

Priority	Water Treatment Plant																			
1	Item # 1	Raw Water Control Valve	Cost \$15,490.00																	
		<p>We are please to submit this proposal for supplying and installing a new electronic actuator and associated controls for the 18" raw water valve at the Clinton WTP that we have discussed with Rusty during our previous work at the plant. There are no written specifications or requirements for this work so this proposal is based on our discussions and our understanding of how this valve should operate. Worth will supply the actuator, PLC, touch panel display and all labor and materials necessary for a complete installation for \$15,490.00.</p>																		
		<p>During our recent work on the controls at the WTP we determined that the existing air actuator on the raw water valve would not repeat the flow rate into the plant with the necessary accuracy for automatic plant startup and shutdown. We believe that the problem is in the air control system and the pneumatic actuator currently on the valve – the plant has not automatically operated this valve in many years. There is a raw water flow meter currently in operation that we are going to use to provide a closed-loop feedback control system based on flow rate. The new system will take a flow rate set point (provided by the operators) and open and close the raw water valve in increments to hold the set flow rate. This proposal assumes that the mechanical condition of the valve will allow this type of control – we are not liable for mechanical problems with the valve itself. We are not going to be opening the valve itself – only replacing the actuator on the external valve shaft.</p>																		
		<p>The proposal includes the following items:</p>																		
		<p>QX 115/1/60 electric motor actuator assembly, non intrusive for modulating service 4-20 mA in/out, local controls, limit/torque switches, and mounting adaption plate/machining for an existing operable 18" Pratt Class 150B butterfly valve</p>																		
		<p>Allen Bradley MicroLogix 1400 PLC</p>																		
		<p>Combo 2 in / 2 out analog PLC card</p>																		
		<p>EZ Automation 8" touch panel</p>																		
		<p>Two conduit runs from control panel to valve (one for AC and one for control wiring)</p>																		
		<p>All necessary conduit, wiring, mounting hardware, etc. for installation</p>																		
		<p>All labor necessary to install the actuator, run conduit and wire, program PLC and touch panel, etc.</p>																		
		<p>The proposal includes time for the Oklahoma Pratt valve rep to come to Clinton to inspect and measure the valve shaft, mounting plate, etc. before the actuator is ordered to make sure the correct one is received (apparently there can be differences between Pratt Class 150B valves that he needs to see and measure).</p>																		
		<p>Bid received from:</p>																		
		<p>Worth Hydrochem of Okla., Inc. P.O. Box 6447 Norman, OK 73070-6447 Voice: (405) 366-7729 Fax: (405) 366-7728 Email: mgirdner@worthok.com</p>																		
		<p>Water Treatment Chemicals Water Softeners/Salt Acid/Chemical Cleaning Service</p>																		
		<p>The PLC will be mounted on the back side of the plant's control panel and the touch panel will be mounted flush on the front of the control panel. This touch panel will be used to display the flow rate information as well as be how the operators would change the desired flow rate for the raw water valve. The existing raw water flow meter's signal will be used by the PLC as the source for the current flow rate – it is assumed that this flow meter and its flow rate are correct and operating correctly. NOTE: Stated delivery time from the manufacturer for the actuator is 10 weeks from date of order.</p>																		
		<p>It should be noted that the PLC will also serve a the PLC for the Distribution Scada System at the time it is installed.</p>																		
2	Item # 2	Clarifier Blow Down Valves	Cost \$8,800																	
		<p>The Automatic Blow down valves for the two settled water clarifiers have been removed. For proper blanket control in the clarifiers, It is necessary for the two 6" automated valve be installed and controlled by the PLC that is included in Item #1. The blank depth needs to be controlled by very short blow downs and occur in regular cycle during the day. Blow control of blanket better TOC and Turbidity removal can be obtained.</p>																		
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3	Item # 3	Auxiliary Generator Fuel Tank	Cost\$ 3,795.00																	
		<p>Install 550 Gallon Diesel Double wall Tank for Generator. Existing Tank will only run generator for 2 hours. Bid Received from Domino Equipment Co.</p>																		