KANSAS RURAL WATER association
Quality water, quality life

P.O. Box 226 • Seneca, KS 66538 • 785/336-3760
FAX 785/336-2751 • http://www.krwa.net

February 18, 2010

Rick Koenig
City of Hiawatha
723 Oregon
Hiawatha, Ks 66434

Re: Meter tests

Dear Rick;

This is a follow up letter to recent meter tests conducted for the city.

The first report is for the test on the Sparling, (waterhawk) meter at the Knouse well. The first test is the one I ran with my meter and the other 3 are the tests with Gary's meter. We were just making sure that there was no malfunction with the meter I was using. As you can see by the results below, both tests were almost identical.

Meter: Sparling 6-inch; SN:K-60893005-6; Dated: 1993; Location: Knowse Well						
Test Number	Test Flow rate gallons per min.	Meter Volume (entity's meter)	Tester Volume (KRWA's tester)	Entity's meter accuracy (compared to KRWA)	(flow curve adjustment) on test meter	Adjusted Accuracy
1	180	1000	1190	84.0%	99.5%	83.6%
2	190	2000	2387	83.8%	99.6%	83.5%
3	190	3000	3583	83.7%	99.6%	83.4%
4	190	4000	4777	83.7%	99.6%	83.4%

As you already know the results were not as hoped. The meter is under-registering by about 16% and does not meet the 6% deviation allowed by DWR. As you stated this meter could be repaired, but is not on the DWR approved meter list. And it did not pass a field test. It should be replaced.

Below are the results of the test on the Sparling, (Waterhawk meter) at the Beckwith Well south of town.

Meter: Sparling, 4-inch; SN: K15191392; Dated: none; Location: Beckwith Well						
Test Number	Test Flow rate gallons per min.	Meter Volume (entity's meter)	Tester Volume (KRWA's tester)	Entity's meter accuracy (compared to KRWA)	(flow curve adjustment) on test meter	Adjusted Accuracy
1	180	1000	1024	97.7%	99.5%	97.2%
2	180	2000	2057	97.2%	99.5%	96.7%
3	180	3000	3074	97.6%	99.5%	97.1%

Although this meter was under-registering by more than 2% during the test and does not meet the AWWA standard, I see no reason to replace this meter at this time. I suggest retesting this meter annually to make accuracy does not decrease further.

The last test report is for the Water Specialties meter, at the well south of town. The results are below.

Meter: Water Specialties, 4-inch; SN: 20051104-04; Location: Well south of town						
Test Number	Test Flow rate gallons per min.	Meter Volume (entity's meter)	Tester Volume (KRWA's tester)	Entity's meter accuracy (compared to KRWA)	(flow curve adjustment) on test meter	Adjusted Accuracy
1	250	2000	1750	114.3%	99.2%	113.4%
2	250	1000	875	114.3%	99.2%	113.4%
3	250	1000	871	114.8%	99.2%	113.9%

As you can see, and as you anticipated, this meter was over-registering by about 13.5%. As we discussed after the test the issue of the installation may be the cause for the inaccuracy. This meter has also been tested at a testing facility and was found to be accurate. I would contact some other meter companies and have them look at the installation; another manufacturer may have a meter that can perform satisfactorily in this installation. That will be more cost efficient way to address the issue, rather than trying to re-plumb that meter.

Please feel free to contact Kansas Rural Water Association or me if we can be of further assistance. I enjoyed the opportunity to work with you on this and look forward to working with you in the future. If you have any questions please feel free to call me (785-541-0342). Also, visit the KRWA website www.krwa.net for news and information concerning water and wastewater utilities, training opportunities and other KRWA programs.

Again, thank you for the opportunity. Elmer apologizes for the delay getting this to you. The documents got mixed in with others.

Sincerely,

Greg Metz
Technical Assistant

GM:ejr
C: Lynne Ladner, City Administrator