May 16, 2019

Mr. Chad Kolstad
DWRF Program Coordinator
Minnesota Department of Health
625 North Robert Street
St. Paul, MN 55155

Re: Water Treatment Plant Improvements – EPA Waiver Application
City of Tonka Bay, MN
WSB Project No. 012441-000

Dear Mr. Kolstad:

We are writing to request an EPA waiver for the City of Tonka Bay Water Treatment Plant (WTP) Improvements project located at 4901 Manitou Road, Tonka Bay, MN 55331. This waiver is in the public's best interest based on the project schedule.

The Tonka Bay WTP is a lime softening WTP. The improvements project will include a 45-day bypass of the lime softening clarifier and filters. Prior to the bypass, the plant will be briefly shut down for the replacement of the process valves and flowmeters that will be needed during the bypass. It is intended that this shutdown occur as soon as possible to avoid having the plant completely offline in May and June when the City typically experiences its peak water demands.

The project includes the replacement of process valves; this waiver pertains to five (5) of the valves. The estimated lead time for these five (5) valves, as detailed below, is twenty-five (25) weeks for an AIS compliant product. Based on the estimated lead time, these valves would not be available for installation until the end of October at the earliest, well beyond the required shut down and bypass dates. This delay would also prevent the contractor from meeting the contract's substantial completion date unless non-AIS valves can be provided for these five (5) valves.

Description	Quantity	Proposed Valve	Existing Flange to Flange Dimension
6" CHECK VALVE	1	Crane Center Line Series 800*	3.125"
8" CHECK VALVE	2	Crane Center Line Series 800*	4"
8" CHECK VALVE	1	Titan CV41-DI**	4"
12" CHECK VALVE	1	Crane Center Line Series 800*	5"

*Crane ChemPharma & Energy, 4526 Research Forest Drive, Suite 400, The Woodlands, Texas 77381
**Titan Flow Control, Inc., 290 Corporate Drive, Lumberton, NC 28358

The proposed Center Line check valves listed above have the advantage that their face to face dimension will fit within the existing flange to flange dimension of the existing process piping. Therefore, no modifications to the existing piping will be necessary, thereby reducing the project cost. The proposed Titan check valve will be located on one of the four High Service Pump discharge lines and will match existing Titan valves on the remaining three lines. The eight-inch (8") check valves needed prior to the plant bypass will be available in four (4) weeks. The total estimated credit for the waiver of the AIS requirement for these five (5) valves is [redacted] per the attached pricing provided by the Contractor.

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The extension of the contract is of great concern, but the work sequences that would push to cold weather are far greater. Due to the late start in the year and the plan to utilize the new door into the filter room to move the filter media in and out of the building, the roofing work would take place in cold, wet conditions that are not ideal for this type of work and will incur extra costs for cold weather installation. The new filter media will be exposed to possible freezing temperatures. The anthracite is known to fracture in freezing temperatures, which will shorten its lifetime.

It is in the public's best interest that the AIS requirement for these valves be waived so that the WTP shutdown can occur before peak water demands begin, so that the roofing work and filter media will not be exposed to cold temperatures, and so that the project can be completed on schedule.

Sincerely,

WSB

Greg Johnson, PE
Project Manager

Attachments:
Shank Constructors Pricing
Shank Preliminary Schedule Valve Delay

cc: Nick Preisler, WSB/City Engineer
Robin Bowman, City of Tonka Bay

jsc

This waiver request was submitted to the EPA by the state of Minnesota. All supporting correspondence and/or documentation from contractors, suppliers or manufacturers included as a part of this waiver request was done so by the recipient to provide an appropriate level of detail and context for the submission. There may be documents with project diagrams, schedules, and supplier correspondence in formats that do not meet the Federal accessibility requirements for publication on the Agency's website. Hence, these exhibits have been omitted from this waiver publication. They are available upon request by emailing SRF_AIS@epa.gov.

conduit entry. The solenoid valves will normally operate at 120 VAC, 60 Hz, single phase. A porous metal muffler shall be provided.
6. The solenoid valve function shall be identified with a suitable nameplate for each valve.
7. All pneumatically operated valves shall be fitted with S.P.D.T. limit switches at ends-of-travel for remote monitoring of full-open and full-closed positions.
8. Pneumatic actuators shall include fail-safe spring mechanism that fails in the closed position. The spring mechanism shall be isolated from air supply for corrosion prevention.
9. Valves with pneumatic actuators shall include provisions for emergency manual operation.
10. Pneumatic actuators shall be Kinetrol USA, K-TORK, or approved equal.

D. Electric Actuators
1. Existing electric actuators shall be removed and reinstalled as shown on the drawings.

E. Swing Check Valves (Air Cushioned)
1. The swing check valve shall be constructed with heavy cast iron or cast steel body with a bronze or stainless steel seat ring, a non-corrosive shaft for attachment of weight and lever, and complete non-corrosive trim cushion chamber. Body shall have minimum 175 psi pressure rating and shall be provided with ANSI standard 125-pound flanges.
2. Valve shall absolutely prevent the return of water, soil, or gas back through the valve when the inlet pressure decreases below the deliver pressure. The valve must be tight seating, and must be cushioned in operation. The seat ring must be renewable.
3. The cushion chamber shall be of bronze construction and the shock absorption by air. The cushion chamber shall be attached to the side of the valve body externally and so constructed with a piston operating in a chamber that will effectively permit the valve to be operated without any hammering action. The cushion chamber shall be arranged that the closing will be adjustable to meet the service requirements.
4. The valve disc shall be convex and of cast iron or cast steel and shall be suspended from a non-corrosive shaft which will pass through a stuffing box and be connected to the cushion chamber on the outside of the valve.
5. All material and workmanship shall be first class throughout and the purchaser reserves the right to inspect this valve before shipment.
6. Air cushioned swing check valves shall be Golden Anderson Figure No. 250-D, or APCO Series 250.

F. Double Door Check Valves
1. The double door check valve shall be constructed with ductile iron body with a bronze or stainless steel seat ring, and a non-corrosive shaft. Body shall have minimum 175 psi pressure rating and shall be provided with ANSI standard 125-pound flanges.
2. Valve shall absolutely prevent the return of water, soil, or gas back through the valve when the inlet pressure decreases below the deliver pressure. The valve must be tight seating, and the seat ring must be renewable.
3. The valve disc, spring, and stop pin shall be stainless steel.
4. All material and workmanship shall be first class throughout and the purchaser reserves the right to inspect this valve before shipment.
5. Double door check valve manufacturers shall be per the Valve Schedule in Part 3.05.

G. Duckbill Check Valves
1. Provide an all rubber duckbill flanged check valve where shown on the Drawings.
2. Inlet port areas shall be 100 percent of the mating pipe port size. The port area shall contour down to a duckbill shape that will allow passage of flow in one direction only.
3. The flexible duckbill sleeve shall be a one piece rubber construction with fabric reinforcement. A protective neoprene exterior wrapping shall be applied for protection against sunlight attack.
4. Check valve shall be attached to pipe by a flange, gasket, and stainless steel bolts.
5. Manufacturer must provide available flow test data from an accredited hydraulics laboratory to confirm pressure drop data.