

310 Maple Avenue • P.O. Box 247

Phone: (479) 752-3912

June 30, 2014

Michelle Bolenbaugh  
Enforcement Analyst  
ADEQ  
5301 Northshore Drive  
North Little Rock, AR 72118

RE: Decatur Permit Violations Permit Number AR0022292, AFIN 04-00052

Dear Ms. Bolenbaugh,

The Decatur WWTP has had a few permit limit problems since April 2011 that have occurred with most of the violations happening in large part due to freezing decant valves in our post equalization tank. This last winter was the longest and coldest since we have been operating our new WWTP that went online in 2009. In December and January we had several nights we would have someone at the WWTP around the clock to insure the valves were opening and closing at the end of a batch. We can attribute the permit problems we had really up until our last Nitrate violation in early May of this year to two extreme cold events one in December and one in January of this year. That resulted in a biology that got upset and slow to recover despite continues attempts to do so.

When the WWTP was designed and built the idea of the valves freezing was brought up but none of the Engineers or us for that mater believed the valves could freeze being attached closely to the SBR tanks. They had water that at the worst times being treated in them was 55 degrees plus, keeping the valves from freezing. However as we now know the wind blows through the post equalization tank like a wind tunnel; this appears to have flash froze the valve seats and long valve stems either open or closed. After the freezing event we had in December 2013 we knew what the answer was to fixing the problem, it was heat tracing the valves. This was not simple of course due to the fact that the heat tracing would have to be water proof, find a contractor, order parts ect. By the time the ideas went to reality it was late February, they are thermostatically controlled and have worked as advertised. Along with this we also worked several extra hours replacing all of the 12 inch decant valves to ensure that if damage had been done to the valve seats it would not be a problem in the future. In total over \$20 thousand dollars was well spent.

In continuation of the solutions, on July the 7<sup>th</sup> installation of a SCADA monitoring system will begin. This will let us know of a predetermined list of alarms that could cause

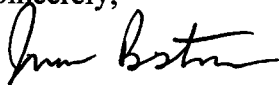
problems during the night or weekends that could majorly upset the biology of the plant. The alarm will be sent to the operator responsible those nights or weekends. He can then make minor changes such as resetting alarms; or get to the plant and investigate the problem. We needed this all along but it was not in the budget along with the back up power generator when the plant was built. The SCADA is \$25 thousand and the generator is now in place that had a cost of \$300 thousand dollars.

Lastly for now we are meeting today with bond counsel to try and refinance our WWTP bonds and roll in a Blue Water phosphorus and nitrate reducing tertiary filter. This would take a lot of the burden of the removal of these two nutrients off of the treatment plant. We believe that a slight upset of the SBR system could still be contained by this new filter process since it is in large part a chemical process. This has been already approved by your department in the past. Due to the rule changes that has happened in the past few years however it has been very difficult to refinance bonds. We feel like our revenue supports this treatment process and hoping to have good news in the near future on getting this process installed. We feel like this would put us very proactive in insuring we do not have hiccups in the future. We do still have a biological treatment plant and there is going to be issues from time to time but we feel like with what we have done and are continuing to do we will minimize the size of the hiccups in the future and hopefully it will not result in a permit violation.

I would like to say one last thing about nitrates plus nitrites. This is our toughest permit requirement. I don't know if anyone from your department or the EPA can appreciate the difficulty of a 10 mg/l instantaneous permit limit. It is not like any other permit requirement in that it can go up and down rapidly unlike other nutrients that will usually trend up or down; giving you more time to react. We talk about nitrates everyday, when we get there in the morning, during the day and sometimes on the phone at night. It is a battle we do everyday and we win most of the time. I know this will never happen but we know that we could send a lower amount of nitrate to the creek if the number we have to meet was an average instead of an instantaneous number as it is now.

I hope I have shown that we do take these violations seriously and we do. We are striving for no violations ever. I do apologize for this report not being in on the 25<sup>th</sup>, I had it on my calendar that it was not due until the 30<sup>th</sup> of June. Any questions or concerns please contact me at 479-752-3912.

Sincerely,



James Boston  
Public Works Manager  
City of Decatur

**Decatur Water & Waste Water**

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Decatur, Arkansas 72722

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