

July 28, 2016

In June of 2012, the City of Lebanon Authority began a Biological Nutrient Removal project to reduce our footprint on the Chesapeake Bay. Our goals were to reduce Total Phosphorous to .8 mg/L and Total Nitrogen to 6 mg/L in our effluent to the Quittapahilla Creek. Several vendors played a vital role in achieving our goals.

Along with Severn Trent (Denitrification Filters) and Siemens (Turblex Blowers), Biochem was the most integral part to enable us to meet our goals and beyond. The user interface is very intuitive and gives the operator a quick view as to how well the system is working. As the Operator goes deeper into the interface they have the flexibility to utilize two separate control systems. One is the feed forward control system where the system will look at historical data and be ahead of the curve in making adjustments to achieve our goals. The other is the feedback control system where the system looks at current levels and makes adjustments to achieve our goals.

HACH has provided 18 D.O. sensors, 4 Ammonia sensors, 4 Nitrate Sensors and 2 TSS sensors, each having its own controller. If an instrument is giving a bad reading, Biochem has given us the flexibility to use backup instrumentation from another train in the process.

Biochem has given the City of Lebanon Authority the ability to look at historical trends by providing an additional computer and monitor inside the control panel. This has been very beneficial in troubleshooting. Recently, we had an air valve that was torque tripping every couple of hours and with Biochems backup control the valve would go to 50% to provide sufficient air to that zone even though the valve had malfunctioned. We were able to use the historical trends to see what was happening and fix the problem.

Biochem was very easy to work with from the beginning. I recall changes that were made during our first trip to their facility for Factory Testing. During startup, they would work to make sure we understood how to operate the system and make changes to suit our needs. When they weren't at our facility, they were quick to respond to phone calls, emails and text messages.

Our Operators find the Bioreactor Process Control System very easy to navigate and make changes. However, very few changes need to be made when everything is in Auto. Today, we are exceeding our original goals and can reduce Total Phosphorous to as low as .4 mg/L and Total Nitrogen to 3 mg/L in large part to the robust system that was designed by Biochem.

Satisfied Customer,

Frank DiScuillo Jr.
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