
From: Schock, Michael <Schock.Michael@epa.gov>
Sent: Wednesday, October 14, 2015 2:42 PM
To: Henry, James;Howard Croft;Reynolds, Lawrence
Cc: Lane, Mike;Lytle, Darren;Andy Leavitt;Marc Edwards;Amy Hovey;Brent Wright;Dayne Walling;donna.cole;Dykema, Linda D. (DHHS);Krisztian, George (DEQ);Gerald (Jed) Natzke;Jamie Gaskin;Jason Lorenz;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Wright, Michael;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;Robert Bincsik;rosejo@msu.edu;Russell Hudson;Samir Matta;Sean Kammer;Busch, Stephen (DEQ);Warren Green;Wurfel, Brad (DEQ);Anthony Chubb;Kevin Keane;Valacak, Mark
Subject: RE: 3rd Quarter Water Report

Hi, All;

I inquired of one of the national facility engineering managers for VA, with whom I've been working on some building corrosion issues in another state. Here is our input for two of the Health Center questions, which is more oriented towards how water quality (aside from specifically lead) will impact the operation of certain critical equipment. Studies would be suggested on the impact of the upcoming two water quality changes, as to how they would impact the operation of medical and other facilities. Local in-facility pretreatment of water for some uses may be necessary, whether or not it has any lead in it, to prevent scaling or attack on the instruments being washed/sterilized. Stainless steels and other metallic surfaces are not "inert." There are probably process water consultants available, perhaps through contacting the Water Quality Association, who could advise on instrument-specific water pretreatment needs.

Spotting on instruments has been noticed in some applications of boiler steam (likely due to phosphates), as well as staining from corrosion (often from steel plumbing). If any water contains appreciable minerals or substances that can react with scale-forming minerals (like phosphate and carbonate), it will tend to leave deposits, we see this in the sterilizers themselves. The VA medical facility strives to achieve "lead-free," the influent water may have lead in it and there are so many components in the whole plumbing and sterilizer/autoclave systems, that totally lead free is really not achievable. Currently an RO system for sterilizer influent water is being tested, but different equipment manufacturers may have their own specifications for water composition that is compatible with the specific metals and alloys in the plumbing and at the water contact surfaces of their products, which should be consulted.

For what it's worth, I would also add an observation that though I don't know of specific studies, but under the new the Reduction of Lead in Drinking Water Act, new household dishwashers are required to be "lead free" by the definition of the Act.

--Mike

Hamilton Health Center Questions w/ CDC response below:

2. Is it ok to utilize the water for cleaning of instruments?

3. Is it ok to use the water in autoclaving?

Michael R. Schock

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From: Henry, James [mailto:jhenry@gchd.us]
Sent: Wednesday, October 14, 2015 12:55 PM
To: Howard Croft; Reynolds, Lawrence
Cc: Lane, Mike; Lytle, Darren; Andy Leavitt; Marc Edwards; Amy Hovey; Brent Wright; Dayne Walling; donna. cole; dykemal; George Krisztian (DEQ); Gerald (Jed) Natzke; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Michael Glasgow; Wright, Michael; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane; Valacak, Mark
Subject: RE: 3rd Quarter Water Report

Hello everyone,

Similar to many of your organizations the Genesee County Health Department has been receiving many specific questions regarding risks from lead. We have partnered with MDEQ's Toxicology Division to try to get some answers. Our research has provided only limited information. Attached are EPA, CDC and a few other documents that have been extremely helpful, but they do not address many of the specific questions. Also, copied below is a CDC response to some of the questions.

Please feel free to comment and add to the list below. If anyone has official, scientific or generally accepted guidance, please share it. I'll compile a comprehensive FAQ document and share it back with the group.

Public FAQ's

- Is it ok to wash fruits and vegetables?
- Is it ok to wash dishes?
- Is it ok to wash hands and then handle or eat food?
- Is it ok to wash clothes? (skin irritations)
- What are risks to pets (any particular pet that may be more susceptible) i.e. canary?

Hamilton Health Center Questions w/ CDC response below:

1. Can Flint River water be used to wipe down surfaces, counter tops?
2. Is it ok to utilize the water for cleaning of instruments?
3. Is it ok to use the water in autoclaving?

Dr. Arias wrote: We know of no formal guidance on this issue. However, lead in water is measured in parts per billion. Ambient contamination of surfaces and metals in general is much higher. Lead is also not well absorbed through skin. Our SMEs would not expect any problems with this practice unless the water is ingested. I'm copying Mary Jean Brown here who would be available if you have additional questions or need some other follow up.

Thanks Jim

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From: Howard Croft [<mailto:hcroft@cityofflint.com>]

Sent: Tuesday, October 13, 2015 5:59 PM

To: Reynolds, Lawrence

Cc: Lane, Mike; Lytle, Darren; Andy Leavitt; Marc Edwards; Amy Hovey; Brent Wright; Dayne Walling; donna. cole; dykemal; George Kristzian (DEQ); Gerald (Jed) Natzke; Henry, James; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Michael Glasgow; Wright, Michael; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane; Valacak, Mark

Subject: Re: 3rd Quarter Water Report

All,

The comments continue to be helpful and I am making adjustments as we go. I spent two hours at the Health Department today at their board meeting and we have greatly enhanced the communication between the City and the GCHD. I will be attending their future board meetings and will keep Mark and Jim not just appraised but involved in directional decisions as we continue to craft short and long term plans.

On Tue, Oct 13, 2015 at 10:39 AM, Reynolds, Lawrence <LawrenceR@mottchc.org> wrote:

Thank you Mr. Lane. These points will help medical providers stay on message with information our families can act on .

From: Lane, Mike [mailto:milane@umflint.edu]

Sent: Tuesday, October 13, 2015 9:53 AM

To: 'Lytle, Darren'; Howard Croft; Andy Leavitt

Cc: Marc Edwards; Amy Hovey; Brent Wright; Dayne Walling; donna. cole; dykemal; George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Reynolds, Lawrence; Reynolds, Lawrence; Michael Glasgow; Wright, Michael; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane

Subject: RE: 3rd Quarter Water Report

Howard,

I agree with Darren that it may be a good idea to let the community know and prepare them that while switching back to Detroit water in the near future they will likely see discolored water, particulates, etc. during the transition.

Also, providing specific details on how to sample water in their homes would be helpful... the first draw, how long to flush before taking the second sample, how long water should sit in pipes before the first draw, etc.

It would further help to rebuild trust with the community to share the City's plan/timeline of more aggressive water quality sampling, specifically as it relates to lead exposure in homes and schools. Is there a timeline that can be shared which the City is working with to identify homes with lead service lines, and how can the City and State work together to assist those homeowners with mitigation. Perhaps indicating that the issue of lead is and will remain a high priority for the City until all households, schools, etc. have reliable/safe water quality regardless of whether the source of lead is from city transmission lines or a property owner's service line and home fixtures would also be helpful.

Mike

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Michael Lane

Director, Environment, Health and Safety

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PPI

cell

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From: Lytle, Darren [<mailto:Lytle.Darren@epa.gov>]**Sent:** Tuesday, October 13, 2015 7:40 AM**To:** Howard Croft; Andy Leavitt**Cc:** Marc Edwards; Amy Hovey; Brent Wright; Dayne Walling; donna. cole; dykema; George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Wright, Michael; Lane, Mike; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane**Subject:** RE: 3rd Quarter Water Report

Howard,

I am in agreement with past comments and suggestions. Is this the time to let the public know your future plans? Are you expecting to be back to Detroit water next quarter? If so, that does not necessarily come without issues. It is a change and the potential for a brief upset (e.g., "red" water, particles, etc) exists. Would it be worth letting the public know in advance? Under "current drinking water issues", do you want to let residents know how and where to take samples here? A sampling plan (beyond LCR compliance sampling) is very important to understand the relative lead source (brass, solder and service lines) contributions, assess the current situation and the effectiveness of the return to Detroit water to reduce lead. You could state that one is being developed.

Darren

Darren A. Lytle, Ph.D., P.E.

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From: Howard Croft [<mailto:hcroft@cityofflint.com>]

Sent: Sunday, October 11, 2015 7:29 AM

To: Andy Leavitt

Cc: Marc Edwards; Amy Hovey; Brent Wright; Lytle, Darren; Dayne Walling; donna. cole; dykemal; George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Wright, Michael; Mike Lane; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejp@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane

Subject: Re: 3rd Quarter Water Report

All,

The comments were very helpful and I have made several revisions to the report that was sent yesterday, please review the amendments and forward any additional recommendations. I would like to solicit comments from anyone in the medical community that is willing to be quoted.

On Sat, Oct 10, 2015 at 12:03 PM, Andy Leavitt <aleavitt@senatedems.org> wrote:

I would echo Marc's sentiment on the bold language agreeing with his points but I would also add that trust needs to be rebuilt and the public simply will not believe anything in the document if you start by telling them it still meets standards. They do not differentiate between regs and rules but they know the water does not meet the standard of the physician community.

I would also recommend opening with timeline of going back to Detroit and what steps people can take to mitigate lead issues. Preferably with an excerpt from a physician.

The technical information matters for transparency but the trust gap is so wide that most people will be skeptical of all of it.

On Sat, Oct 10, 2015 at 11:48 AM Marc Edwards <edwardsm@vt.edu> wrote:

Hi Howard,

I think it is universally acknowledged now, that 30 seconds to 2 minutes flushing are not adequate, and all public education should say 5 minutes flushing.

I also think that given results of our team sampling 277 homes, the high levels of lead MDEQ detected in the Flint schools (a 90%ile over 15 ppb., which is horrible because they are not tier 1 plumbing sites), and the problems in the official LCR sampling conducted in late 2014-2015, that the following statement (in bold) is not really helpful in getting the message out about the current health risks. The bold statement seems more like wishful thinking or a legal position, and detracts from the goal of telling the public about the known problems.

*After 16 months of treating water from the Flint River, the City became aware that the while **still meeting all Safe Drinking Water Standards**, the level of corrosiveness could result in more lead leaching from service lines and household plumbing.*

That is my input. I am available at 540 231-7236 or 540 320-8740, if anyone should have questions about this.

Best Regards,

Marc Edwards

From: Howard Croft [mailto:hcroft@cityofflint.com]

Sent: Saturday, October 10, 2015 8:33 AM

To: Amy Hovey; Andy Leavitt; Brent Wright; Darren Lytle; Dayne Walling; donna. cole; dykemal; edwardsm; George Krisztian (DEQ); Gerald (Jed) Natzke; Howard Croft; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Michael Wright; Mike Lane; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; schock.michael@epa.gov; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane

Subject: 3rd Quarter Water Report

Team,

Included in this email is a copy of the first quarter water quality report that has been developed by the Utilities Division. Please take a look and offer any comments that you may have regarding content. There will be an additional one page insert containing three months test data inserted prior to distribution.

The purpose of the quarterly mailer is to increase communication, provide more transparency, and put more information into the hands of the public about what's occurring within the water system and with the infrastructure.

I will be putting together a separate weekly report for this Committee.

Thank you,

--

Howard Croft

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