



Speed and Innovation is Our WaterMark

January 21, 2025

Mr. Rob Nelson
Mauston Water Department
303 Mansion St.
Mauston, WI. 53948

Re: Well #4 Variable Frequency Drive Conversion

Dear Mr. Nelson,

Our recent observation of the control valve condition indicates a more serious repair is needed. Discussing this with Shawn, it was felt that eliminating the valve and converting the system to one similar to well #5 with a mechanical check valve and variable frequency drive operation would be a cost effective approach for the long term operation of the well. In addition to the aged valve, estimated at forty plus years, the present solid state motor starter is over twenty years old and the manufacturer is no longer in existence. Part of the requested service included replacement of the motor actuated 3" butterfly valve on the bypass piping which could be eliminated with the vfd installation.

The proposed improvements and modifications will consist of removing the current check valve, control valve, and 8" pipe up to coupling, bypass piping, actuated valve and piping exiting well house. Isolate and track control wiring. Install new swingflex valve, 8" half spool, reconnect water line and raw sample tap. Remount air/vac valve with screened return. Remove current solid state motor starter, install 100 hp rated variable frequency drive, dc link choke ventilation fan and inlet air filter. Install output reactor in separate enclosure. Install operator programming unit in front cover of enclosure. Track control wiring and bypass and/or remove unused components, program drive and start and test. A DNR submittal will be required for this service and a cost for a submittal is included.

The above costs are estimated not to exceed \$26,284.00. This figure allows for a larger amount of time than usual for the control work. If you could locate the electrical schematics for the bypass piping and past control upgrades we could shorten our labor costs for this portion. If possible I would like to review these items prior to performing the work.

I hope you find this proposal helpful. If you should have any questions or comments please feel free to contact me. I will also be willing to meet with you to discuss further.

Sincerely,

Tom Goethel P.E., CTW Corporation cc: Hunter Cummings, CTW Corporation

CTW Corporation

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