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Sent: Thursday, October 22, 2015 10:22 AM
To: Sygo, Jim (DEQ); Wurfel, Brad (DEQ)
Cc: Wyant, Dan (DEQ)
Subject: FW: 3rd Quarter Water Report

For your records.

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Sent: Thursday, October 15, 2015 7:29 PM
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Subject: RE: 3rd Quarter Water Report

I have gotten a lot of questions about this., so figured I would answer in one e-mail.

The city is still using the MDEQ sampling approach. That method takes the EPA sampling method, and adds two modifications, both of which are technically legal, but "miss" lead in water that is normally present when people use it. I have been trying to get these modifications banned since 2007, because they give a false low measurement of lead in water risks on the day you sample. As a result, a city can be meeting the EPA rule, technically, and still have a huge problem with elevated blood lead in children.

The two modifications are:

- 1) Using a sample bottle **with a tiny opening**. This forces consumers to fill the bottles at a very low flow rate. The net effect of this, is that particulate Pb that would normally flow into a consumers water glass at a normal flow rate, stays on the pipe when you sample for lead. When a consumer fills a glass or collects water for drinking, the particles fall off.
- 2) **Pre-cleaning the pipes the night before sampling (aka. Pre-flush)**. This basically remediates and sweeps the pipe clean of lead the night before sampling, so that the next morning when you sample, you get unusually low lead. The sampling protocol used by MDEQ requires a **5 minute pre-cleaning**.

When Virginia Tech sampled in Flint, we used the EPA protocol, without the modifications that miss lead in water problems.

I hope this explains the discrepancy. The MDEQ approach could give people a result for 0 ppb lead in water, and when they collect a sample for cooking or drinking it can be 100 ppb. I have seen it happen. **No one who is getting a low result using the MDEQ approach, should be told their water is safe to drink.** The result is meaningless. If it is high with

the MDEQ approach, you have a very, very serious problem. MDEQ is also not the only primary agency in the country using these methods that miss lead, so I am not being any, I am just telling the facts.

Mguil Del Toral of EPA warned MDEQ to stop using this method back in April-May in writing, because it would hide a lead problem if they existed, and they basically told him to mind his own business. I also asserted that Mguil was right, in the AGIU report in

June. <http://www.deadline-detroit.com/426926/can-97/scary-leaded-water-and-one-flint-family-s-toxic-nightmare-VAZ777WVU>

Best Regards, Marc