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July 26, 2010

Joe Alvarez
City of Hillsboro
PO Box 125
Hillsboro, KS 67063

Dear Joe,

As requested, I visited with you on July 22 to answer questions about odor problems at the waste stabilization pond. We went to the lagoons to check on the severity of odors and color of the lagoons. There were no noticeable odors around the entire lagoons that day and it was quite windy. There was only a slight, quite normal, odor from the influent structure and that was very faint, as I had to kneel down next to structure to get even a slight smell.

The color of the cells was bright green in the primary and slightly less in the other two cells. There was substantial wave action; the second and third cells had slightly more waves than the primary, which I would consider good for any lagoon system. If I were not aware of the past problems I would say this is a typical system in operation, which it was at the time of my visit.

You mentioned measures to keep odors under control. I understand the city is looking at an ozone system to add Dissolved Oxygen (DO) to the system. We recommend the city continue with setting up and monitoring the performance of the ozone/oxygen pilot plant recommended by Jim Kohman of EBH and Associates, P.A. Another option that you may wish to also discuss would be an aeration basin that could be controlled by a DO meter which subsequently control blower motors. These could be on variable frequency drives (VFD's) to increase blower speed to maintain a more consistent DO in the waste entering the system. This may be an option as there is electricity at the lagoons. The basin could be constructed to oxygenate the waste to the desired level before waste flows into the lagoons. This is just another option; initial expense as well as monthly operational and maintenance cost should also be considered.

I contacted KRWA staff member Jeff Lamfers; we recommend that when taking DO measurements, you take them at a couple different depths such as at six inches and one foot as you and I discussed.

Please call if you have any questions. KRWA appreciates the opportunity to provide assistance to the city of Hillsboro.

Sincerely,

Charlie Schwindamann
Wastewater Tech

CS: ejr
C: Delores Dalke, Mayor
Larry Paine, City Administrator
Marsha Carpenter, KDHE Salina