
From: Busch, Stephen (DEQ)
Sent: Monday, August 24, 2015 10:33 AM
To: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Cc: Devereaux, Tracy Jo (DEQ)
Subject: RE: LeeAnn Walters Draft

I'm good with dropping the plumbing paragraph. The breakdown looks fine to me and I didn't see any other issues.

Stephen Busch, P.E.
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From: Benzie, Richard (DEQ)
Sent: Monday, August 24, 2015 9:38 AM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Cc: Devereaux, Tracy Jo (DEQ)
Subject: RE: LeeAnn Walters Draft

In the first paragraph under pH, I would eliminate the word out from "out in the distribution system" and change the verb in the last sentence from "is" to "are."

From: Shekter Smith, Liane (DEQ)
Sent: Friday, August 21, 2015 6:01 PM
To: Busch, Stephen (DEQ)
Cc: Devereaux, Tracy Jo (DEQ); Benzie, Richard (DEQ)
Subject: RE: LeeAnn Walters Draft

Revised. Please review. Thanks.

Dear Ms. Walters,

I wanted to update you regarding our Department's findings related to questions raised during our meeting at the Governor's office on August 4. I apologize for the delay in getting back to you.

Lead and Copper Monitoring

Regarding Flint lead and copper compliance monitoring for the January – June 2015 period, the City has confirmed that all lead and copper samples collected throughout the City, whether routine sites or customer requests, were sent to the State of Michigan lab for analysis. Individual sample results are provided to the property owner within 30 days of receiving the lab results in accordance with the Michigan Safe Drinking Water Act (Public Act 399, 1976 Administrative Rule 410(5)). Results from the State of Michigan lab are provided directly to our Office.

Staff have confirmed that the lead 90th percentile compliance calculation of 11 parts per billion is based on 69 samples that met the appropriate sampling location site criteria, and met the sample collection site and collection protocol

requirements of the Safe Drinking Water Act for this monitoring period. A minimum of 60 samples were required for this monitoring period. As indicated during the meeting, the City's sampling for lead complies with the Action Level standard of 15 parts per billion, but based on the population served by the City and these results, the City will need to make a recommendation to the MDEQ on how they will fully optimize their corrosion control treatment. These next steps continue to follow the requirements of the Lead and Copper Rule.

Samples collected at your residence of 212 Browning Avenue were not included this compliance determination as you utilize a whole home filter. As stated in the Michigan Safe Drinking Water Act (Public Act 399, 1976 Administrative Rule 710a, Lead and Copper in tap water; monitoring requirements) "Sampling sites may not include faucets that have point of use or point of entry treatment devices designed to remove inorganic contaminants." Such treatment alters the water chemistry and water quality such that it is no longer representative of public water from the City's distribution system. Therefore, the City cannot use samples collected at your residence as part of its determination for public water system compliance with the lead or copper action level standard.

Sample Summary (samples taken at your residence)

For your information, we are providing the information that we've gathered regarding samples collected at your home. Our records indicate between February and June of this year there were six samples collected by either you or Mr. Mike Glasgow with the City of Flint, and submitted to the State Laboratory for analysis as follows:

February 11, Bathroom tap, collected at 10:20 AM by Mike Glasgow. This sample was analyzed for aesthetic metals (copper, iron, manganese, and zinc) which does not include lead analysis.

February 18, Kitchen tap, collected at 7:15 AM by you. This sample was analyzed for lead (104 parts per billion) and copper (non-detect).

February 25, Kitchen tap, collected at 10:26 AM by Mike Glasgow. This sample was analyzed for metals including lead. All results (including lead) were non-detect except for Barium 0.01 parts per million. The result for Barium was well below its maximum contaminant level of 2 parts per million.

March 3, Kitchen tap, collected at 6:00 AM by you. This sample was analyzed for lead (397 parts per billion) and copper (non-detect).

March 18, Kitchen tap, collected at 11:10 AM by Mike Glasgow. This sample was analyzed for lead (4 parts per billion) and copper (non-detect).

April 2, Pre-point of service, collected at 8:00 AM by you. This sample was analyzed for lead (707 parts per billion) and copper (110 parts per billion).

Lead Education/Outreach

As we discussed during the meeting, we support efforts to educate homeowners about the sources of lead in their private residence, provide guidance measures to reduce the potential for lead exposure, and provide information on resources for lead abatement. Along those lines, our Office has been in contact with the Department of Health and Human Services, Environmental Health Division, Healthy Homes Section and had some preliminary discussions about a public education and assistance campaign regarding household lead issues, guidance and abatement.

Lead monitoring by public water systems serves a dual purpose. The first purpose is to ensure the public water supply is adequately treating its water to address corrosion potential and help limit lead exposure. The second purpose is to inform homeowners about lead levels within their individual residence so that they can make educated choices regarding their own exposure risk.

You continue to express aesthetic water quality concerns at your home regarding color, taste, iron, etc. While we work with the City to continue addressing these concerns as they relate in part to the City's aging water distribution system infrastructure, we would expect homeowners to also take responsibility and due diligence to ensure proper construction and maintenance of their own household plumbing system. It has been indicated that your residence was recently re-plumbed using plastic piping materials. However, the City of Flint has no record of a plumbing permit being obtained for the completion of this work. While homeowners may choose to complete their own plumbing, it does not preclude the requirement to obtain a local permit for such construction work so that any plumbing work completed can be inspected for compliance with the requirements of the Michigan Plumbing Code and Michigan Residential Code. As a result it is uncertain whether there may be conditions within the household that are contributing to some of the water quality issues you are experiencing. (Steve - I'm proposing we delete this paragraph. I think it's a lightning rod and not sure it adds to the discussion. Are you okay with this?)

pH Results

During the meeting concerns were also expressed regarding pH levels within customer plumbing systems. As you may know, pH has no associated contaminant level as it is simply a numeric scale used to specify the acidity or alkalinity of a solution. The City of Flint conducts daily monitoring of pH values on both its raw and finished (treated) water at the City's water treatment plant as part of its operations. The City is also required to conduct water quality parameter monitoring out in the distribution system, which includes pH. Samples are analyzed in accordance with Standard Methods using properly calibrated analytical equipment. Results for pH from these samples is summarized below.

Since late April 2014 – June 2015, the following pH conditions were reported:

Water Treatment Plant – Finished Water plant tap pH range = 7.07 minimum to 9.9 maximum, overall average 7.7, measured daily. We believe the 9.9 is a one- time anomaly from softening treatment.

Distribution System – Water Quality Parameters taken from 25 sample sites located throughout and monitored quarterly

July – Sept. 2014: pH 7.71 average, range 7.56 – 7.86

Oct. – Dec. 2014: pH 7.88 average, range 7.62 – 8.10

Jan. – March 2015: pH 7.81 average, range 7.60 – 7.99

April – June 2015: pH 7.63 Average, range 7.48 – 7.80

In addition, the City's treated water contains alkalinity, which is a measurement of the buffering capacity of water to resist a change in pH. As you can see from the water quality parameter monitoring results above there has been very little change in pH within the City's distribution system. The pH levels described within customer site piping or premise plumbing systems are believed to be the result of onsite treatment and not representative of water quality shown to be occurring in the public water supply system.

Consumer Confidence Report

Finally, there was confusion during the meeting regarding the City's annual water quality report, the Consumer Confidence Report which we have since been able to clarify.

The City of Flint issued two separate Consumer Confidence Reports (CCR's) in 2015 covering the water quality data from 2014. One report was for the period of January – April 2014 when the City was obtaining water from Detroit (DWSD). And a second report was for the period April – December 2014 when the City was using the Flint River and its own Water Treatment Plant.

The CCR for DWSD water was mailed to customers in June. The Flint River based CCR was mailed to customers in mid-July, delayed due to issues with the printing contractor. We agree that having two separate reports caused confusion. We are working with the City to ensure both reports are posted to the City's website and both are made

available when requested by customers. Should the City choose to create separate CCR's during the year that the City of Flint connects to the Karegnondi Water Authority we will work with the City to provide more clarity and try to have all material included in a single mailing.

The DWSD based CCR is the one community members had at the meeting, while the DEQ brought a copy of the Flint River based CCR. As separate and distinct sampling was done under each source, this explains the discrepancy in the values and monitoring periods being reported in the respective CCR's.

We appreciate your interest in these matters and hope this has addressed many of the questions brought up during our meeting. I would like to provide this information to both Dr. Sullivan and Ms. Mayes, but I do not have their contact information. I'm hoping you can share this with them and any others that may be interested.

Sincerely,