



## LEHIGH COUNTY AUTHORITY

April 28, 2014

### BOARD MEETING AGENDA

1. Call to Order
2. Review of Agenda
  - *Public Participation Sign-In Request*
3. Executive Sessions
4. Approval of Minutes
  - *March 24, 2014 Regular Meeting Minutes*
5. Public Comments
6. Action / Discussion Items

#### **FINANCE AND ADMINISTRATION**

- *None*

#### **WATER**

- *None*

#### **WASTEWATER**

- *Wastewater Rates for Boston Beer (Approval)*
- *Allentown Division – Belt Filter Press Rehabilitation- Purchase of OEM Parts (Approval)*

7. System Operations Overview
8. Staff Comments
9. Solicitor's Comments
10. Other Comments
11. Adjournment

#### **MAY MEETINGS**

Workshop Meeting  
Board Meeting

May 12 – 12:00 p.m.  
May 27 (TUESDAY) – 12:00 p.m.

#### **PUBLIC PARTICIPATION POLICY**

In accordance with Authority policy, members of the public shall record their name, address, and discussion item on the sign-in sheet at the start of each meeting; this information shall also be stated when addressing the meeting. Members of the public will be allowed 5 minutes to make comments/ask questions regarding non-agenda items, but time may be extended at the discretion of the Chair; comments/questions regarding agenda items may be addressed after the presentation of the agenda item. Members of the public may not request that specific items or language be included in the meeting minutes.

## **REGULAR MEETING MINUTES**

### **March 24, 2014**

---

The Regular Meeting of the Lehigh County Authority was called to order at 12:27 p.m. on Monday, March 24, 2014, Chairman Asa Hughes presiding. Other Members present at the commencement of the meeting were: Tom Muller, Brian Nagle, Richard Bohner, Scott Bieber, and Norma Cusick. Authority Staff present were Aurel Arndt, Liesel Adam, Bradford Landon, Frank Leist, Bob Kerchusky, Dan Standish, Pat Mandes, John Parsons, and Cristin Keppel.

#### **REVIEW OF AGENDA**

Mr. Arndt stated there will be a goals discussion after the regular agenda items.

#### **PUBLIC COMMENTS**

None.

#### **EXECUTIVE SESSION**

None.

#### **APPROVAL OF MINUTES**

##### **February 24, 2014 Regular Meeting Minutes**

On a motion by Ms. Cusick, seconded by Mr. Muller, the Board unanimously approved the minutes of the February 24, 2014 Regular Meeting (3-0). Messrs. Nagle, Bohner, and Bieber abstained.

#### **ACTION AND DISCUSSION ITEMS**

##### **Allentown Division – Belt Filter Press Rehabilitation – Design Phase (Approval)**

Mr. Parsons explained the Project includes the replacement or reconditioning of the three wastewater plant belt filter presses (BFP's) which have all reached the end of their useful lives. The existing frame on BFP #1 is beyond repair and a fully factory remanufactured replacement unit is necessary; which has already been purchased. The condition of BFP's 2 & 3 will allow for reconditioning on-site. He noted that two of the three existing control panels are beyond repair and are included for replacement as part of this project. Mr. Parsons explained that this authorization is for the design of all the construction activities that will be required to install the remanufactured unit (BFP #1), and also for the in-place retrofits (BFP #2 and #3). Based upon our review of all aspects of proposals submitted by four firms, we recommend award of the Design Phase services to D'Huy Engineering, Inc. Their proposal is on scope and represents what we believe is the best overall value for the Authority.

On a motion from Mr. Bieber, seconded by Mr. Nagle, the Board unanimously approved the Capital Project Authorization for the Design Phase of the Allentown Division Belt Filter Press Rehabilitation in the amount of \$86,080, which included a Professional Services Authorization for D'Huy Engineering (6-0).

#### **SYSTEM OPERATIONS OVERVIEW**

Mr. Standish noted that Pennsylvania Department of Environmental Protection (DEP) [??] Annual Reports are finished, stating that there is 17% unaccounted for water in the City Division, which is a significant drop from previous years in the City system.

Mr. Parsons provided a handout reflecting the changes in unaccounted for water in the system. He explained that this amount has typically been between 25-30%; however the implementation of automated

meter reading has allowed for more accurate counts, thus resulting in the significant drop. Mr. Parsons also noted that these numbers only reflect partial year readings, so there is potential for another drop in unaccounted for water.

Mr. Standish also noted that LCA has a more aggressive stance on leak detection than in previous years in the City Division, which will aide in lowering unaccounted for water totals.

Ms. Cusick left the meeting at 1:30 p.m.

### **OTHER COMMENTS**

Chairman Hughes congratulated Staff members for receiving the Government Finance Officers Association designation for Excellence in Financial Reporting.

### **SOLICITOR'S COMMENTS**

Mr. Landon noted that the amended Articles of Incorporation increasing Board membership from seven to nine members have been advertised and as soon as confirmations of such advertisements are received from the respective publications, the amendment will be filed.

### **STAFF COMMENTS**

Mr. Arndt, along with Staff members, reviewed the Authority's goal listing for 2014, which was provided to attendees.

Mr. Hughes excused all Staff members, except Mr. Arndt, to discuss Mr. Arndt's personal goal listings<sup>3</sup> for 2014 at 1:52 p.m.

Mr. Muller left the meeting at 2:05 p.m.

### **ADJOURNMENT**

There being no further business, the Chairman adjourned the meeting at 2:16 p.m.

---

Richard H. Bohner  
Secretary

**FINANCE & ADMINISTRATION****ACTION ITEMS**

---

1. *None.*

**DISCUSSION ITEMS**

---

1. *None.*

**INFORMATION ITEMS**

---

1. **CMMS Upgrade and Expansion Project**

GIS map identifying both Suburban and Allentown Division distribution and collection system assets has been developed and transmitted to RJN for review. Cityworks software installation and CASSWORKS data conversion is scheduled for June. Pilot phase is scheduled for Aug. – Oct. Verizon Wireless is willing to provide sample mobile devices ex. Ipad, Android tablet for evaluation during the pilot phase.

2. **Recently Purchased Investments – Certificates of Deposit (CDs)**

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
WW Capac	Washington Trust Company of West	Westerly, RI	249,000.00	3/19/14	9/21/15	0.35
WW Capac	Middlefield Banking Co	Middlefield, OH	249,000.00	3/19/14	9/21/15	0.30
Cons Wtr (2)	Everbank	Jacksonville, FL	240,000.00	3/21/14	9/21/15	0.35
Cons Wtr (2)	Goldman Sachs Bank USA	New York, NY	108,000.00	3/26/14	3/28/16	0.50
Cons Wtr (2)	First Niagara Bank	Buffalo, NY	249,000.00	3/28/14	3/27/15	0.30
Cons Wtr (2)	Noah Bank	Elkins Park, PA	249,000.00	3/28/14	9/28/15	0.40
Cons Wtr (2)	Webbank	Salt Lake City, Ut	249,000.00	3/28/14	3/28/16	0.50
Cons Wtr (2)	Barclays Bank Delaware	Wilmington, DE	245,000.00	4/15/14	4/15/16	0.55
Cons Wtr (2)	Discover Bank	Greenwood, DE	200,000.00	4/16/14	4/18/16	0.55
LLRI CR	Ridgestone Bank	Brookfield, WI	245,000.00	4/21/14	1/21/16	0.40

Fund Descriptions for Investments:

WW Capac	Wastewater Capacity
Cons Wtr (2)	Consolidated Water (2)
LLRI CR	Little Lehigh Relief Interceptor Capital Reserves

## **WATER**

### **ACTION ITEMS**

---

1. *None.*

### **DISCUSSION ITEMS**

---

1. *None.*

### **INFORMATION ITEMS**

---

1. **Arcadia West Pumping Station Modifications**

The general contractor submitted a preliminary shop drawing for the high service pump that we and the Engineer are reviewing. The pump controller manufacturer has taken exception to certain specialty features that need to be addressed. The general contractor's schedule to install the equipment and piping in the station has slipped by three months due to difficulty in releasing all shop drawings. The contractor is investigating options to expedite his work such as modifying his sequence of piping installation. The 24" diameter disinfection piping has been installed, pressure tested and the tie-in made. Modifications to the two production wells were made. A manhole was installed over the casing of a third well that is being held in reserve. Other upcoming work includes setting the fuel tank and installing fencing. The electrical contractor has completed over half of the conduit in the station. The SCADA panel was installed. Tie-ins will be made as the work progresses.

2. **LCA Facilities Emergency Power Project**

As of March 26, 2014 all Project sites are now operable with a generator and transfer switch. The electrical contractor is currently working on all punch list items and providing all necessary close out documents. Delivery of the 100 KW generator for the Gary pump station in Buss Acres has been received and is currently scheduled for startup inspection from the manufacture's dealership.

3. **Allentown Division- Water Main Replacement Program**

City of Allentown has granted Conceptual Design approval of this Major Project. Preliminary meetings have taken place with Allentown Streets Department, PennDOT, UGI and other entities to introduce the program. 30% design has been completed and design comments have been received by our engineering consultant from both the LCA project team and the City of Allentown. Substantially complete design plans and are currently under review by both LCA and PennDot. Upon LCA's final review both plans and specification will be formally submitted to the City of Allentown for their approval. This project will be funded by LCA.

4. **Allentown Division- Coagulation Chemical Conversion**

In 2010, DEP approved the City to change the primary coagulant from Aluminum Sulfate (Alum) to Polyaluminum Chloride (PACL). This change has not been implemented due to change over in City personnel and the leasing of the City water system. A review of the proposals received in January for professional services to evaluate options for the implementation of this changeover indicated that a further refinement of project scope and associated costs is necessary before recommending an award. Revised proposals were

received on March 21, 2014 and are being reviewed internally with the goal of selecting a consultant by mid-late April. Gannett Fleming will be on-site 4/21/2014 to discuss the project prior to any award being given. This project will be funded by LCA.

**5. Allentown Division- Schantz Spring Cl2 Booster Station**

Construction of a chlorine feed station at a midway point of the transmission main from Schantz Spring to the Water Filtration Plant to increase the reliability of the source. After 3-months, we finally met with Director of Parks regarding the proposed location of the facility because it is in City Park system. The Director maintains because the City has received grants from DCNR for the park system that he has to abide by their rules governing improvements/buildings that have a non-park function. A meeting will be scheduled in the near term with representatives of DCNR to discuss the issues. It may be necessary to acquire property or an easement that is not located in the park system to locate this facility on.

Alternative treatment options and improvements to the existing facilities are being considered and will be fully evaluated based on cost and feasibility. Backup power supply, more reliable chemical feed pumps, and full-time data recording are all being considered in an effort to reduce the potential for unchlorinated slugs of water in the future. Barry Isett Inc is preparing a proposal to determine costs of our alternate plan vs the original booster station. LCA will then need to address the City of Allentown as far as getting approval for the revised project. This Project is identified as Un-Completed Work and will be funded by the City. **No current activity**

**6. Allentown Division- WFP Chemical Building Roof Replacement**

The Project includes modifications to the roof of WFP chemical storage area (i.e. installation of hatches), removal and replacement of (2) 8,000 gallon chemical storage tanks; and replacement of the 20-year old rubber membrane roof system. The project has been bid by the City and a contract has been awarded. The replacement chemical feed tanks have been fabricated and are being stored by the vendor until we are ready for them. Construction has been underway since 3/31/2014. Water pipes, sprinklers, storm drains, etc are being moved first. Dismantling of the existing roof is scheduled to begin on 4/28/2014. This Project is identified as Un-Completed Work and will be funded by the City.

**7. Developments**

Water system construction is occurring in the following developments:

Laurel Field, Phase 4A, 29 residential lots (sfa), UMT  
Valley West Estates, Phases 4, 5 & 6, 46 residential lots (sfd), UMT

Water system plans are being reviewed for the following developments:

Above & Beyond (personal care facility), 2 commercial lots, UMT  
Diocesan Pastoral Center, 2 commercial lots, 3 additional lots and residual lot for existing cemetery, LMT  
Grant Street Townes, 18 residential lots (sfa), WashT  
Hamilton Crossings, 2 commercial lots with 20 buildings having retail, financial, convenience and restaurant uses, LMT  
Hickory Park Estates, 3 residential lots (sfd), UMT  
Hillview Farms, 31 residential lots (sfd), LMT/SWT  
Indian Creek Industrial Park, 6 commercial lots, UMiIT, water and sewer  
Lehigh Hills, 247 residential lots (sfa/sfd), UMT  
Liberty at Mill Creek, 2 industrial lots, UMT  
Morgan Hills, 40 residential lots (sfd), WeisT, water and sewer

North Whitehall Commercial Center (Walmart), 5 commercial lots, NWT, water and sewer

Route 100 Bypass & Cetronia Road Proposed Commercial Development, 1 commercial lot with 4 buildings having auto, convenience, financial and day care uses, UMT

Shepherd's Corner, 1 commercial lot, LMT

Spring Creek Properties Settlement Subdivision (formerly Spring Creek Properties Subdivision I), 16 commercial and industrial lots, LMT

Trexler Business Center, Lot 1, 1 commercial building, LMT

Weilers Road Twins, 82 residential lots (sfa), UMT

Woodmere Estates, 60 residential units (sfd), UMT

Woodmont at Upper Macungie (formerly Rabenold Farms II), 288 apartment units and clubhouse, (Portion north of I-78), UMT

## **WASTEWATER**

### **ACTION ITEMS**

---

1. **Wastewater Rates for Boston Beer** (Approval)

The rates for Boston Beer for the 2014 year (March 2014 – February 2015) have been updated as per the 2011 agreement. The rates are calculated in a model based on 8% coverage of the 2014 LCA WTP expenses (**blue**).

2. **Allentown Division – Belt Filter Presses (BFP) #2 & 3 Purchase of OEM Parts** (Approval)

The wastewater treatment plant has three belt filter presses that are used to dewater both wastewater sludge and water plant chemical sludge. This project will install a remanufactured belt press for existing BFP #1, and will rehabilitate in-place existing BFP #2 and #3. Units #1 and #2 will also get a new control cabinet. Board approval has already been received to purchase the remanufactured unit and for D'Huy Engineering, Inc. to design the construction work for the entire project. Design of the construction activities is underway. The project is planned for completion by the end of 2014 and will be funded by LCA.

Board approval for the purchase of Original Equipment Manufacturer (OEM) parts for the rehabilitation in place of BFP #2 & 3 is requested, reference attached documentation (**yellow**).

### **DISCUSSION ITEMS**

---

1. **None.**

### **INFORMATION ITEMS**

---

1. **Infiltration and Inflow (I&I) Program Update**

The following is work planned for 2014:

- Submission of reports to EPA and DEP.
- Rehab effectiveness metering in Phase 1 pipe lining project areas to determine the reduction in peak flows as a result of the rehab work.
- Phase 2 of Signatory pipe lining projects as determined by KCE.
- Rehab effectiveness metering in Phase 2 pipe lining project areas.
- WLI Manhole Inspections. This work is near completion.
- Test and Seal project for branches of the WLI that were CCTVed in 2011 – 2012.
- Long term flow meters will continue on a limited basis. Two rain gauges and meters remain in the system.
- Alternative Modeling and feasibility analysis to evaluate the various alternatives to achieve the preliminary objectives. The alternatives will include various combinations of I & I elimination, storage and capacity increases.
- Preliminary Program Objectives Evaluation Report will be submitted to DEP by the end of 2014. This document will define the current system performance and assess what it will take to achieve the system preliminary objectives. The report will include a discussion of



the investigation and evaluation work completed including flow evaluation, SSES prioritization, modeling, current and future level of service, current and future system sizing requirements, and will propose the Level of Control for system operation.

- The development of the Capital Improvements Plan is scheduled to begin by the end of the year. This will identify the rehab needs, replacement needs, expansion requirements, costs of improvements and schedule for implementation to achieve the program objectives.
- The LCA Engineering team met with the City Engineering team to discuss combining the LCA and City hydraulic models. It was agreed that the best technical approach to evaluating the entire City system is to work together on combining the models and performing the alternatives analysis together.
- The City and LCA hydraulic models have been combined by Arcadis. A meeting was held with City representatives and the City Engineer and LCA representatives and our Engineer to discuss the combined model and to determine if additional flow monitoring is required to calibrate the models. Ten meters are being installed near the park Pump Station to collect flow data for three to four months. The flow data will help the two models work together.

## **2. Wastewater Treatment Capacity**

The Memo of Understanding (MOU) regarding working together on a joint Act 537 Plan with the City was never executed with the City. The MOU was revised as a result of the Concession. The City revised the MOU and returned to LCA. We are in the process of continued negotiations.

A Stakeholder's Advisory Committee (SAC) Meeting will be scheduled for early 2014.

DEP has indicated that a Jordan Creek study must be submitted to DEP prior to the issuance of final effluent standards. If we want to avoid the study, then water quality standards would be imposed for effluent limitations. There is no work currently being done on the Jordan Creek discharge option.

A meeting was held with the DRBC to discuss updating the prospective effluent limits for the various alternatives. The model was refined and the grandfathered loads for Phosphorus and Ammonia have been updated based on the actual Kline's Island data. The new effluent limits have been developed and provided by the DRBC. The Engineering team held a meeting to discuss the revised effluent limits provided by the DRBC. A follow-up letter will be provided to the DRBC requesting back-up documentation and sources of data.

A meeting was held at the Pretreatment Plant with the DEP to discuss the land application option. Four individuals from DEP toured the area to see the various sites that are being investigated for land application of the plant effluent. DEP is still excited about this option but did present the requirement for total dissolved solids (TDS) which will be one of the challenges.

Effluent sampling was performed on the Pretreatment Plant effluent to determine the make-up of the TDS. The high TDS in the effluent will require a reverse osmosis process to treat the TDS to acceptable levels. The major industries and waste haulers are now being sampled to determine where the sources of the high plant TDS is coming from. The high TDS concentrations will present a challenge for the land application option as additional acreage will be needed to dilute the TDS.

The City has provided future population projections to be utilized in the hydraulic model.

## **3. Northern Lehigh Wastewater System**

The project is composed of the following:

Wastewater Treatment Plant (on a 5-acre tract at KidsPeace)

The North Whitehall Township (NWT) Board of Supervisors granted approval of the Conditional Use for the proposed WWTP. In late November 2012 the opposition, the Voice of the Jordan (Voice), appealed the NWT decision to Lehigh County Court of Common Pleas. On June 5, 2013 the Court ordered “that the decision of the NWT Board of Supervisors dated October 23, 2012 is hereby reaffirmed”. On July 29, 2013 the Voice filed an appeal of the previous Court ruling to Commonwealth Court. Arguments in Harrisburg took place on December 11, 2013, a decision rendered by the Court on January 9, 2014 affirmed the lower Courts decision and Township approval. The Voice has filed a Petition with the Pennsylvania Supreme Court to hear the case. We are evaluating the timing of any legal action to request that the Court require the Voice to post a bond. **No Current Activity**

The total cost of the WTP including soft costs and KidsPeace acquisition costs is estimated at \$4.69 million.

#### Wal-Mart

Wal-Mart has put the proposed store on-hold indefinitely. Wal-Mart was a key financial contributor to the offsite conveyance facilities, which includes gravity sewers, a pump station and force main to deliver the wastewater from their proposed development and other future wastewater customers to the proposed wastewater treatment facilities at the Kids Peace site. Cost-sharing negotiations are on hold. **No Current Activity.**

#### Kids Peace Agreement

A revised amendment to the Agreement has been sent to KidsPeace. It primarily focuses the financial impact on the Jordan Creek Wastewater system because of KidsPeace’s sale of the 101 Acre parcel to Lehigh Carbon-Community College (LCCC). The 101 Acre parcel was an integral economic component for LCA in the 2006 Agreement. Kids Peace has filed for Chapter 11 Bankruptcy. We have retained an attorney who specializes in bankruptcy to represent LCA in this matter.

#### Act 537 Plan (Plan) Revision

NWT continues to work on developing an alternate a solution for the wastewater treatment needs for a revised 1-5 year service area which would include a WTP located on the eastside of Route 309 that would discharge to the Coplay Creek. LCA met with NWT on November 21, 2013 to discuss the status of their efforts. NWT has requested that LCA work their engineer to obtain the information necessary to secure conceptual pricing for the WTP and to develop high level capital and operating cost estimates. **No Current Activity.**

#### 4. Arcadia West WWTP Improvements

Construction is complete at the site. Full startup date was January 10, 2014. Demolition of the old facilities should be completed in April. Commissioning of the plant has stretched out to about 90 days and continues to be challenging. Staff is working with the manufacturer to investigate and identify what is impacting the nitrifying bacteria growth, besides the bitterly cold temperatures. The project is still in budget. Three contracts, totaling \$2,535,700.00, were awarded in 2012, with total change orders at \$35,401.24. A summary follows:

<u>Contract #1</u>	<u>Reason</u>	<u>Costs</u>
#1	Establish Contract deadline	No Cost
#2	Adjustment for Prev. Wages	\$ 7,952.13
#3	Accent Block Rows	\$ 913.50
#4	Utility Connections	\$ 4,747.78
#5	Water Meter Pit	\$ 7,797.00
#6	Shed Plywood and Fence/Gate	\$ 4,798.02
#7	Set Substantial Completion Date	No Cost

#### Contract #2

#1	Establish Contract Deadline	No Cost
#2	Chem. Tank Leak Detection and	

	Disconnects for Heaters	\$ 1,177.78
#3	Post EQ Pump VFD's	\$ 2,414.79
#4	X'tra Bollards for Met5Ed	\$ 1,747.40
#5	Set Substantial Completion Date	No Cost
#6	X'tra Control Wiring	\$ 676.58
#7	Heat tape for Decanters	\$ 3,176.26

Contract #3  
None to Date

**5. Wynnewood Terrace Pump Station & Force Main Replacement**

Design work is complete and DEP has granted the permit. Staff is initiating an application to PENNVEST for construction funding. A planning consultation, with regulatory agencies, was held on March 18. Funding offer is 1% for years 1 through 5 and 1.743% for years 6 through 20. In addition, a NPDES construction storm water will be required which we expect to receive in three to four months.

**6. Park Pump Station Improvements**

Fuel Tank Replacement – Staff has received and is reviewing the final specifications and plans for replacement of the fuel tank at the Park Pump Station. We expect to place the work to bid in June.

**7. LCA WTP**

Truck Waste Receiving Station (TWRS):

Construction is complete and currently in operation.

Digester Mixer Replacements:

The General contractor has completed the installation of mixers in the first digester and the digester is now operational. Although delayed by the extremely cold weather mixer installation in the 2<sup>nd</sup> digester is complete. Transfer of the contents and cleaning of the 3<sup>rd</sup> and final digester is underway. Holes have been cut in the top of the digester and concrete installation curbs have been poured, both necessary to accommodate the new mixers. Assuming no major difficulty in cleaning the 3<sup>rd</sup> digester we expect the project will be completed by the end of the 2nd quarter of 2014.

PPL E-Power Customizable Energy Program:

PPL has accepted the E-power applications for energy savings rebates and verification methodologies for both the Digester Mixer Replacements and Truck Waste Receiving Station (TWRS). Monitoring of the electric usage of the remaining old mixers has been completed. Monitoring devices on the High Purity Oxygen system have been installed with monitoring extending to the end of April 2014.

**8. Allentown Division- WWTP-New Bar Rack at Headworks**

The Project includes the replacement of the existing screen equipment with new coarse bar screens to minimize potential for jamming or mechanical malfunctions experienced by the existing screening equipment, resulting in discharges from Outfall 003 during high flow events. The project has been bid by the City and a contract in the amount of \$737,000 has been awarded to Blooming Glen Contractors. Given the long lead time for the equipment we expect the bulk of the work to start in June 2014. This Project is identified as Administrative Order / Un-Completed Work and will be funded by the City.

**9. Allentown Division- WWTP-Replacement of Motor Control Centers**

This Project will replace five aged motor control centers that provide power on a 24/7 basis to various parts of the WWTP. The motor control centers are located in areas where they are exposed to corrosive wastewater gas and have deteriorated considerably. Because of the age

of the existing MCCs, replacement parts are nearly impossible to find. This equipment is critical for the daily operation of the WWTP. The design of the electrical upgrade has been awarded to CDM and kickoff meeting for project was held 2-12-14. Design is currently in-progress.

**10. Allentown Division- WWTP-Other Work**

**PPL Combined Heat & Power (CH&P) Facility:**

In October the City of Allentown issued PPL Renewable Energy the building and electrical permits required for the construction of the new Combined Heat and Power (CH&P) facility at the Kline's Island WWTP. Since then Millennium Builders and Albarell Electric have mobilized and begun the construction of the infrastructure required to install the digester gas powered generator. To date the excavation for electrical duct banks and grounding wires has been completed. The project is projected to produce 50% of the electricity required to operate the wastewater plant from digester gas produced in the anaerobic digestion process. The terms of the contract assigned to LCA through the concession call for PPL to construct and maintain CH&P facility at no cost to LCA. LCA will provide the digester gas required to fuel the facility and will purchase the power produced at a discounted rate. In November, the electrical duct banks were completed and the pad for the generator was poured. During the month of December Millennium Builders and Albarell Electric continued to make significant progress on the construction of the new Combined Heat and Power (CH&P) facility at the Kline's Island WWTP. During the month of March the CH&P facility was brought to the point of startup ready. However during the initial attempts to fire the converted diesel engine a major mechanical problem was discovered, the crankshaft had been installed backwards when the engine was refurbished. The engine had to be disconnected, removed and sent back to the Caterpillar Shop to correct the mistake. The new projected startup date for the facility is the week of April 21, 2014.

**No.1 Intermediate Settling Tank Wire Failure**

The wiring powering No.1 Intermediate Settling Tank clarifier drive mechanism failed on December 25, 2013, cause of the failure appears to be poor workmanship during the 1999 plant upgrade of the treatment plant. Temporary power has been supplied to the equipment through the use of 480 V insulated power cord. The plant staff is working with Crowder Jr to restore permanent power, control, and alarm wiring to this equipment. Pushbutton start/stop station has been received; installation of new switch and wiring will be completed when weather is more favorable for working on an outdoor elevated tank. The plant staff completed rewiring the settling tank on March 4<sup>th</sup>.

**11. Lynn Township – WWTP Improvements, Phases 1 & 2**

Gannett Fleming is revising the Water Quality Management (WQM) Part II permit package and preparing the specifications for bidding the work in Phases 1 and 2. A question has come up regarding whether to include new blowers and RAS pumps in the project instead of in the Operating Budget. Operations reports that two of the three blowers are original equipment from 1980 and parts are no longer available. The third blower is eight to ten years old and very inefficient. Additional pipe work will be needed to replace the two original blowers. It would be very expensive to rebuild the RAS pumps. It should be noted the aforementioned pumps and blowers are components of the treatment process part of the WWTP, which is not part of the Phase-1 and 2 (i.e. head works and disinfection part of the WWTP) scope of work.

**12. Allentown Division – Sanitary Sewer Evaluation Study (SSES)**

This project involves field investigatory work to identify sources of inflow and infiltration (I/I) in the City's sanitary sewer system located in the Primary and Secondary basins as identified in the WR&A report. The work will include closed circuit television (CCTV) inspection of approximately 102,000 linear feet of sanitary sewer mains ranging in size from 8 to 36 inches in diameter. The work will include the inspection of approximately 550 manholes and sewer piping point repairs,

joint repairs, smoke testing, and heavy cleaning. The design phase of this project has been authorized administratively. The project was advertised for bid on March 20, 2014 and bids will be opened on April 28, 2014. The project has an anticipated completion date by the end of September 2014. This project is identified as Administrative Order / Un-Completed Work and will be funded by the City.

**13. Allentown Division – Manhole Collars with Water Tight Frame and Covers**

This project involves, where applicable, installing a 5-foot diameter, three to four foot deep concrete collar around 100 aged brick manholes identified by previous City staff. This technique will be used to secure a new water tight frame and cover onto the manhole. Where vehicular accesses to the manholes are problematic, alternative solutions will be investigated to secure new water tight frame and covers. This work will eliminate the potential for inflow and infiltration (I/I) entering these manholes, this eliminating the potential for sanitary sewer overflows (SSO's) from these manholes. The City has directed LCA to bring the project to a bid ready stage, but not to bid unless authorized to do so by the City. A RFP was issued and proposals were received on March 26, 2014 for engineering consulting services. The proposals are currently under evaluation and a selection of an engineering consultant is forthcoming. The project is anticipated to be bid ready by the end of June 2014. The project is identified as Administrative Order and will be funded by the City.

**14. Allentown Division – Sanitary Sewer Manhole Lining**

This project will install a lining system in 50 aged brick manholes identified by previous City staff. This lining system will eliminate infiltration and will provide additional structural reinforcement to the manholes. The City has directed LCA to bring the project to a bid ready stage, but not to bid unless authorized to do so by the City. A RFP was issued for engineering consulting services and proposals were received. A professional service agreement was approved administratively with Barry Isett & Associates on April 4, 2014. The project is anticipated to be bid ready by the end of May 2014. The project is identified as Administrative Order Work and will be funded by the City.



## Lehigh County Authority

1053 Spruce Street \* P.O. Box 3348 \* Allentown, PA 18106-0348  
(610)398-2503 \* FAX (610)398-8413 \* Email: [service@lehighcountyauthority.org](mailto:service@lehighcountyauthority.org)

---

### MEMORANDUM

---

**Date:** April 21, 2014

**To:** Board of Directors & Management Staff  
**From:** Emily Gerber & Pat Mandes  
**Re:** Boston Beer 2014 Wastewater Rates

---

#### Approvals Requested

We are requesting approval of the 2014 wastewater rates for Boston Beer.

#### Brief Background of Boston Beer Agreement

The current Boston Beer agreement was renewed in September of 2011. Rates are adjusted annually and effective from March until February of the following year. The rate is adjusted based on cost of service plus a fixed 1.08 expense coverage ratio. Usage rates are calculated for flow and allocation per 1,000 gallons and BOD, TSS and TKN per pound. Additionally, Boston Beer pays a monthly minimum payment. Rates will be capped at +/- 12% annually. Rate history under the agreement has been as follows:

Year	% Rate Change
2011	-8.80%
2012	7.90%
2013	-4.80%
2014	-11.40% <i>(proposed)</i>

A 6-month working capital reserve must be maintained; however, any excess wastewater treatment plant revenue coverage exceeding the working capital reserve will be credited to both Boston Beer and LCA. To date, the working capital reserve has not been met.

#### Current & Proposed Rates

Over the last year, Boston Beer has increased production by 28%. For 2014, they are anticipating an additional 30% increase from their 2013 production numbers. The 2014 rates were calculated based on their projected increases as well as estimated usages for all other system users.

		2011 Rates	2012 Rates	2013 Rates	2014 Rates
Flow	per 1000 gal	\$ 0.700	\$ 0.755	\$ 0.719	\$ 0.637
BOD	per lb	\$ 0.196	\$ 0.212	\$ 0.201	\$ 0.178
TSS	per lb	\$ 0.174	\$ 0.188	\$ 0.179	\$ 0.159
TKN	per lb	\$ 0.350	\$ 0.378	\$ 0.360	\$ 0.319
Allocation	per 1000 gal	\$ 0.230	\$ 0.250	\$ 0.250	\$ 0.220
Minimum	per month	\$ 113,050	\$ 124,061	\$ 118,106	\$ 104,642
Total Revenue		\$ 2,514,014	\$ 2,769,305	\$ 3,296,848	\$ 3,638,654

We request approval of the 2014 rates listed in the table above. If approved, rates will be retroactive to March 1, 2014

# CAPITAL PROJECT AUTHORIZATION

**PROJECT NO.:** AD-S-14-1 **BUDGET FUND:** Allentown Div\Wastewater\Capital

**PROJECT TITLE:** Allentown Wastewater Treatment Plant  
Belt Filter Press Rebuilds and Replacements **PROJECT TYPE:**

**THIS AUTHORIZATION:** \$ 499,516 ☒ Construction  
**TO DATE (W\ABOVE)** \$1,026,376 ☐ Engineering Study  
☐ Equipment Purchase  
☒ **Amendment No. 2**

## DESCRIPTION AND BENEFITS:

The Project includes the replacement or reconditioning of the three wastewater plant belt filter presses (BFP's) which have all reached the end of their useful lives. Having been installed approximately 30 years ago, all three BFP's have become highly corroded due to the nature of the local environment. The existing frame on BFP #1 is beyond repair and a fully factory remanufactured replacement unit is necessary. The condition of BFP's 2 & 3 will allow for reconditioning on-site.

This authorization is for the purchase of all of the new O.E.M. parts that will be required to fully rebuild belt presses #2 and #3.

Please reference the cover Memo for additional information.

## Authorization Status:

Previous Authorizations		
BFP #1 Procurement	\$	440,780
Design Phase	\$	86,080

Requested This Authorization		
Purchase of OEM Parts, BFP #2 & 3		
OEM Parts BFP #2	\$	250,181
OEM Parts BFP #3	\$	249,335
Total This Authorization	\$	499,516

Future Authorizations		
Construction Phase	\$	748,624
Total Estimated Project	\$	1,775,000

## REVIEW AND APPROVALS:

_____ Project Manager	_____ Date	_____ Chief Executive Officer	_____ Date
_____ Chief Capital Works Officer	_____ Date	_____ Chairman	_____ Date

---

## MEMORANDUM

---

**Date:** March 31, 2014

**To:** Authority Board  
**From:** John Parsons, Frank Leist  
**Subject:** Allentown Wastewater Treatment Plant  
Belt Filter Press Reconditioning and Replacement – Purchase of OEM Parts,  
Belt Filter Press #2 & 3

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	Capital Project Authorization – Equipment Procurement Phase	\$499,516
2	Ashbrook Simon-Hartley- New O.E.M. parts and roller assemblies to fully recondition belt filter presses #2 and #3	\$499,516

*(1) Included in the Capital Project Authorization.*

**PROJECT OVERVIEW:**

The Project includes the replacement or reconditioning of the three wastewater plant belt filter presses (BFP's) which have all reached the end of their useful lives. Having been installed approximately 30 years ago, all three BFP's have become highly corroded due to the nature of the local environment. The existing frame on BFP #1 is beyond repair and a fully factory remanufactured replacement unit is necessary. The condition of BFP's 2 & 3 will allow for reconditioning on-site.

The corrosive environment has also taken its toll on the belt press control cabinets and instrumentation. Two of the three existing control panels, namely those for BFP #1 and #2, are beyond repair and are included for replacement as part of this project.

The installation of the remanufactured unit and the reconditioning in place of the remaining units and control panels will be publically bid.

The remanufactured BFP #1 unit and all of the components to recondition #2/#3 are only available through Ashbrook Simon-Hartley. A letter referencing this project as sole-source has been included with this documentation.

**FINANCIAL:**

This Project is identified on Schedule 7 of Concession Lease Agreement as a Required Capital Improvement Project that will be funded by LCA. With a conceptual estimated cost of ~\$1.775 million, the work meets the definition of a Major Project. If approved by the City, the costs can be recaptured outside of the contractual rate caps. In addition, a Labor Stabilization Agreement may be required.



**PROJECT STATUS:**

The Board previously approved:

1. The purchase of a factory remanufactured unit to replace BFP #1.
2. The Design Phase of the Project.

Currently, D'Huy Engineering is working on the construction specifications that are needed to install BFP #1 and rebuild #2 and #3.

The construction work will be publicly bid and board approval will be required prior to an award for the project.

**THIS APPROVAL – OEM PARTS PROCUREMENT PHASE**

This authorization is for the purchase of factory O.E.M. parts that are needed to fully rebuild BFP #2 and #3. The parts are only available through Ashbrook Simons-Hartley. Ashbrook will warrant, unless otherwise indicated, the new parts, of its own manufacture, for a period of (1) one year from date of delivery. New rollers shall be warranted for a period of three (3) years against failure from defects in material and workmanship under normal use and service when used and maintained per Ashbrook's published operation and maintenance procedures. Bearing assemblies are warranted for 5 years as long as assemblies are maintained per Ashbrook's published operation and maintenance procedures. New 316 stainless steel steering valve warranted for 5 years.

OEM Parts for BFP #2	\$250,181
OEM Parts for BFP #3	249,335
Total	\$499,516

*See attached Ashbrook Simons Hartley proposals*

**PROJECT SCHEDULE:** The Project is expected to be completed by the end of 2014.

**FUTURE AUTHORIZATIONS-**

1. Construction Phase.

Date: October 25, 2013



LEHIGH COUNTY AUTHORITY  
112 UNION ST  
ALLENTOWN, PA 18102

Attn: Michael Walter

Alfa Laval Inc.  
11600 East Hardy Road  
Houston, TX 77093-1098  
USA  
Tel: +1 800-362-9041  
Fax: +1 281-449-1324  
[www.alfalaval.us](http://www.alfalaval.us)  
[www.as-h.com](http://www.as-h.com)

All parts are provided and many exclusively manufactured by Ashbrook the Original Equipment Manufacturer of your equipment. Ashbrook Simon-Hartley Operations L.P. is the Original Equipment Manufacturer of the Klampress®, Winklepress®, and Aquabelt®. Thus, we are the sole source provider for O.E.M. replacement parts.

Ashbrook continues to develop and bring technology to our industry. Due to the sensitive nature of Ashbrook's technology our equipment and most replacement parts are either proprietary or patented, as each is designed specifically for your equipment, the application, and expected use; therefore, others cannot legally manufacture our equipment or offer Ashbrook replacement parts.

Constant investment in research and development, a commitment to quality, and improving our new equipment and our equipment currently in operation around the world, allows Ashbrook to bring the latest developments in technology to our industry and clients. This includes patented or proprietary items such as chicanes, wedge adjustments, cylinders, hydraulic systems, bearing housings, rollers, steering and tension systems, and so on. An illustration of this commitment is our quality assurance program; Ashbrook is the only manufacturer within our specific industry which is certified to ISO 9001 quality standards.

Thank you for requesting this information and the opportunity to fully explain our commitment. If you have any questions I can be reached at 1-609-841-3885.

Sincerely,

ALFA LAVAL ASHBROOK SIMON – HARTLEY INC.

*Derek Francis*

Derek Francis  
Northeast Territory Manager  
[Derek.francis@alfalaval.com](mailto:Derek.francis@alfalaval.com)

*Ashbrook  
Simon-Hartley*

March 18, 2014



City of Allentown  
112 Union Street  
Allentown, PA 18102

Attention: John Parsons

Rebuild Proposal – Ashbrook Quote # **35163 Rev. 3**  
Site Rebuild of Customer's  
Winklepress Type 84 2.0 meter  
**(Customer's Machine #2)**

Alfa Laval Inc.  
11600 East Hardy Road  
Houston, TX 77093-1098  
USA  
Tel: +1 800-362-9041  
Fax: +1 281-449-1324  
[www.alfalaval.us](http://www.alfalaval.us)  
[www.as-h.com](http://www.as-h.com)

Dear Mr. Parsons,

Alfa Laval Ashbrook Simon-Hartley Inc. ("Ashbrook") is pleased to offer its proposal for rebuilding one (1) existing Winklepress Type 84 Size 3 (2.0 meter) at the above referenced location. Ashbrook's experience in designing and building belt filter presses and repairing/rebuilding earlier model belt filter presses can only enhance our position in offering the services and parts needed to provide additional years of service to your Ashbrook Winklepress.

For nearly twenty years Ashbrook has completed rebuild projects consisting of partial site repairs, complete site machine reconditioning, complete factory machine reconditioning, partial factory machine reconditioning and site machine upgrades.

All parts supplied by Ashbrook for rebuilding your machine(s), shall meet Ashbrook's latest O.E.M. design standards. All parts will be made to Ashbrook's standard level of quality under ISO9001 certified procedures. All subassembly labor shall be performed by qualified Ashbrook trained service technicians.

**Scope of Supply:**

Ashbrook's scope for rebuilding one (1) Winklepress Type 84 Size 3 (2.0 meter) includes using only new O.E.M. (Original Equipment Manufacturer) parts, new roller assemblies, factory labor for machine component subassembly, site labor for removal/installation of machine components and inbound/outbound freight. The rollers removed from the Winklepress will become the property of Ashbrook.

**Ashbrook shall be responsible for the removal and installation of Winklepress replacement parts.** Project shall consist of 1 trip. Estimated down time for disassembly/reassembly of the Winklepress is 12-15 extended working days at 10-12 hours per day, including weekend work.

**Ashbrook**  
**Simon-Hartley®**

Some of the items listed below consist of new pre-engineered machine upgrades designed to both enhance your machine's performance and lower its operational and maintenance costs.

**Winklepress Rebuild (Materials):** The list below details the new parts and freight that will be provided on this project.

<u>QUANTITY</u>	<u>DESCRIPTION</u>
(1)	Complete sets of new 60/90mm roller assemblies, including: <ul style="list-style-type: none"> <li>(8) 9 ½" Plain rollers (tensioning/guide/steering) 60mm</li> <li>(2) 9 ½" Pressure rollers 90mm</li> <li>(2) 10" Drive rollers 90mm</li> <li>(1) 11" Pressure roller 90mm</li> <li>(1) 16" Pressure roller 90mm</li> <li>(1) 18" Pressure roller 90mm</li> <li>(1) 32" Perforated dandy roller 90mm</li> </ul> <p>Drive rollers shall be coated with ¼" Buna-N rubber. Perforated stainless steel dandy roller shall have 3/16" thick stainless steel outer shell. All other rollers shall be coated with 30 mils of thermoplastic nylon. <b>New rollers shall be warranted for a period of three (3) years against failure from defects in material and workmanship under normal use and service when used and maintained per Ashbrook's published operation and maintenance procedures.</b></p>
(32)	New Ashbrook/Dodge bearing housing assemblies. New Ashbrook/Dodge bearing housing assemblies consist of triple labyrinth seal, bearing with steel bronze machined cage, 316 stainless steel hardware and splashguard kit. New housings will be coated with thermoplastic nylon for maximum protection against corrosion. Housing shall have a triple labyrinth seal for superior sealing against contaminants. Greasing intervals every 6 months. <b>Bearing assemblies are warranted for 5 years as long as assemblies are maintained per Ashbrook's published operation and maintenance procedures.</b>
(1) Lot	New stainless steel hardware for mounting all roller assemblies.
(1) Lot	New KA97 belt drive gear motor assemblies with distance bushings, torque arm brackets fabricated from A-36 carbon steel and hot dip galvanized, and 316 stainless steel mounting hardware.
(1)	New UHMWPE retrofit vertical seal assembly with stainless steel cross brace and mounting hardware.
(1)	New retrofit vertical wedge assembly. Retrofit wedge shall be fabricated from 316L stainless steel and shall include UHMWPE wear bars and stainless steel hardware.

<u>QUANTITY</u>	<u>DESCRIPTION</u>
(2)	New parts to recondition existing spray shower washtubs with new internal cleaning brushes, stainless steel nozzles, gaskets, retaining rings and valve gaskets.
(1) Lot	New upper and lower retrofit washbox assemblies with adjustable side panels fabricated from 316 stainless steel. Includes mounting brackets fabricated from A-36 carbon steel and hot dip galvanized and UHMWPE spray shower mounting blocks.
(2)	New 316 stainless steel steering valve/paddle assemblies with ceramic wear pads. <b>New 316 stainless steel steering valve warranted for 5 years.</b>
(1)	New direct replacement hydraulic tension valve.
(6)	Replace worn hydraulic cylinders with new fiberglass steering and tensioning cylinders. New hydraulic cylinders shall have fiberglass outer casing, laminated phenolic heads, stainless steel tie rods and 316 stainless steel piston rods. Includes stainless steel fittings and braided hoses for all cylinders.
(1) Lot	Tensioning components including: <ul style="list-style-type: none"> <li>(2) New horizontal tensioning racks</li> <li>(2) New vertical tensioning racks</li> <li>(4) New tension pinion gears</li> <li>(4) New galvanized cylinder-to-roller mounting plates</li> </ul>
(1) Lot	New wear components consisting of: <ul style="list-style-type: none"> <li>(1) Lot Rubber seals on washboxes and sludge restrainers</li> <li>(2) UHMWPE discharge scraper blades</li> <li>(1) Lot UHMWPE chicane plow blades with mounting pins</li> <li>(1) Lot UHMWPE wear bars for gravity section drainage grids</li> <li>(1) Lot UHMWPE tension slide plates</li> <li>(1) UHMWPE gravity section belt slide plate</li> </ul>
(1) Lot	New press mounted electrical system including: <ul style="list-style-type: none"> <li>(1) NEMA 4X stainless steel electrical junction box</li> <li>(2) Belt misalignment limit switches</li> <li>(2) Belt breakage proximity limit switches</li> <li>(1) Lack of cake switch for gravity section</li> <li>(1) Emergency stop trip cord switch</li> </ul>

<u>QUANTITY</u>	<u>DESCRIPTION</u>
(1)	New sludge feed chute assembly fabricated from 316 stainless steel. Includes rubber flap and seal, stainless steel cover plates and hardware.
(1) Lot	New Ashbrook upper and lower dewatering filter belts.
(1) Lot	Inbound/outbound freight. Loading/off-loading at site to be by others.
(1)	<p>New Duplicate Belt Filter Press Main Control Panel. The Belt Filter Press (BFP) Main Control Panel (MCP) will be designed based on the existing drawings (original design). Panel will be powered from a 480 VAC power source, supplied by others. IEC style motor starter will be supplied for the one (1) hydraulic pump, two (2) wash water booster pumps, two (2) sludge feed pumps, (1) polymer mixer and (3) conveyors. A 7 1/2 HP Allen Bradley PowerFlex style VFD will be provided for belt drive speed control. Polymer system DC SCR controller shall be by others.</p> <p>The BFP MCP will be a free standing NEMA 4X stainless steel enclosure. The controls for the BFP and ancillary equipment will be manually or automatically controlled via an Allen Bradley MicroLogix Programmable Logic Controller (PLC).</p>
(1)	Central Greasing System. New greasing system shall consist of (2) two central greasing panels, new 316 stainless steel tubing/fittings and 316 stainless steel hardware.
(1)	Press Mount Hydraulic Unit. The press mount hydraulic unit shall control the steering and tensioning systems on the belt press. The press mount hydraulic unit shall consist of a pressure compensated pump/motor assembly, pressure gauge, low hydraulic pressure switch, 2 gallon stainless steel reservoir, carbon steel galvanized mounting bracket and 316 stainless steel tubing/hardware.

**Installation:**

<u>QUANTITY</u>	<u>DESCRIPTION</u>
(1) Lot	Site labor and expenses for disassembly/assembly of the Winklepress. All new machine components listed above shall be installed on the machine. Pennsylvania State prevailing wage rates shall be paid during the duration of the site work.
(1)	100% Performance Bond and Labor & Material Bond.
(1)	10% Maintenance Bond.

QUANTITY

DESCRIPTION

- |         |   |
|---------|---|
| (1)     | Contingency: Due to the intricacy of and vendors experience with projects of this category, a contingency budget of \$20,000.00 has been established and added to the overall costing as seen below. This amount represents an estimate to cover unforeseen events and/or needs required to complete this project successfully. All funds accessed from said contingency budget shall require written pre-approval from approved customer representative. |
| (1) Lot | Inbound/outbound freight. Loading/off-loading at site to be by others.  |

Pricing Summary:

- 1) Total Sell Price Materials: **\$ 250,181.00**, F.O.B. Houston, TX with freight allowed to jobsite.
- 2) Total Sell Price Installation: **\$ 67,026.00**, F.O.B. Houston, TX with freight allowed to jobsite.
- Grand Total: **\$ 317,207.00**

Purchase Orders shall be made to "Alfa Laval Ashbrook Simon-Hartley Inc."

**Adder (Note: Adder cost is in addition to the above listed pricing):**

1. **Start-up Services.** After completion of site rebuild, Ashbrook will perform mechanical/electrical start-up of the Winklepress. Services will be performed over a 5 day period (travel time inclusive).

**Start-up Services Sell Price: \$ 6,650.00**

**Clarifications:**

In addition to the parts and labor listed above the following electrical work will be required by the General Contractor.

- 1) Removal of existing BFP Main Control Panel and installation of new Main BFP Control Panel.
- 2) New electrical conduit and wiring to the new press mount hydraulic motor and pressure switch.

**Terms and Conditions:**

Shipment of parts can be made within 12-14 weeks from receipt of purchase order. Invoice(s) are due after receipt of parts on site and/or after completion of site work. Payment terms are 100% net 30 days. Ashbrook's "Terms and Conditions of Sale" are enclosed and apply in their entirety.



Customer shall be responsible for off-loading of parts at job site and placing crates in the work area where work will be performed and disposing of old parts/crating materials.

Ashbrook will warrant, unless otherwise indicated, the new parts, of its own manufacture, for a period of (1) one year from date of delivery. Ashbrook's obligation under this warranty being limited to repairing or replacing, at its option, any part found to its satisfaction to be so defective, provided that such part is, upon request, returned to Ashbrook's factory, freight prepaid. This warranty does not cover parts damaged by decomposition from chemical reaction or wear caused by abrasive materials, nor does it cover damage resulting from misuse, accident, neglect, or from improper operation, maintenance, modification or adjustment.

The quoted prices, unless noted, do not include any bonding, local, state or federal taxes, permits or other fees. Any bonding, taxes or fees that may apply must be added to the quoted price and paid by the buyer.

This proposal is offered for acceptance within thirty (30) days from date of quotation. Prices are subject to review thereafter. Prices are firm, based upon receipt of Letter of Intent or Purchase Order and notice to proceed within this thirty (30) day period.

We wish to thank you for the opportunity to provide this rebuild proposal. Should you have any questions, please feel free to contact Derek Francis at 609-841-3885.

Regards,

A handwritten signature in black ink that reads "Larry Packard". The script is cursive and fluid.

Larry Packard  
Retrofit/Rebuild Manager

cc: Derek Francis / Alfa Laval Ashbrook Simon-Hartley



## TERMS AND CONDITIONS OF SALE

These Terms and Conditions Apply to All Quotations, Orders, and Contracts for Alfa Laval Inc. Products (hereafter "Equipment"). As used in these Terms and Conditions of Sale, the word "Equipment" includes all hardware, parts, components, software and options.

1. **ACCEPTANCE:** Our sale to you is limited to and expressly made conditional on your assent to the terms and conditions of sale herein and, if applicable, on the attendant quotation, both of which form a part of this order and which supersede and reject all prior agreements, representations, discussions or negotiations, whether written or oral, with respect hereto and any conflicting terms and conditions of yours, or any statement therein, whether or not signed by you. We will furnish only the quantities and Equipment specifically listed on the face hereof or the pages attached hereto. We assume no responsibility for terms or conditions of, or for furnishing other equipment or material shown in, any plans and/or specifications for a project to which the Equipment quoted or ordered herein pertain or refer.
2. **PRICES:** Unless otherwise specified in writing, all quoted prices are firm for thirty (30) days from the date of offer. Stenographic, clerical and mathematical errors are subject to correction.
3. **DELIVERY:** Dates for the furnishing of services and/or delivery or shipment of Equipment are approximate only and are subject to change. Quoted lead times are figured from the date of receipt of complete technical data and approved drawings as such may be necessary. We shall not be liable, directly or indirectly, for any delay in or failure to deliver caused by carriers or delays from labor difficulties, shortages, strikes or stoppages of any sort, failure or delay in obtaining materials from ordinary sources, fires, floods, storms, accidents, or other acts of God or *force majeure*, by any statute, regulation, administrative order or decree or order or judgment of a court of law or other causes beyond our reasonable control. Unless otherwise specifically agreed in writing by us, in no event shall we be liable for any damages or penalties whatsoever, or however designated, resulting from our failure to perform or delay in performing due to any of the causes specified in this paragraph 3.
4. **SHIPMENT, RISK OF LOSS, TAXES:** Prices are in U.S. Dollars, F.O.B. Alfa Laval shipping point, unless otherwise noted. Duty, brokerage fees, insurance, packing and handling as applicable are not included unless otherwise noted. Our prices do not include federal, state, municipal or other government excise, sales, use, occupational, processing, transportation or like taxes now in force or enacted in the future. You shall pay any taxes we may be required to collect or pay now or at any time in the future (including interest and penalties imposed by any governmental authority), or any taxes you may be required to pay, that are imposed upon the sale, delivery or support of Equipment purchased or licensed as a part of this order, or you shall provide us with a tax exemption certificate acceptable to the appropriate taxing authorities.
5. **CREDIT AND PAYMENT:** Unless otherwise noted on the face hereof payment for Equipment shall be (30) days net. *Pro rata* payments shall become due with partial shipments. Any discount period which may be granted by us begins on the invoice date and all payments are due 30 days after the invoice date. All payments shall be made without deduction, deferment, set-off, lien or counterclaim of any nature. All amounts due not paid within 30 days after the date such amounts are due and payable shall bear interest at the lesser of 1.5 percent per month or the maximum rate of interest allowed by law. We reserve the right at any time to suspend credit or to change credit terms provided herein, when, in our sole opinion, your financial condition so warrants. Failure to pay invoices when such invoices are due and payable, at our election, shall make all subsequent invoices immediately due and payable irrespective of terms, and we may withhold all subsequent deliveries until the full account is settled. We shall not, in such event, be liable for delay of performance or nonperformance of contract in whole or in part subsequent to such event.

6. **CANCELLATIONS AND CHANGES:** Orders which have been accepted by us are not subject to cancellation or changes in specification except upon prior written agreement by us and upon terms that will indemnify us against all losses resulting from or arising out of such cancellation or change in specifications. In the absence of such indemnification, we shall be entitled to recover all damages and costs of whatever nature permitted by the Uniform Commercial Code.

7. **DEFERRED SHIPMENT:** If shipment is deferred at your request, payment of the contract price shall become due when you are notified that the Equipment is ready for shipment. If you fail to make payment or furnish shipping instructions we may either extend the time for so doing or cancel the contract. In case of deferred shipment at your request, storage and other reasonable expenses attributable to such delay shall be payable by you.

8. **EQUIPMENT WARRANTY AND REMEDY:**

(a) For new Equipment only, we warrant to you that the Equipment that is the subject of this sale is free from defects in design (provided that we have design responsibility), material and workmanship. The duration of this warranty is twelve (12) months from delivery to you (the "Warranty Period"). If you discover within the Warranty Period a defect in design, material or workmanship, you must promptly notify us in writing. Within a reasonable time after such notification, we will correct any such defect with either new or used replacement parts, at our option. Such repair, including both parts and labor, is at our expense.

(b) For repairs, parts and service provided by us, we warrant to you that the repairs parts and service we provide to you will be free from defects in material and workmanship. The duration of this warranty is ninety (90) days from as applicable (i) the date the machine which required the repairs, parts or service is returned to you by us, (ii) the date of your receipt of the part, or (iii) the date of repair, if performed at your facility. If during this ninety day period you discover a defect in the repairs, parts or service you must promptly notify us in writing.

(c) All warranty service is subject to our prior examination and approval and will be performed by us at your facility or at service centers designated by us. All transportation to and from the designated service center will be at our expense. If we are unable to repair the Equipment to conform to the warranty after a reasonable number of attempts, we will provide, at our option, one of the following: (i) a replacement for such Equipment, or (ii) full refund of the purchase price. These remedies are your exclusive remedies for breach of warranty. Unless otherwise agreed in writing by us, our warranty extends only to you and is not assignable to or assumable by any subsequent purchaser, in whole or in part, and any such attempted transfer shall render all warranties provided hereunder null and void and of no further force or effect.

(d) We will use all reasonable efforts to obtain for you any manufacturer's guarantees or warranties for any sub-assemblies included in the Equipment. To the extent such warranties are assignable, we hereby assign to you all warranties that are granted to us by our suppliers of any sub-assemblies contained in the Equipment.

(e) The warranties set forth above are inapplicable to and exclude (i) any product, components or parts not manufactured by us or covered by the warranty of another manufacturer, (ii) damage caused by accident or the negligence of you or any third party, normal wear and tear, erosion, corrosion or by disasters such as fire, flood, wind and lightning, (iii) damage caused by your failure to follow all installation and operation instructions or manuals or to provide normal maintenance, (iv) damage caused by unauthorized or improper installation of attachments, repairs or modifications, (v) damage caused by a product or component part which we did not design, manufacture, supply or repair, or (vi) any other abuse or misuse by you or any third party.

9. **LIMITATION OF LIABILITY:** In no event shall we be liable, and you hereby waive any claims against us and release us from liability to you, for any indirect, special, punitive, incidental, or consequential damages whatsoever based upon breach of warranty, breach of contract, negligence, strict tort, or any other legal theory. Excluded damages include, but are not limited to, loss of profits, loss of savings or revenue, loss of use of the Equipment or any associated equipment, cost of capital, cost of any substitute Equipment, facilities or services, downtime, the claims of third parties including customers, and injury to property. This limitation does not apply to claims for personal injury. Some states do not allow limits on warranties, or on remedies for breach in certain transactions. In such states, certain of the limitations in this paragraph and in subparagraph 8(c) may not apply.

10. **OWNERSHIP:** All drawings, designs and specifications supplied by us have been prepared or assembled by us and are solely our property. Such drawings, designs and specifications have been furnished in order to provide full documentation and on the condition that they shall not be reproduced or copied in any manner whatsoever, in whole or in part, except for your internal use as necessary, and upon the further condition that, as our sole property, they shall not be used, in whole or in part, for furnishing information to others or for any purpose not specifically authorized in a writing signed by one of our corporate officers. These ownership provisions shall not be superseded by any printed form used in connection with or arising out of a sale induced by a proposal or otherwise.

11. **PATENT INFRINGEMENT**

(a) We warrant that the Equipment in the condition sold to you is free of the rightful claim of infringement of any apparatus claims of any third-party U.S. patent issued as of the date of our acknowledgement and acceptance of your order, and we will defend, indemnify and hold you harmless from such claims; provided, however, we make no express or implied warranties of non-infringement and undertake no indemnification in respect of third-party rights where the alleged patent infringement is based upon or related to (i) any method, process or product claims in third-party U.S. patents; (ii) any combination of the Equipment with other equipment not supplied by us; or (iii) any modifications of the Equipment made by you and not approved by us.

(b) You shall notify us within 30 days of your receipt of notice of an alleged third-party patent infringement claim that would entitle you to patent infringement indemnification pursuant to paragraph 11(a), and we shall thereupon assume defense of the claim at our expense. We shall have the sole right to settle or otherwise compromise such a third-party claim, including but not limited to the right to either (i) modify the Equipment to avoid infringement if you are agreeable to the modification, (ii) repurchase the Equipment from you at a price equal to the then-current fair market value of the Equipment, or (iii) secure rights by assignment or license to permit continued use of the Equipment.

(c) If a third party charges us with patent infringement relating to Equipment sold by us to you, we shall have the right to either (i) modify the Equipment to avoid infringement if you are agreeable to the modification, (ii) repurchase the Equipment from you at a price equal to the then-current fair market value of the Equipment, or (iii) secure rights by assignment or license to permit continued use of the Equipment. If a third party charges us with patent infringement on the bases set forth in paragraph 11(a)(i), (ii) or (iii), you shall hold us harmless for all expenses and awards of damage assessed against us, and we shall also have the right to modify or repurchase the Equipment or to secure rights for continued use by way of assignment or license as set forth in this paragraph.

(d) Our total, cumulative liability under paragraphs 11(a), (b) and/or (c) is limited to 100% of the price paid to us by you for the Equipment.

12. **SAFETY AND HEALTH STANDARDS:** The Equipment described herein (or on the specifications provided herewith) complies with applicable safety and health standards issued pursuant to the Occupational Safety and Health Act of 1970 (the Act) and in effect on this date as such standards are

interpreted and understood by us. These standards may be amended and/or their meaning may be clarified prior to shipment or performance, and if such change or clarification requires changes in the Equipment described herein, we shall make the necessary changes available to you. You shall pay for any and all such changes at our prices therefore in effect at time of shipment or performance, as the case may be. Because actual compliance by employers with the Act is beyond our control, we cannot and do not represent that the use of the Equipment described herein, nor the location, installation or maintenance thereof, will comply with the Act or regulations and standards issued pursuant thereto. We make no representation of compliance with safety and health standards contained in any statute, regulations or ordinance of any state or political subdivision thereof applicable to the Equipment described herein unless you have notified us of the existence and contents of such standards and we have agreed in writing to the incorporation of such standards in the specifications relating to such Equipment. Nothing in this provision shall operate to modify or affect in any manner whatsoever our disclaimer of any liability for consequential damages contained elsewhere in these terms and conditions of sale.

13. **INSPECTION:** Upon prior written notice, you may make reasonable inspections of Equipment at our facility. We reserve the right to determine the reasonableness of the request and to select an appropriate time and location for such inspection. You agree to execute appropriate confidentiality provisions upon our request prior to visiting our facility. All costs of inspection shall be solely determined by us and shall be payable by you. No inspection or expediting by you at the facilities of our suppliers is authorized.

14. **SOFTWARE PROVISIONS:** If software is provided hereunder, you are granted a nonexclusive, royalty free license only for your use of the software provided with our Equipment. Under this license you may: (i) use our software in machine readable object code only and only with the Equipment provided; (ii) copy our software into any machine readable object code form for back up purposes in support of your use of our software on the Equipment provided; and (iii) create one additional copy of the software for archival purposes only. This license may not be assigned, sublicensed or otherwise transferred by you without our prior written consent. You hereby recognize and acknowledge that the software provided to you hereunder comprises valuable trade secret and/or copyright property of Alfa Laval [or its licensor] and you covenant that you will take adequate precautions against access to the software by, or disclosure of the software to, anyone not authorized hereunder to use or have access to the software.

15. **TIME LIMIT FOR BRINGING SUIT:** Any action you file against us, whether for breach of contract, including but not limited to breach of warranty, or for negligence or strict tort, must be commenced within 90 days following the expiration of the Warranty Period.

16. **MODIFICATION OF TERMS:** The terms and conditions of sale set forth herein are an integral part of our proposal and/or confirmation of order. These terms shall not be deemed altered or modified by printed or other "standard" terms in a purchase order, acceptance or similar document. Our confirmation or acknowledgment of any order is with the express understanding that all printed or other "standard" language on any such documents submitted by you will be entirely disregarded to the extent that it varies from the terms and conditions of this proposal/order which may be modified only by typed or handwritten language in the body of your order, acceptance or similar document, together with a written acknowledgment and acceptance of such modification by us.

17. **LIMITATION ON WARRANTIES:** THE WARRANTIES SET FORTH HEREIN ARE IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING AN IMPLIED WARRANTY OF MERCHANTABILITY, AN IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND AN IMPLIED WARRANTY OF NONINFRINGEMENT. WE HEREBY EXPRESSLY EXCLUDE FROM THIS CONTRACT THE IMPLIED WARRANTY OF MERCHANTABILITY, THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND THE IMPLIED WARRANTY OF NONINFRINGEMENT. OUR WARRANTIES AND LIABILITIES HEREUNDER ARE LIMITED AS STATED HEREIN.

18. **APPLICABLE LAW:** Any controversy or claim arising out of the contract or the breach thereof shall be finally decided with binding effect on both parties by the courts of Virginia and in accordance with the laws of the Commonwealth of Virginia, without giving effect to the provisions thereof relating to conflict of laws.

**THE EQUIPMENT AND PARTS DESCRIBED IN THESE TERMS AND CONDITIONS OF SALE MAY CAUSE INJURY IF NOT OPERATED PROPERLY AND FOR THIS REASON ALL OPERATORS SHOULD BECOME THOROUGHLY FAMILIAR WITH THE OPERATING INSTRUCTIONS BEFORE OPERATING THE EQUIPMENT.**

March 18, 2014

City of Allentown  
112 Union Street  
Allentown, PA 18102

Attention: John Parsons

Rebuild Proposal – Ashbrook Quote # **35162 Rev. 3**  
Site Rebuild of Customer's  
Winklepress High Solids Type 84 2.0m  
**(Customer's Machine #3)**



Alfa Laval Inc.  
11600 East Hardy Road  
Houston, TX 77093-1098  
USA  
Tel: +1 800-362-9041  
Fax: +1 281-449-1324  
[www.alfalaval.us](http://www.alfalaval.us)  
[www.as-h.com](http://www.as-h.com)

Dear Mr. Parsons,

Alfa Laval Ashbrook Simon-Hartley Inc. ("Ashbrook") is pleased to offer its proposal for rebuilding one (1) existing Winklepress Type 84 High Solids Size 3 (2.0 meter) at the above referenced location. Ashbrook's experience in designing and building belt filter presses and repairing/rebuilding earlier model belt filter presses can only enhance our position in offering the services and parts needed to provide additional years of service to your Ashbrook Winklepress.

For nearly twenty years Ashbrook has completed rebuild projects consisting of partial site repairs, complete site machine reconditioning, complete factory machine reconditioning, partial factory machine reconditioning and site machine upgrades.

All parts supplied by Ashbrook for rebuilding your machine(s), shall meet Ashbrook's latest O.E.M. design standards. All parts will be made to Ashbrook's standard level of quality under ISO9001 certified procedures. All subassembly labor shall be performed by qualified Ashbrook trained service technicians.

**Scope of Supply:**

Ashbrook's scope for rebuilding one (1) Winklepress Type High Solids 84 Size 3 (2.0 meter) includes using only new O.E.M. (Original Equipment Manufacturer) parts, new roller assemblies, factory labor for machine component subassembly, site labor for removal/installation of machine components and inbound/outbound freight. The rollers removed from the existing Winklepress will become the property of Ashbrook.

**Ashbrook shall be responsible for the removal and installation of Winklepress replacement parts.** Project shall consist of 1 trip. Estimated down time for disassembly/reassembly of the Winklepress is 12-15 extended work days at 10-12 hours per day, including weekend work.

**Ashbrook**  
**Simon-Hartley®**

Some of the items listed below consist of new pre-engineered machine upgrades designed to both enhance your machine's performance and lower its operational and maintenance costs.

**Winklepress Rebuild (Materials):** The list below details the new parts and freight that will be provided on this project.

**QUANTITY****DESCRIPTION**

- |         |   |
|---------|---|
| (1)     | Complete sets of new 60/90mm roller assemblies, including:  |
| (8)     | 9 ½" Plain rollers (tensioning/guide/steering) 60mm   |
| (8)     | 9 ½" Pressure rollers 90mm  |
| (2)     | 10" Drive rollers 90mm  |
| (1)     | 11" Pressure roller 90mm  |
| (1)     | 16" Pressure roller 90mm  |
| (1)     | 18" Pressure roller 90mm  |
| (1)     | 32" Perforated dandy roller 90mm  |
|         | Drive rollers shall be coated with ¼" Buna-N rubber. Perforated stainless steel dandy roller shall have 3/16" thick stainless steel outer shell. All other rollers shall be coated with 30 mils of thermoplastic nylon. <b>New rollers shall be warranted for a period of three (3) years against failure from defects in material and workmanship under normal use and service when used and maintained per Ashbrook's published operation and maintenance procedures.</b>   |
| (44)    | New Ashbrook/Dodge bearing housing assemblies. New Ashbrook/Dodge bearing housing assemblies consist of triple labyrinth seal, bearing with steel bronze machined cage, 316 stainless steel hardware and splashguard kit. New housings will be coated with thermoplastic nylon for maximum protection against corrosion. Housing shall have a triple labyrinth seal for superior sealing against contaminants. Greasing intervals every 6 months. <b>Bearing assemblies are warranted for 5 years as long as assemblies are maintained per Ashbrook's published operation and maintenance procedures.</b> |
| (1) Lot | New stainless steel hardware for mounting all roller assemblies.  |
| (1) Lot | New KA97 belt drive gear motor assemblies with distance bushings, torque arm brackets fabricated from A-36 carbon steel and hot dip galvanized, and 316 stainless steel mounting hardware.  |
| (1)     | New UHMWPE retrofit vertical seal assembly with stainless steel cross brace and mounting hardware.  |
| (1)     | New retrofit vertical wedge assembly. Retrofit wedge shall be fabricated from 316L stainless steel and shall include UHMWPE wear bars and stainless steel hardware.   |
| (2)     | New parts to recondition existing spray shower washtubs with new internal cleaning brushes, stainless steel nozzles, gaskets, retaining rings and valve gaskets.  |

<u>QUANTITY</u>	<u>DESCRIPTION</u>
(2)	New 316 stainless steel steering valve/paddle assemblies with ceramic wear pads. <b>New 316 stainless steel steering valve warranted for 5 years.</b>
(1) Lot	New upper and lower steering pivot plate assemblies. Pivot plates fabricated from A-36 carbon steel and hot dip galvanized. Includes UHMWPE picot bushings and 316 stainless steel mounting hardware.
(1)	New direct replacement hydraulic tension valve.
(6)	Replace worn hydraulic cylinders with new fiberglass steering and tensioning cylinders. New hydraulic cylinders shall have fiberglass outer casing, laminated phenolic heads, stainless steel tie rods and 316 stainless steel piston rods. Includes stainless steel fittings and braided hoses.
(1) Lot	Tensioning components including: <ul style="list-style-type: none"> <li>(2) New horizontal tensioning racks</li> <li>(2) New vertical tensioning racks</li> <li>(4) New tension pinion gears</li> <li>(4) New galvanized cylinder-to-roller mounting plates</li> </ul>
(1) Lot	New wear components consisting of: <ul style="list-style-type: none"> <li>(1) Lot Rubber seals on washboxes and sludge restrainers</li> <li>(1) Lot Rubber flap and seal on sludge inlet feed chute</li> <li>(2) UHMWPE discharge scraper blades</li> <li>(1) Lot UHMWPE chicane plow blades with mounting pins</li> <li>(1) Lot UHMWPE wear bars for gravity section drainage grids</li> <li>(1) Lot UHMWPE tension slide plates</li> <li>(1) UHMWPE gravity section belt slide plate</li> </ul>
(1) Lot	New press mounted electrical system including: <ul style="list-style-type: none"> <li>(1) NEMA 4X stainless steel electrical junction box</li> <li>(2) Belt misalignment limit switches</li> <li>(2) Belt breakage proximity limit switches</li> <li>(1) Lack of cake switch for gravity section</li> <li>(1) Emergency stop trip cord switch</li> </ul>



QUANTITY

DESCRIPTION

- |         |  |
|---------|--|
| (1) Lot | New Ashbrook upper and lower dewatering filter belts.  |
| (1)     | Inbound/outbound freight. Loading/off-loading at site to be by others.   |
| (1)     | Press Mount Hydraulic Unit. The press mount hydraulic unit shall control the steering and tensioning systems on the belt press. The press mount hydraulic unit shall consist of a pressure compensated pump/motor assembly, pressure gauge, low hydraulic pressure switch, 2 gallon stainless steel reservoir, carbon steel galvanized mounting bracket and 316 stainless steel tubing/hardware. |

Installation:

QUANTITY

DESCRIPTION

- |         |  |
|---------|--|
| (1) Lot | Site labor and expenses for disassembly/assembly of the Winklepress. All new machine components listed above shall be installed on the machine. Pennsylvania State prevailing wage rates shall be paid during the duration of the site work.   |
| (1)     | 100% Performance Bond and Labor & Material Bond.   |
| (1)     | 10% Maintenance Bond.  |
| (1)     | Contingency: Due to the intricacy of and vendors experience with projects of this category, a contingency budget of \$20,000.00 has been established and added to the overall costing as seen below. This amount represents an estimate to cover unforeseen events and/or needs required to complete this project successfully. All funds accessed from said contingency budget shall require written pre-approval from approved customer representative |
| (1)     | Inbound/outbound freight. Loading/off-loading at site to be by others.   |

**Pricing Summary:**

1) Total Sell Price Materials: **\$ 249,335.00**, F.O.B. Houston, TX with freight allowed to jobsite.

2) Total Sell Price Installation: **\$ 78,514.00**, F.O.B. Houston, TX with freight allowed to jobsite.

**Grand Total: \$ 327,849.00**

Purchase Orders shall be made to "Alfa Laval Ashbrook Simon-Hartley Inc."

**Adder (Note: Adder cost is in addition to the above listed pricing):**

1. **Start-up Services.** After completion of site rebuild, Ashbrook will perform mechanical/electrical start-up of the Winklepress. Services will be performed over a 5 day period (travel time inclusive).

<b>Start-up Services Sell Price: \$ 6,650.00</b>
--

**Clarifications:**

In addition to the parts and labor listed above the following electrical work will be required by the General Contractor.

- 1) New electrical conduit and wiring to the new press mount hydraulic motor and pressure switch.

**Terms and Conditions:**

Shipment of parts can be made within 12-14 weeks from receipt of purchase order. Invoice(s) are due after receipt of parts on site and/or after completion of site work. Payment terms are 100% net 30 days. Ashbrook's "Terms and Conditions of Sale" are enclosed and apply in their entirety.

Customer shall be responsible for off-loading of parts at job site and placing crates in the work area where work will be performed and disposing of old parts/crating materials.

Ashbrook will warrant, unless otherwise indicated, the new parts, of its own manufacture, for a period of (1) one year from date of delivery. Ashbrook's obligation under this warranty being limited to repairing or replacing, at its option, any part found to its satisfaction to be so defective, provided that such part is, upon request, returned to Ashbrook's factory, freight prepaid. This warranty does not cover parts damaged by decomposition from chemical reaction or wear caused by abrasive materials, nor does it cover damage resulting from misuse, accident, neglect, or from improper operation, maintenance, modification or adjustment.

The quoted pricing does not include any state prevailing wage rate requirements. Pricing is subject to review if project must meet prevailing wage rate requirements. The quoted prices do not include any bonding, local, state or federal taxes, permits or other fees. Any bonding, taxes or fees that may apply must be added to the quoted price and paid by the buyer.

This proposal is offered for acceptance within thirty (30) days from date of quotation. Prices are subject to review thereafter. Prices are firm, based upon receipt of Letter of Intent or Purchase Order and notice to proceed within this thirty (30) day period.

We wish to thank you for the opportunity to provide this rebuild proposal. Should you have any questions, please feel free to contact Derek Francis at 609-841-3885.

Regards,

A handwritten signature in black ink that reads "Larry Packard". The script is fluid and cursive, with the first letters of "Larry" and "Packard" being capitalized and prominent.

Larry Packard

Retrofit/Rebuild Manager

cc: Derek Francis / Alfa Laval Ashbrook Simon-Hartley

## TERMS AND CONDITIONS OF SALE

These Terms and Conditions Apply to All Quotations, Orders, and Contracts for Alfa Laval Inc. Products (hereafter "Equipment"). As used in these Terms and Conditions of Sale, the word "Equipment" includes all hardware, parts, components, software and options.

1. **ACCEPTANCE:** Our sale to you is limited to and expressly made conditional on your assent to the terms and conditions of sale herein and, if applicable, on the attendant quotation, both of which form a part of this order and which supersede and reject all prior agreements, representations, discussions or negotiations, whether written or oral, with respect hereto and any conflicting terms and conditions of yours, or any statement therein, whether or not signed by you. We will furnish only the quantities and Equipment specifically listed on the face hereof or the pages attached hereto. We assume no responsibility for terms or conditions of, or for furnishing other equipment or material shown in, any plans and/or specifications for a project to which the Equipment quoted or ordered herein pertain or refer.

2. **PRICES:** Unless otherwise specified in writing, all quoted prices are firm for thirty (30) days from the date of offer. Stenographic, clerical and mathematical errors are subject to correction.

3. **DELIVERY:** Dates for the furnishing of services and/or delivery or shipment of Equipment are approximate only and are subject to change. Quoted lead times are figured from the date of receipt of complete technical data and approved drawings as such may be necessary. We shall not be liable, directly or indirectly, for any delay in or failure to deliver caused by carriers or delays from labor difficulties, shortages, strikes or stoppages of any sort, failure or delay in obtaining materials from ordinary sources, fires, floods, storms, accidents, or other acts of God or *force majeure*, by any statute, regulation, administrative order or decree or order or judgment of a court of law or other causes beyond our reasonable control. Unless otherwise specifically agreed in writing by us, in no event shall we be liable for any damages or penalties whatsoever, or however designated, resulting from our failure to perform or delay in performing due to any of the causes specified in this paragraph 3.

4. **SHIPMENT, RISK OF LOSS, TAXES:** Prices are in U.S. Dollars, F.O.B. Alfa Laval shipping point, unless otherwise noted. Duty, brokerage fees, insurance, packing and handling as applicable are not included unless otherwise noted. Our prices do not include federal, state, municipal or other government excise, sales, use, occupational, processing, transportation or like taxes now in force or enacted in the future. You shall pay any taxes we may be required to collect or pay now or at any time in the future (including interest and penalties imposed by any governmental authority), or any taxes you may be required to pay, that are imposed upon the sale, delivery or support of Equipment purchased or licensed as a part of this order, or you shall provide us with a tax exemption certificate acceptable to the appropriate taxing authorities.

5. **CREDIT AND PAYMENT:** Unless otherwise noted on the face hereof payment for Equipment shall be (30) days net. *Pro rata* payments shall become due with partial shipments. Any discount period which may be granted by us begins on the invoice date and all payments are due 30 days after the invoice date. All payments shall be made without deduction, deferment, set-off, lien or counterclaim of any nature. All amounts due not paid within 30 days after the date such amounts are due and payable shall bear interest at the lesser of 1.5 percent per month or the maximum rate of interest allowed by law. We reserve the right at any time to suspend credit or to change credit terms provided herein, when, in our sole opinion, your financial condition so warrants. Failure to pay invoices when such invoices are due and payable, at our election, shall make all subsequent invoices immediately due and payable irrespective of terms, and we may withhold all subsequent deliveries until the full account is settled. We shall not, in such event, be liable for delay of performance or nonperformance of contract in whole or in part subsequent to such event.

6. **CANCELLATIONS AND CHANGES:** Orders which have been accepted by us are not subject to cancellation or changes in specification except upon prior written agreement by us and upon terms that will indemnify us against all losses resulting from or arising out of such cancellation or change in specifications. In the absence of such indemnification, we shall be entitled to recover all damages and costs of whatever nature permitted by the Uniform Commercial Code.

7. **DEFERRED SHIPMENT:** If shipment is deferred at your request, payment of the contract price shall become due when you are notified that the Equipment is ready for shipment. If you fail to make payment or furnish shipping instructions we may either extend the time for so doing or cancel the contract. In case of deferred shipment at your request, storage and other reasonable expenses attributable to such delay shall be payable by you.

8. **EQUIPMENT WARRANTY AND REMEDY:**

(a) For new Equipment only, we warrant to you that the Equipment that is the subject of this sale is free from defects in design (provided that we have design responsibility), material and workmanship. The duration of this warranty is twelve (12) months from delivery to you (the "Warranty Period"). If you discover within the Warranty Period a defect in design, material or workmanship, you must promptly notify us in writing. Within a reasonable time after such notification, we will correct any such defect with either new or used replacement parts, at our option. Such repair, including both parts and labor, is at our expense.

(b) For repairs, parts and service provided by us, we warrant to you that the repairs parts and service we provide to you will be free from defects in material and workmanship. The duration of this warranty is ninety (90) days from as applicable (i) the date the machine which required the repairs, parts or service is returned to you by us, (ii) the date of your receipt of the part, or (iii) the date of repair, if performed at your facility. If during this ninety day period you discover a defect in the repairs, parts or service you must promptly notify us in writing.

(c) All warranty service is subject to our prior examination and approval and will be performed by us at your facility or at service centers designated by us. All transportation to and from the designated service center will be at our expense. If we are unable to repair the Equipment to conform to the warranty after a reasonable number of attempts, we will provide, at our option, one of the following: (i) a replacement for such Equipment, or (ii) full refund of the purchase price. These remedies are your exclusive remedies for breach of warranty. Unless otherwise agreed in writing by us, our warranty extends only to you and is not assignable to or assumable by any subsequent purchaser, in whole or in part, and any such attempted transfer shall render all warranties provided hereunder null and void and of no further force or effect.

(d) We will use all reasonable efforts to obtain for you any manufacturer's guarantees or warranties for any sub-assemblies included in the Equipment. To the extent such warranties are assignable, we hereby assign to you all warranties that are granted to us by our suppliers of any sub-assemblies contained in the Equipment.

(e) The warranties set forth above are inapplicable to and exclude (i) any product, components or parts not manufactured by us or covered by the warranty of another manufacturer, (ii) damage caused by accident or the negligence of you or any third party, normal wear and tear, erosion, corrosion or by disasters such as fire, flood, wind and lightning, (iii) damage caused by your failure to follow all installation and operation instructions or manuals or to provide normal maintenance, (iv) damage caused by unauthorized or improper installation of attachments, repairs or modifications, (v) damage caused by a product or component part which we did not design, manufacture, supply or repair, or (vi) any other abuse or misuse by you or any third party.

9. **LIMITATION OF LIABILITY:** In no event shall we be liable, and you hereby waive any claims against us and release us from liability to you, for any indirect, special, punitive, incidental, or consequential damages whatsoever based upon breach of warranty, breach of contract, negligence, strict tort, or any other legal theory. Excluded damages include, but are not limited to, loss of profits, loss of savings or revenue, loss of use of the Equipment or any associated equipment, cost of capital, cost of any substitute Equipment, facilities or services, downtime, the claims of third parties including customers, and injury to property. This limitation does not apply to claims for personal injury. Some states do not allow limits on warranties, or on remedies for breach in certain transactions. In such states, certain of the limitations in this paragraph and in subparagraph 8(c) may not apply.

10. **OWNERSHIP:** All drawings, designs and specifications supplied by us have been prepared or assembled by us and are solely our property. Such drawings, designs and specifications have been furnished in order to provide full documentation and on the condition that they shall not be reproduced or copied in any manner whatsoever, in whole or in part, except for your internal use as necessary, and upon the further condition that, as our sole property, they shall not be used, in whole or in part, for furnishing information to others or for any purpose not specifically authorized in a writing signed by one of our corporate officers. These ownership provisions shall not be superseded by any printed form used in connection with or arising out of a sale induced by a proposal or otherwise.

11. **PATENT INFRINGEMENT**

(a) We warrant that the Equipment in the condition sold to you is free of the rightful claim of infringement of any apparatus claims of any third-party U.S. patent issued as of the date of our acknowledgement and acceptance of your order, and we will defend, indemnify and hold you harmless from such claims; provided, however, we make no express or implied warranties of non-infringement and undertake no indemnification in respect of third-party rights where the alleged patent infringement is based upon or related to (i) any method, process or product claims in third-party U.S. patents; (ii) any combination of the Equipment with other equipment not supplied by us; or (iii) any modifications of the Equipment made by you and not approved by us.

(b) You shall notify us within 30 days of your receipt of notice of an alleged third-party patent infringement claim that would entitle you to patent infringement indemnification pursuant to paragraph 11(a), and we shall thereupon assume defense of the claim at our expense. We shall have the sole right to settle or otherwise compromise such a third-party claim, including but not limited to the right to either (i) modify the Equipment to avoid infringement if you are agreeable to the modification, (ii) repurchase the Equipment from you at a price equal to the then-current fair market value of the Equipment, or (iii) secure rights by assignment or license to permit continued use of the Equipment.

(c) If a third party charges us with patent infringement relating to Equipment sold by us to you, we shall have the right to either (i) modify the Equipment to avoid infringement if you are agreeable to the modification, (ii) repurchase the Equipment from you at a price equal to the then-current fair market value of the Equipment, or (iii) secure rights by assignment or license to permit continued use of the Equipment. If a third party charges us with patent infringement on the bases set forth in paragraph 11(a)(i), (ii) or (iii), you shall hold us harmless for all expenses and awards of damage assessed against us, and we shall also have the right to modify or repurchase the Equipment or to secure rights for continued use by way of assignment or license as set forth in this paragraph.

(d) Our total, cumulative liability under paragraphs 11(a), (b) and/or (c) is limited to 100% of the price paid to us by you for the Equipment.

12. **SAFETY AND HEALTH STANDARDS:** The Equipment described herein (or on the specifications provided herewith) complies with applicable safety and health standards issued pursuant to the Occupational Safety and Health Act of 1970 (the Act) and in effect on this date as such standards are

interpreted and understood by us. These standards may be amended and/or their meaning may be clarified prior to shipment or performance, and if such change or clarification requires changes in the Equipment described herein, we shall make the necessary changes available to you. You shall pay for any and all such changes at our prices therefore in effect at time of shipment or performance, as the case may be. Because actual compliance by employers with the Act is beyond our control, we cannot and do not represent that the use of the Equipment described herein, nor the location, installation or maintenance thereof, will comply with the Act or regulations and standards issued pursuant thereto. We make no representation of compliance with safety and health standards contained in any statute, regulations or ordinance of any state or political subdivision thereof applicable to the Equipment described herein unless you have notified us of the existence and contents of such standards and we have agreed in writing to the incorporation of such standards in the specifications relating to such Equipment. Nothing in this provision shall operate to modify or affect in any manner whatsoever our disclaimer of any liability for consequential damages contained elsewhere in these terms and conditions of sale.

13. **INSPECTION:** Upon prior written notice, you may make reasonable inspections of Equipment at our facility. We reserve the right to determine the reasonableness of the request and to select an appropriate time and location for such inspection. You agree to execute appropriate confidentiality provisions upon our request prior to visiting our facility. All costs of inspection shall be solely determined by us and shall be payable by you. No inspection or expediting by you at the facilities of our suppliers is authorized.

14. **SOFTWARE PROVISIONS:** If software is provided hereunder, you are granted a nonexclusive, royalty free license only for your use of the software provided with our Equipment. Under this license you may: (i) use our software in machine readable object code only and only with the Equipment provided; (ii) copy our software into any machine readable object code form for back up purposes in support of your use of our software on the Equipment provided; and (iii) create one additional copy of the software for archival purposes only. This license may not be assigned, sublicensed or otherwise transferred by you without our prior written consent. You hereby recognize and acknowledge that the software provided to you hereunder comprises valuable trade secret and/or copyright property of Alfa Laval [or its licensor] and you covenant that you will take adequate precautions against access to the software by, or disclosure of the software to, anyone not authorized hereunder to use or have access to the software.

15. **TIME LIMIT FOR BRINGING SUIT:** Any action you file against us, whether for breach of contract, including but not limited to breach of warranty, or for negligence or strict tort, must be commenced within 90 days following the expiration of the Warranty Period.

16. **MODIFICATION OF TERMS:** The terms and conditions of sale set forth herein are an integral part of our proposal and/or confirmation of order. These terms shall not be deemed altered or modified by printed or other "standard" terms in a purchase order, acceptance or similar document. Our confirmation or acknowledgment of any order is with the express understanding that all printed or other "standard" language on any such documents submitted by you will be entirely disregarded to the extent that it varies from the terms and conditions of this proposal/order which may be modified only by typed or handwritten language in the body of your order, acceptance or similar document, together with a written acknowledgment and acceptance of such modification by us.

**17. LIMITATION ON WARRANTIES: THE WARRANTIES SET FORTH HEREIN ARE IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING AN IMPLIED WARRANTY OF MERCHANTABILITY, AN IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND AN IMPLIED WARRANTY OF NONINFRINGEMENT. WE HEREBY EXPRESSLY EXCLUDE FROM THIS CONTRACT THE IMPLIED WARRANTY OF MERCHANTABILITY, THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND THE IMPLIED WARRANTY OF NONINFRINGEMENT. OUR WARRANTIES AND LIABILITIES HEREUNDER ARE LIMITED AS STATED HEREIN.**

**18. APPLICABLE LAW:** Any controversy or claim arising out of the contract or the breach thereof shall be finally decided with binding effect on both parties by the courts of Virginia and in accordance with the laws of the Commonwealth of Virginia, without giving effect to the provisions thereof relating to conflict of laws.

**THE EQUIPMENT AND PARTS DESCRIBED IN THESE TERMS AND CONDITIONS OF SALE MAY CAUSE INJURY IF NOT OPERATED PROPERLY AND FOR THIS REASON ALL OPERATORS SHOULD BECOME THOROUGHLY FAMILIAR WITH THE OPERATING INSTRUCTIONS BEFORE OPERATING THE EQUIPMENT.**