
From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Thursday, February 26, 2015 5:15 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Deltoral, Miguel; Poy, Thomas
Subject: HIGH LEAD: FLINT Water testing Results
Attachments: Flint lean level results Feb 2015 212 Browning (Pb Cu).pdf

Thank you, Mike. These results are dated 2/18/15, so they're probably different results than the results Adam had, but they still have to be included in with compliance calculation of the 90th percentile. What dates are the earlier compliance samples?

Yes, the stagnation of the water would increase the lead levels, and I'm glad you're following up with the City to get the lead levels reduced for Mrs. Walters' home—which will hopefully be effective for her neighbors because they are also most likely being exposed to these high lead levels. Miguel reminded me this morning, there are no safe levels of lead in drinking water.

I talked with Miguel Del Toral about his knowledge on research on lead. He said that high levels of iron, usually bring high levels of lead. The large amount of black sediment at Mrs. Walters' home, is most likely particulate lead, Miguel said, where the lead actually bonds to the iron sediment. While the particulates of lead/iron are small, they're very highly concentrated with lead—up to 95% lead.

Miguel was wondering if Flint is feeding Phosphates. Flint must have Optimal Corrosion Control Treatment—is it Phosphates? Or is it pH/Alkalinity Adjustment? The reason he asks, is because systems using the pH/Alkalinity adjustment have problems with lead levels in the 100's or higher—and they have problems with random lead particulate matter in the distribution system. Miguel said that we all know that flushing regularly helps reduce the lead concentrations, but not immediately. The City can't just flush in advance of taking the compliance samples, they have to flush the lines on a regular schedule.

The problem with high lead issues, is that the water has so many different variables, that it's hard to pinpoint what is causing what problem where. From a public health perspective, can we assume that the high lead levels in Mrs. Walters' neighborhood are isolated to just her area? Or are they more widespread?

Please feel free to contact Miguel directly—312-886-5253; Deltoral.miguel@epa.gov.

Jennifer

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Thursday, February 26, 2015 10:25 AM
To: Crooks, Jennifer
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: HIGH LEAD: FLINT Water testing Results

Jennifer,

I recall Adam showing me a high lead/copper sample result (perhaps it was this one)...as part of the city's routine lead-copper monitoring. If so, it was a stagnated sample as part of the sampling protocol. Adam mentioned that all other samples were below the AL...and the city

will not exceed the lead AL. I will confirm this. The city; however, needs to take further action to help address Ms. Walter's concern. The type of plumbing needs to be identified and sample tap location within the premise plumbing. They should offer to re-sample for PB after flushing the tap to demonstrate that flushing the tap will reduce the lead concentration. The city also needs to provide other lead-reduction strategies to Mrs. Walters.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Crooks, Jennifer [<mailto:crooks.jennifer@epa.gov>]
Sent: Thursday, February 26, 2015 10:53 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Poy, Thomas; Deltoral, Miguel
Subject: HIGH LEAD: FLINT Water testing Results

Hi, Steve and Mike. Thanks for talking with me yesterday, Steve, about the most recent TTHM results. We'll look forward to receiving them whenever you get them back from the lab.

However, the main purpose of my email is to alert you to the high lead levels reported to a citizen yesterday by Flint Water Dept. I have been discussing the water situation with LeeAnn Walters since January, and she has been talking with Mike Glasgow at the plant about the black sediment in her water. (HUGE KUDOS to MIKE!!) He did test it to find that the iron levels were greater than his test would go; GT 3.3. But, because the iron levels were so high, he suggested testing for lead and copper. WOW!!!! Did he find the LEAD! 104 ppb. She has 2 children under the age of 3... Big worries here.

So, Steve, this goes back to what you and I were talking about yesterday. That the different chemistry water is leaching out contaminants from the insides of the biofilms inside the pipes. I think Lead is a good indication that other contaminants are also present in the tap water, that obviously were not present in the compliance samples taken at the plant. VOC/SOC and inorganics/metals would be good samples to start with to take at the tap. And since Ms. Walters' drinking water is showing the high lead levels, her tap water would be a good place to start, I think.

We also talked about Dr. Joan Rose from Michigan State being on the Flint Tech Advisory Committee—you also mentioned that someone from the Dept of Community Health was on the Committee. I'm thinking that Dr. Rose would want to dive further into this, since there's actual evidence that the water is leaching contaminants from the biofilms; or Dept of Community Health would want to get involved and look at this from an epidemiological perspective. (She and her family are also exhibiting the rashes when exposed to the water, and her daughter's hair is falling out in clumps.)

Maybe MSU could authorize the payment of the analyses for these samples? Or Dept of Community Health?

The citizen's name is:
LeeAnn Walters
212 Browning Ave
Flint, MI 48507
616-212-6233
Lwalters313@gmail.com

Jennifer