

# Water System Operators Are Encouraged to Verify Sampling Requests

**M**ost public water supply systems in Kansas use the Kansas Department of Health and Environment (KDHE) laboratory for required drinking water analyses. The drinking water regulations concerning what analyses are required, where and when samples should be taken, when public notification is required, and whether compliance is achieved all make for a complex set of issues. Small systems rely on KDHE to determine what sampling is to be done. This process has worked well for many decades.

But sometimes, there can be problems.

When sample bottles are sent by KDHE to systems, operators generally take the samples as the instructions imply. But when systems are on quarterly monitoring and question

whether or not they might be removed, the operators or those collecting the samples should contact KDHE and discuss the matter with the agency. There may be times that the sample bottles are sent from the lab and then a subsequent letter from the Bureau of Water advises that the samples are not required. This has occurred recently. The message is that operators and others in systems should be vigilant and ask questions if there is any question as to the need to collect the samples.

As mentioned, the regulations are complex. KRWA staff member Pat McCool recently discussed several systems that received sample bottles to test for trihalomethanes (THMs) and haloacetic acids (HAAs). Small systems with a surface water source serving less than 500 persons, and



systems with a groundwater source serving less than 10,000 monitor for both THMs and HAAs on an annual basis.

If analyses are greater than the MCL of 80  $\mu\text{g/l}$  for THMs or 60  $\mu\text{g/l}$  HAAs or both, the system is required to increase monitoring for both on a quarterly basis. After the locational running annual average (LRAA) meets the EPA designated levels, the water supply system can return to annual monitoring. Pertinent parts of federal regulation 40 CFR 141.625 requiring increased monitoring to quarterly and, subsequently, reducing monitoring back to annually can be found in the nearby sidebar.

The charges for one sample for THMs analysis is \$40 and for HAAs, the cost is \$130. Thus, increasing the monitoring from annually to quarterly results in an increase of at least \$510 for three additional quarters of monitoring.

## Example case: Osborne RWD 2

Osborne RWD 2 is a small district serving 55 persons in northwest Osborne County in northwest Kansas. The district purchases treated surface water from Ellsworth RWD 1 (Post Rock). Osborne RWD 2 does not chlorinate or treat the water. The levels of THMs and HAAs in the Osborne

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## EPA Regulation concerning monitoring of THMs and HAAs

The particular federal regulation of interest is 141.625 (a) that states:

**If you are required to monitor ... annually... , you must increase monitoring to dual sample sets once per quarter.....if a TTHM sample is >0.080 mg/l, or a HAA5 is >0.060 mg/l at any location.**

Dual samples sets means monitoring for both TTHM and HAA5 even if only one is high.

Federal regulation 141.625 (c) further states:

**You may return to routine monitoring once you have conducted increased monitoring for at least four consecutive quarters and the LRAA for every monitoring location is equal to or less than 0.060 mg/l for TTHM and equal to or less than 0.045 mg/l for HAA5.**

RWD 2 drinking water are a result of water treatment by the Ellsworth RWD 1 water treatment plant at Kanopolis Reservoir.

The monitoring results for Osborne RWD 2 for the MCLs for THMs and HAAs were exceeded in the annual sample taken in the 3rd Quarter of 2014. Thus, KDHE placed Osborne RWD 2 on quarterly monitoring.

After three additional quarters of monitoring and the annual sample of the 3rd Quarter of 2015, the locational running annual averages for THMs and HAAs were below the EPA standards of 60  $\mu$ g/l and 45  $\mu$ g/l, respectively. Osborne County RWD 2 should have been taken off of quarterly monitoring at that time according to the federal regulation shown in the sidebar. Here's where things get messy.

So while KDHE's lab erred in sending out the sample bottles for the 4th Quarter 2015 and 1st Quarter 2016, it also needs to be mentioned that KDHE sent a letter to the water system dated December 22, 2015 stating that the system had returned to compliance with THMs and HAAs and that they could return to annual monitoring. And KDHE advised the district that sample containers may have already been shipped or processed to be shipped from the lab and that the system did not need to conduct those samples.

Again, the advice for operators or those collecting samples is to read what KDHE sends and ask questions if there's not a complete understanding.

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## Big money for small systems

As everyone is aware, increased regulations and laboratory costs impact smaller systems much more than larger systems.

If anyone has any question concerning what samples are required or concerns about the lab billing statement, system representatives should contact KDHE. KRWA might also be able to be of assistance if a system has questions on the sampling that is being suggested when bottles are received. No one wants to make mistakes; no one wants to be requiring testing that is not correct. It takes everyone's efforts and good communications to avoid problems and misunderstandings.

*Elmer Ronnebaum is KRWA General Manager; he has been employed by KRWA since 1983. He served seven years on the KRWA board of directors prior to that. He also helped develop a large RWD and served for fourteen years on a water district board of directors.*



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