

## **Operations Update**

Plant Operations – Treatment and operations continue to be doing well for the month of March; no issues to report on.

Plant/Kruger SCADA Computers – June 13 – 15<sup>th</sup> is the tentative date set by L.W. Allen to install the new SCADA computers.

ATAD Programing – With the SCADA computer upgrades there is going to be an upgrade to the ATAD. This involves some programming so we'll be able to do the bio-solids transfers during electrical non-peak hours. The upgrade to the ATAD will be \$1,800.

## **Maintenance Update**

Fairbanks Vertical Turbine Pump #3 – Fairbanks received the pump, disassembled, blasted and inspected the unit. They also sent a detailed inspection report which identified additional repairs that were required. The original estimate was approximately \$38,500 total. The new quote with additional repairs of \$14,720 brings the total for the pump rebuild to \$53,220. Cost of pump when new in 2006 was \$110,000.

Process Return Pump Drives –The new upgrades are tentatively scheduled for May 9<sup>th</sup> & 10<sup>th</sup>.

Heating and Ventilation Duct work – The damage that was done to the large duct work associated with the ACTI-FLO venmar unit has been repaired. Bartelt Insulation came in and did the repairs at a cost of \$1,672.00. The other quote received came in at \$4,400.

ACTI-FLO Water Champs – In last month's meeting I had brought up the water champs as far as purchasing one for standby. The quote for it came in at \$18,000. I checked into the cost of parts that would be needed for the vacuum assembly; parts needed to rebuild are two bushings plus a shaft extension that costs \$1,506. A motor with cord and hardware is \$5,352. My plan is to have a new motor on hand along with the parts in the event that a water champ goes out. The vacuum assembly is separate from the motor so there is no need to have a complete unit on standby.

Biostyr Blowers – These blowers have come up in past meetings and I feel we were in agreement that due to the cost of the seal kit with the shaft bushing that we can replace many of them and not reach the cost of a single blower package if we were to replace the blower packages completely. The seal kit is at a cost of \$122.34. The cost of a new blower for the blower packages we have now is \$8,444.23. Currently there is one blower that needs replacing due to the bearings going out on the drive end and gear end. The blower is in the replacement budget.

Director of Operations and Maintenance  
Kevin Skogman



**Zachary Zwibelman**  
Product Engineer – Pumps Services  
Group

**PENTAIR FLOW TECHNOLOGIES**  
Fairbanks Nijhuis  
+1.913.371.5000 main  
+1.913.748.4069 direct  
+1.913.371.0515 fax  
Zach.Zwibelman@pentair.com

3601 Fairbanks Avenue  
Kansas City, KS 66106  
United States  
www.fairbanksnijhuis.com

March 20, 2017

To: L W Allen LLC

Attn: Rick Bartelt

Subject: Kaukauna, WI VTSH Rebuild  
20" VTSH  
S/N: 1296276  
Reference # 300121788 Rev. 0

Fairbanks Nijhuis' Pump Service Group (PSG) would like to thank you for allowing us the opportunity to quote repairs on the unit listed above. We have completely disassembled, blasted and inspected the unit. Below, you will find the inspection report for your 20" VTSH.

The packing box is in fair condition. The threads and male fit are within tolerance, but the packing box bore is pitted and oversized by 0.040". We recommend sleeving the bore with stainless steel and then machining it to print. This will bring the bore back into tolerance and help extend the packing box's longevity.



*Packing Box: The packing box bore is oversized and severely pitted.*

The discharge head is in fair condition. The motor fit, packing box register fit, and column fit are within tolerance and meet FN standards, but the discharge flange fit has evidence of washout as seen in the picture below. We recommend weld repairing the fit back to FN standards.



*Discharge Head: Discharge flange fit shows evidence of wash out and requires repair.*

The column pipe is in good condition. The fits are in good condition and do not have signs of washout. We recommend blasting the column pipe and reusing as is.

The top enclosing tube is in poor condition. The threads have been severely corroded, beyond the point of reuse or repair. The bottom enclosing tube is in fair condition. The threads meet FN standards and can be reused as is, but the flanged side has some wash out. The bottom fit is 0.028" – 0.035" out of tolerance. We recommend replacing the top enclosing tube and weld repairing the bottom enclosing tube.



*Top Enclosing Tube: Top threads show severe washout and wear.*

The diffuser bowl is in poor condition overall. The top column fit, enclosing tube fit and suction bell fit are in good condition and meet FN standards, but the restrictor bushing fit and snap ring groove have evidence of severe washout and will require sleeving and

machining to bring them back into tolerance. We recommend sleeving the restrictor bushing fit and machining back to the original print.



*Diffuser Bowl: The restrictor bushing and snap ring groove fits are washed out.*

The impeller is in fair condition. The bore, outside diameter (O.D.) and ring fit are all within tolerance, but the impeller hub shows severe wear and measures 0.045" – 0.091" out of tolerance. We recommend sleeving the impeller hub with stainless steel and machining back to tolerance. The stainless steel material will help increase the longevity of this wearing surface.



*Impeller: Hub requires repair and will be ceramic coated per the original quote.*

The suction bell is in poor condition. The ring fit and parts of the water passage have severe erosion. We recommend utilizing Loctite PC 3471, which is designed for rebuilding and repairing worn steel components. We will machine a new ring fit and repair the wear using the Loctite product.



*Suction Bell: Wear ring fit and suction bell erosion from pumped media.*

The line shaft and pump shaft are also in poor condition. Both shafts have evidence of pitting all over and severe wear at the bearing journals. We recommend replacing the top line shaft. Typically, we re-chrome plate the pump shaft at the bearing journals, but bearing journals have been grooved and worn too deep to re-chrome plate. We recommend replacing the pump shaft with an OEM pump shaft.



*Pump Shaft: Has deep grooves in bearing journals from wear. Shaft also has pitting from corrosion.*



Below I have outlined our recommended scope of repair for your 20" VTSH.

**Scope of Repair:**

- Receive pump to our Kansas City, KS Repair Facility
- Disassemble, Blast and Inspect all pump components
- Provide Detailed Inspection Report
- The following Components are Considered to be Reusable
  - Suction Bell
  - Impeller
  - Discharge Bowl
  - Enclosing Tube (1)
  - Column Pipe
  - Discharge Head
  - Packing Box
- Perform Minor Repair Work on Impeller and Coat with a Loctite Ceramic Coating
- Repair Suction Bell and Machine Ring Fit
- Weld Repair and Machine Enclosing Tube Fit
- Weld Repair Discharge Flange on Discharge Head
- Sleeve the Packing Box Bore
- Replace the following with OEM components.
  - Impeller Wear Ring
  - Impeller Hardware (Key, Stud, Washer, & Nut)
  - Restrictor Bushing
  - Suction Bell Wear Ring
  - Bowl Throttle Ring
  - Bowl Bearings
  - Pump Shaft
  - Chesterton 155 Mechanical Seal, as per Original Order
  - Line Shaft and Couplings
  - Connector Bearings
  - Top Enclosing Tube
  - Gaskets and Hardware (as needed)
- Assemble Bowl Assembly and Perform an Enclosing Tube Flow Test
- Reassemble the Pump Complete
- Coat the Pump per the Original Paint Sheet
- Prepare unit for Shipment to Destination

**Additional costs to repair components that were not originally included:**

<b>Added Repairs</b>	<b>\$ 14,720.00</b>
Original cost to repair	<u>\$ 28,655.00</u>
Total Pump Repair Cost.....	\$ 43,375.00



Our lead time will be 5 – 7 weeks after receiving the pump and the approval to proceed. A non-witness performance test is also included. Please add an additional 3 weeks onto the lead time for this option. This quotation includes only the parts or processes specifically outlined above.

The above quotation is valid for 30 days after the date of this letter, and is subject to Pentair's standard Terms and Conditions (KC585), including the same warranty as new products. Our warranty covers defects in materials or workmanship for 1 year after start up, or 18 months after shipment, whichever comes first. Taxes and freight are excluded, and will be billed separately, as applicable.

As always, Fairbanks Nijhuis appreciates your business and stands ready to address any questions or comments that you may have.

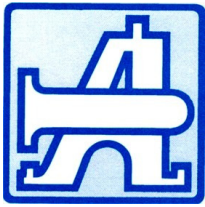
Sincerely,

A handwritten signature in black ink that reads "Zachary Zwibelman". The signature is written in a cursive, flowing style.

Zachary Zwibelman  
Product Engineer – Pump Services Group  
Fairbanks Nijhuis Pump

Cc: Andrew Pepperdine  
Justin Gomez

**PROPOSAL**



**L.W. ALLEN, INC.**

*A Full Service Distributor*

**PUMPS – CONTROLS – REPAIR CENTER**

4633 Tompkins Drive - Madison, WI 53716

Phone 608.222.8622

Fax 608.222.9414

Heart of the Valley WWTP

Kaukauna, WI 54130

Attn: Kevin

PROPOSAL ID: 09166RBRev1

REFERENCE: Fairbanks VTSH Pump

LOCATION: VTSH Pumping Station

BID DATE: 9 /15, 2016-Revised 3/21/17

<p><u>FREIGHT IS F.O.B. ORIGIN</u></p> <p><input type="checkbox"/> ALLOWED    <input type="checkbox"/> PREPAID &amp; ADD    <input checked="" type="checkbox"/> COLLECT</p>	<p>TERMS: NET-30 DAYS PER ATTACHED TERMS AND CONDITIONS</p> <p>PRICES DO NOT INCLUDE SALES OR USE TAXES</p>
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ITEM	QUAN	DESCRIPTION	TOTAL PRICE
		L.W. Allen is pleased to provide a quotation for the following equipment and services.	
A	1	<p>Fairbanks Nijhuis would like to thank you for allowing us the opportunity to quote repairs on the unit listed above. Below I have outlined a typical scope of repair and pricing for the rebuild of a 20" VTSH.</p> <p><b>Scope of Repair:</b></p> <ul style="list-style-type: none"> <li>• Receive pump to our Kansas City, KS Repair Facility</li> <li>• Disassemble, Blast and Inspect all pump components</li> <li>• Provide Detailed Inspection Report</li> <li>• The following Components are Considered to be Reusable                             <ul style="list-style-type: none"> <li>o Suction Bell</li> <li>o Impeller</li> <li>o Discharge Bowl</li> <li>o Enclosing Tubes</li> <li>o Line Shafts and Couplings</li> <li>o Column Pipes</li> <li>o Discharge Head</li> </ul> </li> <li>• Perform Minor Repair Work on Impeller and Coat with a Loctite Ceramic Coating</li> <li>• Re-chrome Bearing Journals on Pump Shaft</li> <li>• Replace the following with OEM components.                             <ul style="list-style-type: none"> <li>o Impeller Wear Ring</li> <li>o Impeller Hardware (Key, Stud, Washer, &amp; Nut)</li> <li>o Restrictor Bushing</li> <li>o Suction Bell Wear Ring</li> <li>o Bowl Throttle Ring</li> <li>o Bowl Bearings</li> <li>o Chesterton 155 Mechanical Seal, as per Original Order</li> <li>o Connector Bearings</li> </ul> </li> </ul>	



ITEM	QUAN	DESCRIPTION	TOTAL PRICE
		o Gaskets and Hardware (as needed) <ul style="list-style-type: none"> <li>• Assemble Bowl Assembly and Perform an Enclosing Tube Flow Test</li> <li>• Reassemble the Pump Complete</li> <li>• Coat the Pump per the Original Paint Sheet</li> <li>• Prepare unit for Shipment to Destination                             <ul style="list-style-type: none"> <li>• Performance Test of rebuilt unit</li> </ul> </li> </ul>	
		<b>Total Investment.....</b>	<b>\$ 28,655.00</b>
		<b>After Inspection(see attached inspection report) additional parts/re-work is necessary in order to recondition pump back to factory OEM standards. The added cost is \$ 14,720.00</b>	
		<b>Total Pump Repair Cost.....\$ 43,375.00</b>	
B	1	Notes: This quotation includes only the parts or processes specifically outlined above. Any additional parts or processes deemed necessary by F.N. after the inspection will be quoted separately at an extra cost. Additional parts or processes will be included only after the approval and authorization by the Customer. Warranty will be contingent on the inclusion of any processes deemed necessary by F.N. Not Included: Pump removal, shipping and pump re-installation. Removal of existing motor and pump. Rigging and assisting crane operator with removal of pump and setting on delivery truck. Re-installation of rebuilt pump. Motor will be installed, aligned and pump clearance will be set. Start-up is included.	Total Investment..... <b>\$ 5,875.00</b>
C	1	Freight Both ways from HOV to Fairbanks in KC, USA then back to HOV after unit is rebuilt.	Total Investment..... <b>\$ 2,450.00</b>
D	1	Crane rental and operator will be billed on a T&M basis. Please see attached quote for specifics.	

ACCEPTED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_

PRICE FIRM FOR 30 DAYS

SUBMITTED THIS:

September 16, 2016

NAME OF PURCHASER

BY: \_\_\_\_\_

L.W. ALLEN, INC.-BY:

Rick Bartelt

NAME & TITLE

### Terms and Conditions

**Controlling Provisions:** These terms and conditions shall supersede any provisions, terms, and conditions contained on any purchase order or other written form Buyer may use or provide (whether received by Seller prior or subsequent to date hereof), and the rights of the parties shall be governed exclusively by the provisions, terms, and conditions hereof.

**Quotations and Acceptance:** Acceptance of a quotation, whether by a separate purchase order or by other means, shall constitute an acknowledgment and approval of the quotation as written and an acceptance of the Terms and Conditions hereof. Written quotations shall expire on the date specified in the quotation or, in the absence of such specification, thirty calendar days from the date issued. Seller may, by written notice, terminate a quotation at any time prior to acceptance. Any purchase order received after expiration of a quotation, which Seller honors, shall be subject to all of the Terms and Conditions hereof.

**Submittal Drawings:** Submittal of drawings for approval, if required, will be made after receipt of complete information from buyer. The quantity of the submittal drawings will be as specified in the contract documents. Additional sets will be supplied at \$100.00 per set. Return to Seller of one (1), final approved drawing constitutes notice to Seller to proceed with manufacturer. If this order is conditioned upon "engineer approval" Seller requires written notification from buyer in the form of approved submittal data.

**Force Majeure:** Seller shall not be liable for failure to deliver or perform, for any delay in the performance of orders or contracts, or in the delivery of shipment of goods, or for any damages suffered by the buyer due to such delay or failure, when the delay or failure is, directly or indirectly, caused by or arises from delays of suppliers or carriers or any other cause beyond Seller's control.

**Prices and Taxes:** All prices are F.O.B. factory unless expressly stated otherwise. Prices do not include sales, excise, municipal, state or other governmental taxes. Buyer shall be responsible for all taxes.

**Credit Approval:** The credit terms specified on the face hereof are subject to Seller's continuing approval of Buyer's credit. Seller may withdraw the extension of credit and require modified payment terms if, in Seller's sole judgment, Buyer's credit or financial standing is impaired to the point where Seller in good faith deems itself insecure.

**Delivery:** Delivery will be F.O.B. Seller's point of shipment. Buyer will accept delivery within twenty (20) days after Seller notifies Buyer that the equipment is ready for shipment. If Buyer does not furnish exact shipping instructions, Seller will select, at its discretion, the means of shipment. Seller will not be liable for any loss resulting from such selection. The time of delivery is an estimate only, and Seller may change such time if it does not receive the information and approvals necessary to proceed with the manufacture of equipment.

**Title, Risk of Loss, Inspection of Equipment:** Title and risk of loss to the equipment shall pass to Buyer upon delivery of the equipment to the carrier. Buyer shall immediately inspect equipment upon receipt and any damage must be noted on the carrier's bill of lading at time of receipt. Seller is not liable for any shortages or nonconformance unless notified by Buyer within 10 days of Buyer's receipt of the equipment. Buyer will make all claims for loss or damage in transit against the carrier.

**Changes, Cancellations, Returns:** All changes, cancellations, or returns must have Seller's prior written approval and are conditional on compliance with manufacturer's cancellation/return policies and subject to restocking fees and service charges. Authorized returned equipment must be packaged and shipped prepaid to manufacturer.

**Payment:** Unless the Seller extends alternative credit terms, 90% of the total purchase price is due net 30 days after delivery of equipment (but in all cases prior to field service start-up, if earlier) and the remaining 10% is due upon start-up of equipment by Seller's field technician, but in no event more than 90 days after shipment of equipment. Any balance owed by Buyer after the due date is subject to a 1.5% per month delinquency charge until paid. **FIELD START-UP SERVICE CANNOT BE AUTHORIZED WITHOUT RECEIPT OF PAYMENT IN THE AMOUNT OF 90% OF THE TOTAL PURCHASE PRICE.** If no start-up is required, 100% payment is due net 30 days from invoice date. **BUYER'S PAYMENT OBLIGATION IS IN NO WAY CONTINGENT UPON BUYER'S RECEIPT OF PAYMENT FROM ANY OTHER PARTY.**

**Indemnification and Default:** In addition to all other amounts due hereunder, buyer shall reimburse Seller in full for all collection costs or changes, including reasonable attorney fees, which Seller may incur in the collection of past due amounts from buyer, including interest on overdue accounts. If buyer is in default under this or any other agreement with Seller, Seller may defer performance hereunder until such default is cured. Seller shall have no obligation to provide factory startup assistance and/or factory training until all invoices (including retentions) for equipment have been paid in full.

**Security Interest:** Seller shall retain a security interest in the equipment until the full purchase price has been paid. Buyer's failure to pay any amounts due shall give Seller the right to possession and removal of the equipment after providing ten (10) days written notice. Seller's taking of such possession shall be without prejudice to any other remedies Seller may have.

**Warranty and Liability:** Buyer shall have such warranty rights, and only such warranty rights, as may be extended by the manufacturer of the product. The terms and conditions of any such warranty rights are set forth in the Manufacturer's Operation/Maintenance Manual which accompanies each product. Seller does not otherwise offer any guaranty or warranty for the product. Seller disclaims any and all warranties; express or implied, including the warranties of merchantability and fitness, except as may be set forth in the terms and conditions of sale in this Agreement or in any express written warranty which seller may have otherwise extended to Buyer for the product.

Seller shall not be liable for any damages, charges for labor, or expense in making repairs or adjustments to the product without prior written approval of Seller. Seller shall not be liable for any damages or charges sustained in the adaptation or use of its engineering data or service by Buyer or any third party. Seller shall not be liable for startup or any other field work performed by personnel other than authorized representatives of Seller unless expressly approved in writing in advance by Seller. Seller shall in no event be liable for any consequential, incidental or liquidated damages or penalties. Seller's liability under this Agreement shall in no event exceed the lesser of: (i) the cost of remediating any defect or deficiency in the performance of Seller hereunder; or (ii) the purchase price of the product in respect of which the claim is made.

**Operation/Maintenance Manuals:** Buyer's installation, maintenance and operation manuals will be furnished in the number of copies specified at the time of quotation in contract documents. If none specified, one will be provided at no added cost, with additional copies at \$100.00 each.