

Question and Answer Document on Lead in Drinking Water

Why did the Warwick Township Municipal Authority (WTMA) receive a notice of violation from the Pennsylvania Department of Environmental Protection (PADEP)?

Upon recent review by PADEP of previous information submitted in 2010 and 2013 by WTMA as part of the Lead and Copper Rule (LCR), PADEP identified three deficiencies in the way the LCR was being implemented by WTMA. Specifically, PADEP noted the following:

- WTMA used several sample sites more than once due to not having enough reserve sample sites when some of the previous sample sites dropped out.
- WTMA's distribution system materials evaluation and subsequent sample plan was overly reliant on Tier 3 sites in relation to provided guidance which desired more Tier 1 sites, and had several incorrect classifications.
- WTMA did not submit a revised sample plan to PADEP in a timely manner.

What has PADEP directed WTMA to do to address these issues?

To correct these items, PADEP now requires WTMA to complete an updated materials evaluation to identify potential Tier 1 sampling sites for the sampling to be conducted during 2016. New sampling sites identified as part of this effort are to be incorporated into the 2016 LCR sampling plan for PADEP review prior to the start of sampling.

What is a Tier 1 site?

Per PADEP guidance, a Tier 1 site is a location that is most susceptible to lead levels in drinking water. Tier 1 sites are defined as single family structures that contain lead pipes, are served by lead service lines, or contain copper pipes with lead solder installed after 1982 but before January 6, 1991. **However, in-home water softeners preclude homes that meet this criteria from participating in the sampling.**

What is a Tier 3 site?

Per PADEP guidance, a Tier 3 site is a structure that was constructed as a single family residence and currently used as either a residence or business that contains copper pipes with lead solder installed

before 1983. **However, in-home water softeners preclude homes that meet this criteria from participating in the sampling.**

How will WTMA meet these requirements?

Given the newness of the WTMA water system, which began providing water service in the late 1970s, there are no known lead pipes or service lines in the WTMA system. Due to this, the only way a WTMA customer could be a Tier 1 classification is if their home contains copper pipes with lead solder installed after 1982 but before January 6, 1991. In order to identify customers who may meet this criteria, WTMA is using a recently digitized database of Warwick Township building construction data to identify homes constructed within this time frame.

From this database, WTMA has sent letters to many of its customers who meet the construction date criteria. However, just meeting the construction date criteria alone is not enough. Many homes constructed in Warwick Township during this time period were constructed with plastic water service piping, which excludes them from being used as a sampling location. Furthermore, regulations state that any home with a water softener cannot be used as part of the sampling plan. Finally, a customer who meets all of the above criteria must be a willing participant. WTMA cannot force a customer with the correct criteria to participate as a sample site.

WTMA has sent surveys to many of its customers with homes built in this timeframe requesting information from them regarding their internal home plumbing, the presence or absence of a water softener, and their willingness to participate in the sampling plan. Through this effort, WTMA hopes to identify enough Tier 1 sites to meet the sampling requirements of the LCR, along with an adequate number of reserve locations.

Who sets the rules for lead in drinking water in Pennsylvania and what are they?

PADEP's LCR establishes an action level of 15 parts per billion (ppb) for lead based on the 90th percentile level for a certain number of tap water samples taken from houses within the system. The required number of samples is based on the number of customers a water system serves. Exceeding the action level does not constitute a violation but may trigger additional requirements such as monitoring, treatment, and public education. We are often asked to explain "part per billion". For comparison purposes, one part per billion is equivalent to one drop of water in an Olympic sized swimming pool (which holds 660,430 gallons) or a single blade of grass on a football field.

How long has WTMA been testing for lead?

Required sampling has been done by WTMA since the LCR was implemented by the United States Environmental Protection Agency (USEPA) in 1991. It should be noted that WTMA water quality is within the acceptable USEPA and PADEP standards for lead and copper in drinking water. WTMA continues to closely monitor the water quality to make certain that residents are provided safe and clean drinking water.

How are WTMA customers told about the results of lead and copper sampling?

For customers who participate in the lead and copper sampling, WTMA is required by PADEP to notify them within 30 days of the results for their home. PADEP mandates the form of that notice which contains the test results on their home, information on sources of lead, explanation of the health risks, and precautions to reduce exposure.

For those WTMA customers who do not participate in the sampling plan, the results of the testing can be found on the annual Consumer Confidence Report (CCR) that is provided to all customers. 2014 CCRs can be found on the WTMA website at:

Rothsville http://www.warwicktownship.org/sites/warwickpa/files/u111/2014_rv_ccr.pdf

Lititz http://www.warwicktownship.org/sites/warwickpa/files/u111/2014_lw_ccr.pdf

More detailed results from the LCR sampling can be located on the PADEP website at:

<http://www.drinkingwater.state.pa.us/dwrs/HTM/SelectionCriteria.html>

How is the duration between testing determined?

The PADEP sets the time between testing based on the size of the system (number of people served) and the water quality history of the system. Refer to PADEP's "Lead and Copper Rule: A Quick Reference Guide" for more details on how this is established.

<http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-109146/3900-RG-DEP4316%20Lead%20and%20Copper%20Rule%20Quick%20Reference%20Guide.pdf>

What is WTMA doing about lead in drinking water?

WTMA serves water to its customers in two separate and distinct areas, the Rothsville system and the Lititz system. The Rothsville area is served by WTMA's own water supply (the "Rothsville" system). WTMA monitors for lead and copper in its water as a part of the 3 year sampling cycle. To date, results have demonstrated that no further action is required.

The WTMA also purchases water from the Borough of Lititz and serves customers in Warwick Township (the "Lititz" system). The Borough has addressed lead and copper in its drinking water system since 1994, when it started a corrosion control program. The corrosion control program includes a chemical additive fed in small doses to the water prior to leaving the Lititz Water Treatment Plant. This addition forms a very thin film on the surfaces inside of water pipes throughout the drinking water system which inhibits corrosion. By inhibiting corrosion, the potential for lead to leach into the water is reduced.

What is the relationship between lead in drinking water and lead in children in Pennsylvania?

The Pennsylvania Department of Health issued a detailed study regarding the level of lead in children in Pennsylvania using 2014 data. The study notes, "It is generally recognized and accepted that the primary source for childhood lead poisoning in Pennsylvania continues to be exposure to aging, deteriorating lead-based paint (chips and dust)." The report in its entirety can be found at this link: <http://www.health.pa.gov/My%20Health/Infant%20and%20Childrens%20Health/Lead%20Poisoning%20Prevention%20and%20Control/Documents/2014%20Lead%20Surveillance%20Annual%20Report%20r2.pdf>

Other information related to lead and its health effects can be located at the Pennsylvania Department of Health's website:

<http://www.health.pa.gov/My%20Health/Infant%20and%20Childrens%20Health/Lead%20Poisoning%20Prevention%20and%20Control/Pages/default.aspx#.Vyo5bHjD-71>

What other guidance related to lead in water is available?

Many sources with accurate and detailed information related to lead in drinking water are available on the Internet. Some of those sources of data are at the following sites:

USEPA <https://www.epa.gov/lead>

PADEP

http://www.dep.pa.gov/Citizens/My-Water/PublicDrinkingWater/Pages/Lead-in-Drinking-Water.aspx#.Vyo_5XjD-70