



CITY OF WASHINGTON, ILLINOIS Public Works Committee Agenda Communication

Meeting Date: April 6th 2020

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Agenda Item: Purchase of New Sludge Pump-WWTP #2

Explanation: Wastewater Treatment Facility #2 started experiencing unusual noise coming from the sludge press pump. Plant personnel performed troubleshooting as suggested in the maintenance and operations manual but exhausted all efforts to solve the problem.

Flow Technics, the certified technicians for servicing the sludge press pump was contacted for support in diagnosing the cause of the unusual noise. The technician arrived on site and determined that the pump would need to be brought to the Flow Technics shop for dismantling and evaluation. Plant personnel removed the pump and delivered to the Flow Technics shop.

Once the pump was evaluated, it was determined the pump had overheated. Possible reasons for the overheating are lack of a presence/absence detector, faulty pressure gauge, or the heat sensor used in place of the absence/presence detector is not sufficient to prevent the overheating.

During construction, the correct absence/presence detector was not available due to the vendor going out of business. At that time, the solution presented was the heat sensor. The sensor was installed and until recent there had been no problems other than a loss of polymer alarm. Because the alarm was for loss of polymer, plant personnel concentrated their efforts on trying to figure out why polymer was not being fed. Upon investigation, it was determined that polymer was being fed but because the sludge pump had been started over and over against a closed valve it is thought that this caused damage to the “knuckle”, which is a joint on the sludge press pump shaft.

Flow Technics estimated repairs at \$14,430.80. Plant personnel inquired about the cost of a new sludge press pump because of the costly repairs and were quoted \$16,804.00 plus an additional fee of \$1050.00 for setup and filling out necessary paperwork for warranty.

Fiscal Impact: \$17,854.00 in FY 20/21 for pump, setup, and warranty work. It is thought that if approved the pump could be ordered now with a delivery of sometime late in May.

Recommendation/

Committee Discussion Summary: Flow Technics delivered the re-assembled the pump to the WWTP for plant personnel to re-assemble for use. The sludge press pump is operating currently with no issues other than the unusual noise, however because of the problems experienced Staff recommends purchase of the new pump in the event the damaged pump fails.

A Standard Operation Procedure has been written to avoid any problems due to the polymer alarm which instructs plant personnel to check other components critical to the proper operation of the sludge press pump.

Action Requested: Approval to place order for the replacement sludge press pump now to receive the new pump late May rather than waiting until May 1st to order with a mid-June delivery.