

March 2, 2020

**Subject: ITB #1768-B: Instrumentation & Control for Process System  
South Fayette Water Treatment Plant - Addendum #1**

Gentlemen/Ladies:

Below, please find responses to questions, clarification, or additional information for the above referenced Invitation to Bid. You will need to consider this information when preparing your bid.

- 1. Would Fayette County consider adding Tesco Controls to the PIC System Integrator list in Section 1.02 (C.) of the attached Invitation to Bid Solicitation?**  
Tesco Controls will be added to the PIC System Integrator list.
- 2. Would Fayette County consider adding Southern Flow Inc. to the PIC System Integrator list in Section 1.02 (C.) of the attached Invitation to Bid Solicitation?**  
Southern Flow will be added to the PIC System Integrator list.
- 3. What version of Wonderware is currently running at the plant?**  
Wonderware Version 10.1.3.
- 4. Who is responsible for running conduit/cable?**  
It is the responsibility of the successful bidder to run all conduit and cabling.
- 5. Will all console devices be removed, or will they stay? What will OIT do?**  
All of the devices with the exception of the keypad in the center of the upper portion of the console will remain. The OIT will replace the function of the Keypad and serve as a back-up to console controls.
- 6. The Backwash Sequence of Operations was not included with the original bid package documents. It is included here as an attachment to this addendum.**
- 7. Final placement of the OIT panel shall be coordinated with the owner.**

Received by (Name): \_\_\_\_\_ Company \_\_\_\_\_

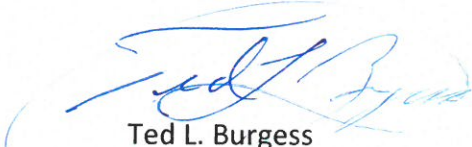
Note: If this addendum is not returned to the Fayette County Purchasing Department or if it is returned not signed, responding individuals, companies or other organizations will still be responsible for the requirements of this addendum and the specifications or changes herein.

The opening date for this ITB has changed. **The new opening time and date are 3pm, Friday, March 13, 2020.** Bids must be received by the Purchasing Department at the address above, Suite 204, at or before the opening date and time.

The deadline for inquiries has passed, so the Purchasing Department will not be able to accept any additional questions after this time.

If you have questions, please contact Natasha Duggan, Contract Administrator at (770) 305-5150, fax (770) 719-5534 or email at [nduggan@fayettecountyga.gov](mailto:nduggan@fayettecountyga.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Ted L. Burgess", is written over a faint, light blue circular watermark or background.

Ted L. Burgess  
Director of Purchasing

## SUPPLEMENTS

### FILTER BACKWASH SEQUENCE

#### Auto Sequence Operation

- Filter Draindown Level Setpoint (default to 1.5 feet)
- Filter Backwash Level Setpoint (default to 7.1 feet (1' below top of trough (8.1')))
- Filter Rewash Level Setpoint (default to 8.9 feet (0.8' above top of trough (8.1')))
- First Low Backwash Duration Timer Setpoint (default to 120 sec)
- High Backwash Duration Timer Setpoint (default to 300 sec)
- Second Low Backwash Duration Timer Setpoint (default to 120 sec)
- Filter Rewash Duration NTU Setpoint (default to 0.10 NTU)
- High Backwash Rate is to be water temperature dependent.
  - High Backwash Rate Flow Setpoint (default to 6,200 gpm at water temperature of 20 degrees Celsius (68 degrees Fahrenheit) and for each degree of Celsius increase or decrease, increase or decrease 2 percent in backwash rate).
  - Allow “high backwash rate at water temperature 20 degrees C” and “percent inc/dec in high backwash rate per degree of Celsius inc/dec ” to be adjustable.
  - Examples:
    - Water temperature = 10 degrees Celsius.
    - Backwash Rate = 6,200 gpm – ((20 C – 10 C) \* 0.02 \* 6200 gpm )= 4,960 gpm
    - Water temperature = 30 degrees Celsius.
    - Backwash Rate = 6,200 gpm - ((20 C – 30 C) \* 0.02 \* 6200 gpm )= 7,440 gpm

Below is for Filter No.1. Apply for Filters 1-6.

Step	Title	
	Requirements (Transition To)	Actions (those items in <i>italics</i> are confirming actions only)
		Flags
		Timer
	Message	
<b>1a</b>	<b>Initial Backwash</b>	
	• Backwash Mode Auto	• Close Influent Valve (FV 102).

	<ul style="list-style-type: none"> <li>• Backwash Initiated</li> <li>• Filter Level &gt; 7.5 feet (6" below top of trough)</li> </ul>	<ul style="list-style-type: none"> <li>• Record current Effluent Flow Control PID Manual/Auto Status</li> <li>• Record current Effluent Valve (FCV 101) Position Control Value</li> <li>• Set Effluent Flow Control PID Manual/Auto to Manual</li> <li>• Close Effluent Flow Control Valve (FCV 101)</li> <li>• Open Air Scour Blower Unloading Valve (FV 702)</li> <li>• <i>Close Waste Drain Valve (FV 103)</i></li> <li>• <i>Close Air Isolation Valve (FV 109)</i></li> <li>• <i>Stop Blower</i></li> </ul>
		<ul style="list-style-type: none"> <li>• Back Wash in Progress</li> <li>• Previous Step: 0</li> <li>• Current Step: 1</li> <li>• Next Step: 2</li> <li>• Screen Select</li> <li>• Backwash Fail</li> </ul>
		<ul style="list-style-type: none"> <li>• 180 sec</li> </ul>
<p>“Close Influent Valve and Effluent Valve. Wait for Filter Level to reach Draindown Setpoint.”</p>		
<p><b>1b</b></p>	<p><b>Draindown</b></p>	
	<ul style="list-style-type: none"> <li>• Influent Valve (FV 102) Closed.</li> <li>• Effluent Valve (FCV 101) Closed.</li> </ul>	<ul style="list-style-type: none"> <li>• Open Rewash Valve (FV 104).</li> <li>• Open Waste Drain Valve (FV 103)</li> </ul>

	<ul style="list-style-type: none"> <li>Air Scour Blower Unloading Valve (FV 702) Open</li> </ul>	<ul style="list-style-type: none"> <li>No changes</li> </ul>
	No changes	
<b>2</b>	<b>Air Scour Prep</b>	
	<ul style="list-style-type: none"> <li>Filter Level &lt; Filter Draindown Level Setpoint [default to 1.5 feet]</li> </ul>	<ul style="list-style-type: none"> <li>Close Rewash Valve (FV 104)</li> <li><i>Stop Blower</i></li> </ul>
		<ul style="list-style-type: none"> <li>Previous Step: 1</li> <li>Current Step: 2</li> <li>Next Step: 3</li> </ul>
		<ul style="list-style-type: none"> <li>20 sec</li> </ul>
	"Close Rewash Valve"	
<b>3</b>	<b>Air Scour Prep</b>	
	<ul style="list-style-type: none"> <li>Rewash Valve (FV 104) Closed</li> </ul>	<ul style="list-style-type: none"> <li>Start Air Scour Blower</li> </ul>
		<ul style="list-style-type: none"> <li>Previous Step: 2</li> <li>Current Step: 3</li> <li>Next Step: 4</li> </ul>
		<ul style="list-style-type: none"> <li>30 sec</li> </ul>
	"Start Blower."	
<b>4</b>	<b>Air Scour Wash</b>	
	<ul style="list-style-type: none"> <li>Air Scour Blower Running</li> </ul>	<ul style="list-style-type: none"> <li>Open Air Isolation Valve (FV 109)</li> <li>Close Air Scour Blower Unloading Valve (FV 702)</li> </ul>
		<ul style="list-style-type: none"> <li>Previous Step: 3</li> <li>Current Step: 4</li> <li>Next Step: 5</li> </ul>
		<ul style="list-style-type: none"> <li>120 sec</li> </ul>
	"Wait for Air Scour Wash > 1000 scfm"	
<b>5</b>	<b>First Low Wash</b>	

	<ul style="list-style-type: none"> <li>• Air Isolation Valve (FV 109) Open</li> <li>• Air Scour Flow &gt; 1000 scfm</li> <li>• Step 4 Timer &gt; Air Scour Wash Timer Set pt [ default to 120 sec]</li> </ul>	<ul style="list-style-type: none"> <li>• Open Backwash Supply Valve (FV 105)</li> <li>• Request Low Backwash Rate</li> <li>• <i>De-energize High Backwash Rate Req't</i></li> </ul>
	<ul style="list-style-type: none"> <li>• Previous Step: 4</li> <li>• Current Step: 5</li> <li>• Next Step: 6</li> </ul>	
	<ul style="list-style-type: none"> <li>• 120 sec</li> </ul>	
	<p>“Open Backwash Supply Valve. Request Low Backwash Rate. Wait for Wash Rate &gt; 1800 gpm.”</p>	
6	<p>Close Air Inlet</p>	
	<ul style="list-style-type: none"> <li>• Air Isolation Valve (FV 109) Open</li> <li>• Air Scour Flow &gt; 1000 scfm</li> <li>• Filter Level &gt; Filter Backwash Set point [7.1 feet (1' below top of trough (8.1'))]</li> </ul>	<ul style="list-style-type: none"> <li>• Open Air Scour Blower Unloading Valve (FV 702)</li> <li>• Close Air Isolation Valve (FV 109)</li> </ul>
	<ul style="list-style-type: none"> <li>• Previous Step: 5</li> <li>• Current Step: 6</li> <li>• Next Step: 7</li> </ul>	
	<ul style="list-style-type: none"> <li>• 180 sec</li> </ul>	
	<p>“Close Air Isolation Valve and Open Blower Air Unloading Valve.</p>	
7	<p><b>Air Scour Wash Complete</b></p>	
	<ul style="list-style-type: none"> <li>• Air Isolation Valve (FV 109) Closed</li> <li>• Air Scour Blower Unloading Valve (FV 702) Open</li> </ul>	<ul style="list-style-type: none"> <li>• Stop Air Scour Blower</li> </ul>
	<ul style="list-style-type: none"> <li>• Previous Step: 6</li> <li>• Current Step: 7</li> <li>• Next Step: 8</li> </ul>	
	<ul style="list-style-type: none"> <li>• 10 sec</li> </ul>	

	"Stop Blower."	
8	<b>High Wash</b>	
	<ul style="list-style-type: none"> <li>Blower Stopped.</li> </ul>	<ul style="list-style-type: none"> <li>Request High Backwash Rate</li> <li><i>De-energize Low Backwash Rate Req't</i></li> </ul>
		<ul style="list-style-type: none"> <li>Previous Step: 8</li> <li>Current Step: 9</li> <li>Next Step: 10</li> </ul>
		300 sec
"Request High Wash Rate. Wait for Wash Rate > "High wash Rate Calculated" gpm."		
9	<b>Second Low Wash</b>	
	<ul style="list-style-type: none"> <li>Step 8 Timer &gt; High Backwash Duration Timer Set pt [ default to 300 sec]</li> <li>Backwash Flow &gt; "High wash Rate Calculated" gpm.</li> </ul>	<ul style="list-style-type: none"> <li>Request Low Backwash Rate</li> <li><i>De-energize High Backwash Rate Req't</i></li> </ul>
		<ul style="list-style-type: none"> <li>Previous Step: 8</li> <li>Current Step: 9</li> <li>Next Step: 10</li> </ul>
		120 sec
"Request Low Wash Rate. Wait for Wash Rate < 2,200 gpm."		
10	<b>Fill Filter Gullet</b>	
	<ul style="list-style-type: none"> <li>Step 9 Timer &gt; Low Backwash Duration Timer Set pt [default to 120 sec]</li> <li>Backwash Flow &lt; 2,200 gpm</li> </ul>	<ul style="list-style-type: none"> <li>Close Washwater Drain Valve (FV 103)</li> </ul>
		<ul style="list-style-type: none"> <li>Previous Step: 9</li> <li>Current Step: 10</li> <li>Next Step: 11</li> </ul>
60 sec		

	"Close Waste Drain Valve. Fill Filter Gullet."	
11	Backwash Ending	
	<ul style="list-style-type: none"> <li>Filter Level &gt; Filter Rewash Level Setpoint [defaulted to 8.9 feet]</li> <li>Backwash Flow &lt; 2,200 gpm.</li> <li>Washwater Drain Valve (FV 103) is Closed.</li> </ul>	<ul style="list-style-type: none"> <li>Close Backwash Supply Valve (FV 105)</li> </ul>
		<ul style="list-style-type: none"> <li>Previous Step: 10</li> <li>Current Step: 11</li> <li>Next Step: 12</li> </ul>
		60 sec
	"Close Backwash Supply Valve."	
12	Backwash Ending	
	<ul style="list-style-type: none"> <li>Backwash Supply Valve (FV 105) Closed</li> <li>Waste Drain Valve (FV 103) Closed</li> </ul>	<ul style="list-style-type: none"> <li><i>De-energize High Backwash Rate Req't</i></li> <li><i>De-energize Low Backwash Rate Req't</i></li> </ul>
		<ul style="list-style-type: none"> <li>Previous Step: 11</li> <li>Current Step: 12</li> <li>Next Step: 13</li> </ul>
		180 sec
	"Wait for Backwash Flow to Stop"	
13	Filter-to-Waste	
	<ul style="list-style-type: none"> <li>Backwash Pumps Stopped.</li> </ul>	<ul style="list-style-type: none"> <li>Open Rewash Valve (FV 104).</li> <li>Open Influent Valve (FV 102).</li> </ul>
		<ul style="list-style-type: none"> <li>Previous Step: 12</li> <li>Current Step: 13</li> <li>Next Step: 14</li> </ul>
		Rewash Duration = Time required for measured turbidity < 0.1 NTU + 20 sec



	"Open Rewash and Influent Valve. Rewash Filter."	
14	Prep for Service	
	<ul style="list-style-type: none"> <li>• Rewash Valve (FV 104) Open</li> <li>• Measured Turbidity &lt; 0.1 NTU + 20 sec.</li> </ul>	<ul style="list-style-type: none"> <li>• Close Rewash Valve (FV 104)</li> <li>• Set Effluent Control PID manual/Auto status to that recorded in Step 1A</li> <li>• Set Effluent Valve Position Control Valve to that recorded in step 1A</li> </ul>
		<ul style="list-style-type: none"> <li>• Previous Step: 13</li> <li>• Current Step: 14</li> <li>• Next Step: 15</li> </ul>
		<ul style="list-style-type: none"> <li>• 180 sec</li> </ul>
	"Close Rewash Valve. Begin modulation of Effluent Valve."	
15	Sequence Complete	
	<ul style="list-style-type: none"> <li>• Rewash Valve (FV 104) Closed</li> <li>• Effluent Valve Modulating (FCV 101)</li> </ul>	<ul style="list-style-type: none"> <li>• Previous Step: 14</li> <li>• Current Step: 15</li> <li>• Next Step: 16</li> </ul>
	"End of Backwash Sequence."	