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March 1, 2010

Bill Tesh
Manager, Montgomery Co. RWD 14
P.O. Box 31
Dearing, Kansas 67340

Re: Water Supply Operations

Dear Bill,

I wish to thank Pat and you for the opportunity to meet on February 28 and discuss water supply operations. The main topics of discussion were rechlorination and ammonia addition.

The district has had difficulty in maintaining chlorine residuals in the distribution system when the water temperature is warm. This is most apparent during July – September / October. The district has added sodium hypochlorite to the pumping station clearwell in order to increase chlorine residual. The addition of chlorine at that location has had limited success due to several reasons.

We discussed that advantages and operation of adding ammonia sulfate solution to the influent to the clearwell and adding the sodium hypochlorite to the high service pumps discharge line. This would enable better control and consistency in raising the combined chlorine residual leaving the pumping station. From our discussion, I think you will be proceeding in these improvements and KRWA will assist in setting up the mixing of these chemicals and determining proper dosages.

Also, this district will hopefully be purchasing a new colorimeter for determining chlorine residuals. The present color wheel test kit is inadequate for the precise and accurate determinations that are needed when rechlorinating the water. The rechlorination of water that has combine chlorine residual and may have some free ammonia is difficult. This is especially true when the residuals and free ammonia are unknown and may be varying. The new test kit will greatly assist us in setting up the proper feed rates and monitoring the situation in the future.

The district's standpipe contains a very large amount of water for the number of customers served by the district. This was very advantageous when the Coffeyville water treatment plant went down for several days during the floods several years past. However, this large amount of storage makes it very difficult to maintain adequate combined chlorine residual in the summer time. Frequent monitoring and proper tank operation will be needed if the residual is to be maintained in the tank and in the water leaving the tank during the warm water temperature months.

After you have progressed in obtaining the necessary equipment to rechlorinate and add ammonia as we discussed, please contact me so that we can determine the dosages and pumping rates.

Funding for the above assistance was provided through a contractual arrangement between the Kansas Dept. of Health & Environment (State Revolving Loan Program set-aside) and KRWA. Also, visit the KRWA website www.krwa.net for news and information concerning water and wastewater utilities, training opportunities and other KRWA programs.

If either of you have any questions concerning water supply operations, please contact me.

Again, thanks for opportunity to meet with you all.

Respectfully,

S. Patrick McCool, P.E.
KRWA Consultant

C: Patrick O'Connell
Richard Thomas, KDHE