SPONSOR: <u>Adamo/Elliot</u>

ORDINANCE NO. 71-08

AN ORDINANCE AUTHORIZING THE CITY TO ENTER INTO AN AGREEMENT BETWEEN THE CITY OF JACKSON, OHIO, AND INFILCO DEGREMONT INC., 8007 DISCOVERY DRIVE, RICHMOND, VIRGINIA 23229-8605, FOR THE PURCHASE OF FILTER SYSTEM REPAIR PARTS FOR THE WASTEWATER TREATMENT PLANT, AND DECLARING AN EMERGENCY.

WHEREAS, the City's Wastewater Treatment Plant is need of filter system repair parts for the plant; and

WHEREAS, the parts required are part of a proprietary system, and therefore cannot be bid; and

WHEREAS, the City now desires to purchase the required filter system repair parts without bidding due to the proprietary nature of the parts.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF JACKSON, STATE OF OHIO, as follows:

Section One. The Mayor and/or Service Director is authorized to enter into an Agreement between the City of Jackson, Ohio, and Infilco Degremont, Inc., 8007 Discovery Drive, Richmond, Virginia 23229-8605, for the purchase of filter system repair parts for the City's Wastewater Treatment Plant. The cost of the parts and of this contract shall be in an amount of Eighty Five Thousand and No/100 Dollars (\$85,000.00), and shall be paid from line item 711-7525-53008.

Section Two. This Ordinance is hereby declared to be an emergency Ordinance necessary for the immediate preservation of the public peace, health, or safety of the City of Jackson, in that it is necessary to enter into this agreement as soon as possible to timely and adequately address the issues involved in acquiring the necessary filter system repair parts as quickly as possible. Therefore, this Ordinance shall go into effect upon passage and approval by the Mayor, as provided in Ohio Revised Code Section 731.30.

<u>Section Three.</u> In the event this Ordinance receives a majority vote for passage but fails to receive the required number of votes to pass as an emergency, then this Ordinance shall be deemed to have passed but with no emergency clause and shall take effect at the earliest time permitted by law.

Section Four. It is hereby found and determined that all formal actions of this Council relating to the adoption of this Ordinance were adopted in an open meeting of this Council, and that the deliberations of this Council that resulted in such formal actions, were in a meeting open to the public, in compliance with all legal requirements, including Section 121.22 of the Ohio Revised Code.

Date: 5-11-08

PRESIDENT OF COUNCIL

CLERK OF COUNCIL

Approved:

Date: 6-12-08

MAYOR





RANDY R. HEATH, Mayor WILLIAM R. SHEWARD, Director of Public Service / Safety

CITY OF JACKSON

MEMORIAL BUILDING 145 BROADWAY ST. JACKSON, OHIO 45640 (740) 286-3224 (740) 286-2201

Jackson City Water and Wastewater Department

Date: July 16, 2008

Regarding: Treatment Plant Filter repair From: Mike Gambino Superintendent WWTP

To: Bill Sheward Director of Public Service/Safety

Bill

The Wastewater treatment plant has operated its sand filter building for near 25 years with periodic maintenance and repairs including Filter sand replacement.

A full inspection was authorized last year the results have been attached to this letter. Currently the filter performance is minimal at best due to deterioration of the under drain system. We have addressed the normal maintenance issues as called out in the inspection report.

I have received the appropriate funding from the budget to order the parts to undertake this repair. We intend to do a majority of the repair in house to conserve on costs.

The only remaining issue is the authorization from the budget for the PO.

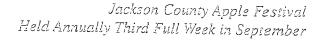
The parts for this project are sole source from Infilco Degremont the manufacturer of the filter system.

To use any other supplier would be like putting Ford parts in a Chevy.

Cc Greg Wilson Director W/WW

Respectfully,

Mike Gambino



		P.O. Number		
	REQUISITION FORM City of Jackson, Ohio			
DATE:	7/10/2008	VENDOR #	ara cuma ita	
Department	Jackson Wastewater Treatment Plant	_		
Account Number	711-7525-	_		
Vendor	Infilco Degremont	_		
Address (if new)		_		
		<u>.</u>		
Quantity	Description	Unit Price	T	Total Cost
1	Filter Repair parts (sole source)	\$ 85,000.00	\$	85,000.00
			\$	-
			\$	-
			\$	-
			\$	-
			\$	-
			\$	-
			\$	-
		}	\$	-
		Sub- Total	\$ \$	-
		Shipping Cost	 	85,000.00
		Total	\$	85,000.00
		10141	Ψ	83,000.00
Requested By	R. Mike Gambino Superintendent	Date Requested:	7/10/2008	
	SPM L			
Approved By:	Bill Sheward Service / Safety Director	Date Approved:		
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Infilco Degremont, Inc. Field Visit Report

By: Jack Jessop

To: Tonya Washington CC: Kevin Smith

Customer Name: City of Jackson - Jackson, Ohio ODI Contract #: 450235

Date of Visit: October 17, 2007

Location: Jackson WWTP

Equipment: 3 - ABW Filters - 12.5' X 24', 11" sand with 8" cells

Purpose of Visit: InfilCare Inspection and recommendations for (3) ABW Filters

originally installed in 1982.

Personnel Contacted:

Mike Gambino V
Chris Lonon II

Wastewater Supervisor InfilCare Coordinator

City of Jackson

IDI

October 16, 2007 Tuesday:

Chris Lonon and I arrived at the Jackson WWTP and met with Mike Gambino to discuss the status of the ABW Filters.

Mike advised us that he has been working at this facility for approximately six months but is familiar with ABW Filters from a previous treatment plant in New Jersey. This facility is currently being upgraded and Mike requested IDI's recommendations to optimize the performance of the ABW Filters.

The filters are approximately 25 years old and are experiencing some media leaks, carriage climbing issues and liquid level sensing probe issues.

I advised Mike that I would conduct a complete inspection of the filters and provide a written report with IDI's recommendations for corrective action.

We moved the discussion to the filter building and began the inspection immediately. The filter tanks were drained but some residual water was still in the effluent channels. Mike arranged for his maintenance people to begin pumping the water out to of the channels to allow inspection of the Underdrains.

While the residual water was being pumped out, I inspected and tested the carriages, carriage components, pumps and electrical controls.

Underdrain Inspection:

After the filter tanks were pumped dry, the Underdrains were inspected for media leaks. The inspection results are listed below:

Starting at the effluent end of the tank, the cells were numbered from 1-36. Each cell was inspected for the presence of sand media by looking into each effluent port using a bright light. Leaking cells were identified and logged (as small, medium or large) as listed in the chart below:

Filter#	Small leak cell #	Medium leak cell #	Large leak cell #	
1	5,14,15,19,20,33,34 & 35	4,18,29 & 30	6,10,27,28 & 36	
Total	8	4	5	

Filter#	Small leak cell #	Medium leak cell #	Large leak cell	
2	3,6,7,19 & 35	2,5,20,21,31 & 32	4,& 36	
Total	5	6	2	

Filter#	Small leak cell #	Medium leak cell #	Large leak cell #	
3	15,18,19,22, & 29	4,9,21,26 & 33	5,10,11,12,14,27 & 28	
Total	5	5	7	

Carriages:

The carriages are in good condition generally but the following maintenance is recommended:

- 1. Lubrication wheel bearings and drive shaft.
- 2. Wheel and Rail surfaces clean surfaces using a degreaser.
- 3. Carriage Alignment align carriage on the rails and re-adjust wheel locking collars to ¼ inch maximum clearance between wheel and collar. **Note:** This was discussed with George of the maintenance department.

Carriage Components:

1. Backwash pump support arms – The carbon steel support arms are corroded and deteriorated - recommend replacement with current design stainless steel version.

- 2. Backwash Piping Bypass type design recommend replacement with current design which utilizes throttle valve to provide positive control of backwash pump flow rate.
- 3. Carriage Rails Stainless steel rail caps are damaged recommend replacement.
- 4. Carriage Travel Indexing Pegs Carbon steel indexing pegs are corroded and falling off tank wall recommend replacement with current design fiberglass Uni-strut with stainless steel all-thread rods.

Electrical Controls:

- 1. Liquid Level Sensing Probes **Note:** The original probes have been replaced with float type switches. However, the probe control circuit functions as it should recommend replacement with original type level sensing probes.
- 2. Probe Holder Box Probe holder box on filter # 3 is short circuited recommend replacement of probe holder box.
- 3. Backwash Interval Timer Timers are non-functional recommend replacement.

Sand Media Inspection:

The sand media was visually inspected and noted to be coated with a sticky substance (brownish in color) and had a strong biological odor.

A media sample was gathered from each of the three filter beds to be forwarded to IDI's DENARD laboratory for analysis as follows:

- a. Sieve analysis to determine the effective size and uniformity coefficient.
- b. Residue analysis to identify the substance type (organic or inorganic) that is coating the media.
- c. Chemical cleaning to determine the most effective chemical cleaning solution i.e., chlorine, caustic or acid or a combination thereof.

Before departing the facility, we met briefly with Mike Gambino and discussed the inspection results. Mike requested that IDI provide a written report including a price and availability quotation for the required material to address the mechanical issues listed above.

Summary Comments & Recommendations:

Mechanical Issues:

The filters are approximately 25 years old and are in good structural condition. However the above listed items should be addressed to improve the filter performance and extend the life of the filters.

Media Leaks:

The media leak repair work is certainly the most critical issue regarding overall filter performance. The media leak repairs will increase the flow rate through the filters and reduce the amount of backwashing required. Therefore, the mechanical components such as pumps, carriage drive, etc. will no longer be required to operate continuously as they are now. Reducing the duty cycle will reduce maintenance and extend the life of the components while the filters are producing an improved effluent water quality.

Media Leak Repair Procedure

- a. Medium and Large media leaks (29 total) Cell rebuild i.e., removal and replacement of the porous plates, retaining angles and caulking.
- b. Small media leaks (18 total) topical repair i.e., removal of retaining angles, clean all caulked surfaces, re-caulk and install new retaining angles.

Backwash Pump Piping

Modification of the backwash pump valve piping to the throttle valve type design will provide improved backwashing efficiency.

Carriage Rail Caps

The stainless steel rail caps are worn and should be replaced to eliminate the reported carriage tracking derailment issues.

Filter Sand Media

The filter media is contaminated and should be either chemically cleaned or replaced. The cleaning procedure should be based on the recommendations from the residue analysis and cleaning regiment report generated by IDI's DENARD laboratories. **Note:** the cost of the required cleaning chemicals, labor involved in the cleaning process and down time should be evaluated to make certain that it does not exceed the cost of new media.

Operational Issues:

Pre-Chlorination

Pre-chlorination is recommended as a preventive maintenance operational procedure change to maintain the filter beds. Specifically, it is recommended that a small amount of chlorine (1-2 mg/l) should be fed ahead of the filters on a continuous basis. The recommended pre-chlorination will prevent organic growth from occurring in the filter beds and thereby eliminate filter bed plugging.

Super Chlorination:

If pre-chlorination is not feasible, a super chlorination procedure should be instituted on a proactive maintenance schedule to clean the filter beds as required.