will perform the following specific tasks –

a. Mobilize the equipment and personnel required to perform the digester cleaning, including pumps, pipe and hoses, safety harnesses and monitoring equipment and any other equipment and supplies necessary to safely and efficiently clean the digesters.
July 7, 2009
Mr. Mark Madison

b. Coordinate with plant staff to ensure that the digesters have been properly taken out of service, including but not limited to, blind flanging sludge feed and gas recovery lines.

c. Slurry digester contents, pump to an inline grinder or screening apparatus to mix tank, which will be used for flow equalization during cleaning activities, transfer the material from the mix tank to the belt presses, dewater the conditioned sludge, load, transport and land apply or reuse dewatered sludge cake as alternative daily cover. Belt press filtrate will be returned to the plant headworks or other mutually agreed upon location.

d. Upon removal of all digester contents, Synagro will wash down the digester interior with fire hoses to facilitate inspection by plant staff.

e. Once the first digester is put back into service, Synagro will assist in the transfer of feed sludge from the digester in service to the recently cleaned digester in order to facilitate digester start up. Synagro’s scope of service will be limited to sludge transfer.

f. Repeat the above steps for the second digester once the first one is back in operation.

g. Breakdown and demobilization of all equipment once both digesters are back in service and the Plant has accepted the work.

2. **Measurement and Payment**

   a. Mobilization of all equipment, including equipment used for temporary dewatering – lump sum charge of $14,500.00.

   b. Removal of digester contents in place – per gallon charge of $0.12. Gallons will be determined by marking the tank content level at the beginning of the project and mutual agreement of calculated gallons in place based on tank interior dimensions.

   c. Dewatering, transportation and offsite reuse – per dry ton charge of $441.23 for material that is composted or disposed of as alternative daily cover or $426.00 per dry ton for material that is land applied. Synagro will provide weight tickets generated at the reuse or disposal facility to determine the total wet weight of the material delivered to the site. Concurrent with this, Synagro will collect grab samples from each of the loads prior to transport, composite the sample for each shift, split the sample and send to a California State Certified laboratory for percent solids analysis. The sample split will be provided to the City in the event the City wishes to conduct its own percent solids analysis. The wet weight of the load will be multiplied by the derived percent solids to determine the dry tons for each load.

   d. Disposal of screenings – per wet ton charge of $95.00.

   e. Demobilization of all equipment, including equipment used for temporary dewatering – lump sum charge of $14,500.00.

   f. Stand by charges for equipment between digester cleanings – charges waived.
July 7, 2009
Mr. Mark Madison

4. **Project Duration and Timetable** – Synagro is prepared to mobilize and commence work shortly after issuance of a notice to proceed from the City. As indicated above, there will be some lead time associated with removing the digester from service. Once Synagro commences work, the cleaning of each digester will require 3 to 4 weeks. The time required between digester cleanings will be dependent upon the work to be done on the digesters, if any. Because Synagro’s fee schedules for all of the above services are performance based, it is in the Company’s best interest to complete the project and restore the City’s digester capacity as soon as possible.

**Estimated Total Project Costs**

Synagro estimates the total project costs to be as follows:

Enhanced primary sludge dewatering, transport and composting:
- 1,020 dry tons @ $396.00 per dry ton $403,920.00
- Mobilization and demobilization $4,500.00
- Subtotal $408,420.00

Digester cleaning, dewatering, transportation and reuse:
- Mobilization and demobilization $29,000.00
- Gallons removed 2,400,000 @ $0.12 per gallon $288,000.00
- Dry tons processed 1,000 @ $441.23 per dry ton $441,230.00
- Screenings disposal 100 tons at $95.00 per ton $9,500.00
- Subtotal $767,730.00

Project total – estimated based on stated quantities $1,176,150.00

**Other Terms and Conditions**

- Synagro will pay its onsite employees not less than the general prevailing rate of wages as determined by the California Department of Labor.
- The City will provide electrical power via a 600 amp breaker. Synagro will provide its own subpanel and pay for the installation thereof by a licensed electrical contractor.
- The City will provide Synagro access to secondary or other reclaim water for polymer make up, belt wash and slurrying digester contents. In the event the plant cannot provide adequate pressure, Synagro will provide pumps to transfer the water to its cleaning and dewatering operations.
- Synagro WWT, Inc. will maintain its California General Engineering Contractors license #801688 in active status for the entire duration of the project.
- Synagro personnel will be Confined Space Entry trained and qualified and will be responsible for securing the Confined Space Entry Permit, including, but not limited to, notification of agencies that may be required for Confined Space Entry rescue.
- Synagro will coordinate with City staff to ensure that all sludge and gas lines are properly blind flanged.
July 7, 2009
Mr. Mark Madison

➢ Synagro will open and ventilate the digesters and will use only nonsparking tools during the cleaning process.
➢ Synagro will provide performance bonding if desired by the City for an additional charge of 1.8% of the value of the bond required.

If you have any questions or require further information, please call me at 650-333-0729.

Very truly yours,

John Pugliaresi

John Pugliaresi

Cc: Steven Gittings
    James Witty, Eco-Logic Engineering
    Andrea Stephenson
    Nicole Blankemeyer
    Sam Monaco
RESOLUTION APPROVING THE FINDINGS AND AUTHORIZING THE CITY MANAGER TO EXECUTE A CONTRACT IN THE AMOUNT OF $1,176,150 WITH SYNAGRO TO PERFORM DIGESTER CLEANING AND REPAIR SERVICES AT THE REGIONAL WASTEWATER CONTROL FACILITY

Stockton Municipal Code ("SMC") section 3.68.070 provides for an exception to the competitive bidding requirements for purchases in cases where the City Council has approved findings that support and justify exceptions to the competitive bidding process; now, therefore,

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF STOCKTON, AS FOLLOWS:

1. The City Council hereby approves the following findings in support of granting an exception to the competitive bidding process and award of the contract for cleaning Digesters 4 and 5 to Synagro.

   b. There is a significant risk of violating the City's wastewater discharge permit which could result in fines if the digesters are not cleaned and repaired as recommended by a report of the facilities conducted by the City's consultant, Eco:Logic Engineering.

   c. Each month the digesters are not online producing methane gas represents an expense of $130,000 in additional energy costs, so any delay in implementing this work will be very costly and would outweigh any potential cost savings that might be realized through the use of the City's normal competitive bidding process.

   d. The competitive bidding process will delay the start of work and increase the cost associated with disposing of the waste material in the digesters. It is in the best interest of the City to contract the work immediately and minimize construction costs.

   e. The contractor, Synagro, is one of a very few specialized contractors who are qualified to perform this type of specialized hazardous work.
f. Synagro is a local company that is familiar with the facility and currently mobilized onsite and is performing other work for the RWCF.

g. Synagro has subcontractors, suppliers, and vendors immediately available to provide specialty parts, materials, and equipment that would typically require months to procure.

h. The cost of the contract is consistent with the engineers’ estimate and is reasonable.

2. Based on these findings and pursuant to SMC section 3.68.070, the City Council declares an exception to the competitive bidding process is justified and authorizes the City Manager, on behalf of the City of Stockton, to contract with Synagro for the Digesters 4 and 5 Cleaning project in the amount up to $1,176,150.

3. The City Manager is authorized to take such other actions as are appropriate to carry out the purpose and intent of this Resolution.

PASSED, APPROVED, and ADOPTED ________________________

__________________________________________
ANN JOHNSTON
Mayor of the City of Stockton

ATTEST:

__________________________________________
KATHERINE GONG MEISSNER
City Clerk of the City of Stockton