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February 21, 2010

Fred Washburn
Superintendent, City of Hoxie
PO Box 898
Hoxie, Kansas 67740

Dear Fred,

I enjoyed meeting with you on Thursday to discuss operation of both the city's water supply and wastewater systems. Good luck with your new house. I am sure you both will be happy once you are moved in.

I am writing to encourage the city to experiment with gradually increasing your rate of recirculation on the trickling filter. I think you said you were currently recirculating about 25% of total influent flow based on meter readings. That is great. But I believe you could improve effluent quality even more by increasing the rate of recirculation. I realize you cannot exceed the plant maximum flow capacity and may even need to reduce recirculation if you have high flows after heavy rainfall. I suggest it is definitely worth trying, as the plant should produce a better quality effluent due to several passes through the plant and the ability to increase biomass growth on the media. You should be able to decrease effluent BOD and ammonia concentrations.

I suggest Alan continue to monitor trickling filter effluent flow and recirculation flow. These should be read daily to determine what percentage of flow is actually recirculated. Do not rely on how far open valves are as that could easily give inaccurate data. I suggest slowly increasing the recirculation flow rate to see if the result is beneficial. If you see an improvement in effluent quality, I would continue to increase recirculation flow to no more than 50% of total flow from the trickling filter. I have seen this done at other plants with beneficial results.

If you have any comments or questions concerning this recommendation, please feel free to contact me at 913-850-8822 or jeff@krwa.net.

Sincerely,

Jeff Lamfers
Consultant

c: Mayor Lori Horesky
Alan Ackerman, Operator
Norb Windholz, KDHE, Northwest District