

**COUNCIL ACTION FORM****SUBJECT: WATER POLLUTION CONTROL FACILITY PUMP PROCUREMENT****BACKGROUND:**

Beginning in FY 2008/09, the five year CIP included a project that would replace the fourteen main “vertical turbine solids handling” pumps at the City’s Water Pollution Control (WPC) plant. The fourteen pumps consist of **six raw water pumps, four first stage trickling filter pumps, and four second stage trickling filter pumps**. All pumps were eighteen years old at the beginning of this process, and maintenance staff had noted that pump failures were occurring with increased frequency and severity. The plant experienced several emergency repairs in the spring of 2008, indicating that the pumps were nearing the end of their useful lives.

Below is a chronology of the process to replace these fourteen pumps.

- On October 14, 2008, Council awarded a contract to **Fairbanks Morse** for \$158,936 to provide two new pumps to replace **two of the six raw water** pumps. Two bids were received, from Fairbanks Morse and Flowserve Pump Division. The pumps were installed in 2009 and are operating without issue.
- On September 8, 2009, Council awarded a contract to **Flowserve Pump Division** to provide four new pumps to replace **all four first stage** trickling filter pumps. There were two bids received, Fairbanks Morse and Flowserve Pump Division. A purchase order was issued on September 18, 2009 to Flowserve Pump Division for a total contract amount of \$219,492 and a contractual delivery date of April 30, 2011. The original delivery date was missed. City staff agreed to extend the delivery date to June 30, 2011, but included terms that, if not met, would allow the city to cancel the contract. The pumps were delivered by the revised date. However, **to date we only have one Flowserve pump installed and operating and it does not meet the specified design flow**. A second Flowserve pump has been installed, but was pulled for modification or repair four times – twice for bearing replacements and twice in an attempt to modify the pump to operate within the required flow specifications.
- On January 25, 2011, Council awarded a contract for \$354,656 to provide four new pumps to replace **all four second stage** trickling filter pumps to the only bidder, **Fairbanks Morse**. These pumps were installed in 2012, and there was a problem with one pump shortly after start-up. The pump was pulled and sent back to the supplier for inspection, from which there were no significant findings. All four pumps are now installed and are operating without issue.
- On January 11, 2011, staff made their first attempt to bid the **four remaining raw water** pumps at the plant. Bids were received from three companies: Fairbanks, Flowserve, and Patterson Pump. Flowserve was the low bidder. Council followed

staff's recommendation to reject all bids and determined that additional language was needed in the specifications to ensure interchangeability between the first two raw water pumps installed in 2009 and the last four pumps being purchased in 2011.

The **four raw pumps were rebid** in January 2012. On March 27, 2012, Council awarded a contract to **Fairbanks Morse** for \$472,880 to provide four new pumps to replace the final four raw water pumps. Two bids were received: Fairbanks Morse and Flowserve Pump Division. Flowserve was the low bidder but was determined to be not responsible because of concerns with the equipment and their performance history regarding the first stage pumps awarded in 2009. The Fairbanks pumps were installed in July of 2013 and are now operating without issue.

To date, the City has made no payment to Flowserve pending resolution of issues with the **four first stage trickling filter pumps**. The manufacturer has failed on two separate attempts to modify the pumps to achieve the required flow, and there have already been two bearing failures. Staff provided Flowserve with one last chance to meet the required flow rate with a third shipment back to the factory for rework. Flowserve has now modified the pump and it is ready for shipment to the plant for installation and testing. However, in a letter dated July 2, 2013, Flowserve proposed new terms to the contract that are not favorable to the City regarding payment and performance. Staff did not agree with the new proposed terms, and the manufacturer was told to hold the pumps until further notice. Staff met with the City Attorney to see what remedies were available and to develop a response to the manufacturer.

The City Attorney's Office issued a letter to Flowserve on October 4, 2013, stating our dissatisfaction with the situation and proposing what staff judged to be an amicable way to resolve the contract. The City's proposal was to purchase the one pump that is in place and operating at 90% of the required flow for 90% of its purchase price. Because procuring new pumps from another vendor could take more than a year, the City would also agree to purchase the second modified Flowserve pump currently at the factory, as it is needed to replace one of the original pumps that has now failed. Flowserve responded in a written letter dated November 22, 2013 with a counter-proposal that was not acceptable to staff. The City Attorney has made repeated attempts to discuss a settlement with Flowserve, but to date Flowserve has not responded. As of the last correspondence from Flowserve, there is agreement to pay 90% for the first pump, and to delete the last two pumps. The point of continuing discussion revolves around the price for the second pump and the warranty period for the two pumps that the City would purchase.

The existing first stage trickling filter pumps, which were already at the end of their useful life when the contract was awarded to Flowserve in 2009, now have an additional four years of wear, and staff is very concerned about the potential for a pump failure. Having functional pumps in the first stage trickling filter process is paramount to the plant being able to pass its full-rated flow and treat to a level that avoids violation of the facility's NPDES permit. Recognizing that there is only one viable provider of this style pump, staff retained HDR Engineering, a national consulting firm, to negotiate a purchase price with Fairbanks on behalf of the City using their recent experience with similar pumps specified and purchased by other clients to arrive at a fair market price.

Staff has received a firm quote dated December 12, 2013 from Fairbanks in the amount of \$416,780 to provide these four pumps. (See attached letter proposal.) Delivery of these pumps will take approximately 40 weeks after the City awards a contract.

**It should be noted that one possible course of action would be for the Council to declare Flowserve in default on their contract. If that were to happen, it is reasonable to assume that Flowserve would demand the immediate return of the one pump that is already installed but pumping below the required flow rate. That would prove extremely problematic for the treatment facility. The original pumps are in such a state of deteriorated performance that the one working Flowserve pump is critical, even though it is pumping less than was called for in the specifications. For that reason, staff recommends that the City continue to negotiate with Flowserve to purchase the one installed pump and the second pump that has been modified but not yet delivered by Flowserve.**

In anticipation of a difficult negotiation and the potential that an unfavorable impasse may be encountered with Flowserve, staff included funds in the FY 12/13 midyear budget amendments to allow for both full payment to Flowserve in the amount of \$219,429 and procurement of four new pumps from Fairbanks. Those funds have now been rolled over into the FY 13/14 budget amendments that will be presented to Council in February. **As long as Council approves the recommended budget, funding will be available and earmarked in the carryover from last fiscal year to cover all six of the alternatives shown below.** Alternative 4 would expend all of the funds budgeted for the pump replacement. Alternatives 1, 2, 3, 5, and 6 would result in a net savings to the budget.

#### **ALTERNATIVES:**

1. A. Direct staff to continue to negotiate with Flowserve to obtain the most favorable terms possible to procure two pumps at a reduced price and delete two pumps from the contract. When acceptable terms are reached, the agreement would be brought back to Council for approval.  
  
B. Authorize the procurement of four new first stage trickling filter pumps from Fairbanks Morse as a negotiated, single source procurement in the amount of \$416,780.
2. Direct staff to negotiate with Flowserve as described in Alternative 1. Do not approve the negotiated single source proposal from Fairbanks and direct staff to solicit formal bids.
3. Direct staff to accept the most recent terms proposed by Flowserve, agreeing to pay 90% for the first pump, 100% for the second pump, deleting the third and fourth pumps, and foregoing the warranty on the two purchased pumps. Direct staff to purchase four new pumps from Fairbanks as a negotiated, single-source procurement. This would offer the quickest resolution.
4. Direct staff to end negotiations with Flowserve, accept receipt of all four Flowserve pumps under contract, and pay the contracted amount to Flowserve upon delivery.

Purchase four new pumps from Fairbanks as a negotiated, single-source procurement. This would offer the most expensive resolution.

5. Direct staff to continue to negotiate with Flowserve on all four pumps as originally awarded by Council on September 8, 2009, with no direction to purchase pumps from Fairbanks. **This would be the least expensive resolution, but would have the greatest risk for reduced plant capacity and discharge permit violations.**
6. Declare Flowserve in default of their contract. Provide direction to staff on the preferred means to procure new pumps. This alternative would likely require the City to surrender the one working Flowserve pump immediately, effectively reducing the capacity of the Water Pollution Control Facility. **This would be the least preferable resolution, as the City would need to return the one working pump already installed.**

#### **MANAGER'S RECOMMENDED ACTION:**

All water being treated by the Water Pollution Control Facility must pass through the first stage trickling filter pumps. Any reduction in the capacity of these pumps results in a reduction in the overall capacity of the treatment facility. The original pumps are failing and must be replaced as quickly as possible. Staff has worked for more than four years to resolve a non-performance by Flowserve in providing replacement pumps, without an acceptable resolution. Staff is now requesting direction from Council to restore the intended pumping capacity of the Trickling Filter Pump Station as quickly as possible, while providing at least some level of reliability during the procurement of the new pumps and minimizing the overall cost to the utility. In order to begin the lengthy procurement of these pumps from another vendor, staff has already negotiated a firm quote from Fairbanks Morse.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby directing staff to continue negotiating with Flowserve to obtain the most favorable terms possible to procure two pumps at a reduced price and delete two pumps from the contract, and authorizing procurement of four new first stage trickling filter pumps from Fairbanks Morse as a negotiated single source procurement in the amount of \$416,780.



# Fairbanks Morse

Pentair Pump Group

3601 Fairbanks Ave.  
Kansas City, KS.  
Phone: 913-371-5000  
Fax: 913-748-4025

December 12, 2013

City of Ames – Purchasing Department  
c/o HDR, Inc.  
300 E Locust Street Suite 210  
Des Moines, IA 50309

## **Project: Trickling Filter Pumps TF-1 thru 4**

We are pleased to propose the following equipment

Trickling Filter Pumps per preliminary Section 11072

4 each single stage, 16" - VTSH, Vertical Turbine Solids-Handling Pump. The units shall be supplied complete with non-clog bowl assembly, column with splitter vane, enclosed line shaft, surface discharge head, AES SCUSI 1.875" Mechanical seal Pump will be shipped completely assembled, less driver and mechanical seal.

4 each 100hp, 1200 rpm, TEFC XP, Vertical Solid Shaft, High Thrust, 3/60/460v Premium efficient, inverter duty, TBA Full Load Amp Motor

### Included:

- Non-Witness certified factory bowl performance test and bowl hydrostatic test.
- Submittals, instruction and maintenance manuals.
- Startup and Training.
- Factory Paint as specified

### Not Included:

- MCC, Controls or VFD's
- Vibration probe.
- Anchor bolts.
- Wetwell baffles
- Mechanical or electrical equipment removal, assembly and installation.
- Miscellaneous components and accessories including valves and fittings.



**Pentair** Pump Group

- Pressure gauges.
- Motor Lubricants
- Structural supports, shims, grouting or templates.
- Field Testing including instrumentation, water or power.
- Field Painting.
- Unloading
- Soleplate

**Taxes, duties or special monies have not been included in this proposal.**

Total Price FOB factory, freight allowed to jobsite..... \$ 412,400.00

Options

A - Performance Bond 24 months from acceptance.....\$ 6,180.00 adder  
 (Not to exceed 3 years from ship date) **Option A is accepted by the City**

B - Non Inverter Duty Rated Motor, following features omitted.....\$( 1,800.00 ) deduct  
 Insulife VPI Insulation Treatment **Option B is accepted by the City**

Insulated Bearing  
 SGR Grounding Ring

C – Non Inverter Duty Standard Efficiency Motor, without following.....\$( 5,228.00 ) deduct  
 Insulife VPI Insulation Treatment **Option C is declined by the City**

Insulated Bearing  
 SGR Grounding Ring

Only Option B or C may be selected, Option A is applicable regardless of motor.

Pricing per KC585 terms and conditions with modification as previously agreed 3/23/12.

Submittals will be made available 8-10 weeks after receipt of procurement agreement.

New equipment will be manufactured in 28-30 weeks from receipt of approved submittals

Please feel free to call if you have any questions regarding this information.

Sincerely,

Don Skinner  
 Application Engineer  
 Fairbanks Morse Pump  
 913-748-4243

c: Andrew Larson (Z&F)