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Department of Utilities

To: Chairman Joe Martin and Members of the Utilities Committee

From: Utilities Deputy Director, Chris Stempa

cc: Chris Shaw, Utilities Director; Robert Kennedy Wastewater Plant Operations Supervisor; Kelli Rindt, Enterprise Accounting Manager

Date: June 5, 2014

Re: *Approval of an Engineering Services contract for the Appleton Wastewater Treatment Plant Tank Coating Project to McMahon Engineers & Architects in the amount of \$27,900 plus a 5% contingency of \$1,395 for a total cost of \$29,295*

Background:

The Appleton Wastewater Treatment Plant (AWWTP) has identified four process tanks that require maintenance and or recoatings. Three of these tanks are recoating three fixed Envirex Duo-Deck® covers (two used for sludge storage and one for filtrate storage). The fourth tank requires carbon steel recoating and concrete floor rehabilitation within the interior of hauled waste Receiving Station Tank No. 1.

The exterior surface of the Envirex tank covers were last coated in the mid 1990's. Since that time coating failure has been observed and the need for recoating evident. Each Envirex cover is 70 feet in diameter. Two of these tanks are utilized for secondary digestion from two primary anaerobic digesters. The tanks are actively and passively ventilated. A photo taken recently (see Photo #1 on next page) depicts coating failure on one of the sludge storage tanks that requires full removal of the existing coating. The other two DuoDeck covers require overcoat of the existing coating.

The AWWTP is seeking engineering services to provide tank coating plans and specifications, contract administration services, and field coating QA/QC services. In addition, the AWWTP is seeking an initial coating conditions and structural integrity assessment of the interstitial space and underlying roof covers of the Envirex tanks. The current condition of these areas is unknown. The AWWTP will utilize the information and recommendations obtained from the conditions assessment to formulate future budget costs.



Photo #1: Secondary Digester #1 Cover Depicting Coating Failure.

Receiving Station Tank No. 1 is a converted carbon steel Dissolved Air Flootation (DAF) tank used to contain hauled wastes. These hauled wastes, such as food process wastes (cheese whey, brine, and rinse wash water), are almost exclusively generated from outside the sewer service area and accepted through a tipping fee structure as part of the Receiving Station Program. This successful program has generated approximately \$600,000 annually over the past three years.

Receiving Station Tank No. 1 along with actively working DAFs is located within a heated and ventilated building referred to as “L-Building”. The tank dimensions are approximately 40 feet (l) x 14 feet (w) x 8 feet (h). Receiving Station Tank No.1 was recoated in 2010. The concrete floor of this tank was also coated with waterproofing products. However, since that time the concrete has shown advanced deterioration (see Photo #2) and is now in need of rehabilitation.



Photo 2: Receiving Station Tank #1 Concrete Deterioration

Quotation Process:

Three qualified firms were invited based on their previous work on similar projects. These firms generally serve the water and wastewater industries. Two quotations were received and both met qualifications defined in the RFQ. McMahon Engineers & Architects had the lowest cost quotation. Donohue and Associates did not submit a proposal. The following table summarizes the company quotes.

ENGINEERING FIRM	QUOTE
Dixon Engineering Inc.	\$29,900
McMahon Engineers & Architects	\$27,900
Donohue and Associates	DNP

Recommendation:

The 2014 operations budget identified \$135,000 for Duo-Deck cover and Receiving Station Tank coating work. With the approval of this contract the remaining project budget will be \$107,100 (excludes contingency).

I recommend approval of an engineering contract service to McMahon Engineers & Architects in an amount of \$27,900 plus a 5% contingency of \$1,395 for a total cost not to exceed \$29,295.

If you have any questions, regarding the project please contact Chris Stempa at 832-2353.