

**OAG Response to Written Questions for the Auditor  
Joint Select Committee on Flint Water Public Health Emergency  
March 22, 2016**

1. There was a question last week about why MDEQ might not have immediately required corrosion control after the first 6 month sampling period indicated that the water wasn't going to meet the exception for corrosion control. Based on your review of the LCR, discussions with the MDEQ, and reviewing emails and other documents could you explain in closer detail how the MDEQ's came to this decision under the LCR?

**DEQ's actions or lack thereof is most concisely reflected in the April 27, 2015 email from Pat Cook, DEQ's Community Drinking Water Unit, commenting about Miguel Del Toral's statement that if Flint did not meet the criteria in the first 6 month test, they cannot meet it for two consecutive periods. Pat Cook said: "...we have always waited for 2 rounds of results before making that decision."**

**We believe that DEQ made that initial decision, went forward with the understanding that they were following the LCR, and future actions were under that guiding premise. Although the EPA appears to refute how DEQ could have reached that decision, the EPA's November 3, 2015 letter, (as referenced below in question 5) acknowledges the potential for misinterpretation.**

**The OAG respectfully encourages the Committee to also pose this question to DEQ, because the internal, in-person discussions that helped drive these decisions were not sufficiently documented for us to provide the Committee with a definitive response.**

2. Did the MDEQ believed that there were two different standards under the LCR?

**Two different standards exist under the LCR. The first is in section 141.81(b)(3) of the LCR, which states that a large water system can be deemed to have optimized corrosion control, without installing treatment, if it can demonstrate for two consecutive 6-month monitoring periods that the difference in the 90<sup>th</sup> percentile lead level and the highest source water lead concentration (0 ppb for Flint) is less than the Practical Quantitation Level (5 ppb). However, this standard is only applicable to water systems which have not already implemented corrosion control treatment. The second, section 141.81(b) of the LCR, states that any water system that has optimized corrosion control with treatment in place, shall continue to operate and maintain corrosion control treatment. We concluded that DEQ misapplied this standard since the Flint water system did have corrosion control treatment under DWSD. We reported in finding 1a that DEQ should have applied 141.81 (b) of the LCR and required the Flint WTP to have installed corrosion control treatment prior to distributing water from the Flint River.**

**We respectfully encourage the committee to ask DEQ if they believed that two standards existed.**

3. For large systems, does the LCR mandate that there be two complete 6-month monitoring periods before moving on to the next step of a corrosion control study, treatment designation?

**Specifically, LCR Section 141.81d(1) indicates the schedule for treatment steps for large systems. It requires the water system to perform an initial monitoring of two consecutive six-month periods. However, as noted in the response for question 2, this would have applied only to a system which has not yet implemented corrosion control treatment; since the Flint water system already had corrosion control treatment under DWSD, they should have installed corrosion control treatment prior to distributing water from the Flint River.**

**Section 141.81e of the LCR includes language related to treatment steps for small and medium sized systems. It states that systems that exceed the lead or copper action level shall recommend optimal corrosion control treatment within six months after the end of the monitoring period during which it exceeds one of the action levels. While the section that addresses large system treatment steps (141.81 (d)) is silent on this, section 141.81 b(3)(v) of the LCR, states that *any* system triggered into corrosion control shall adhere to the treatment deadlines for medium sized systems (141.81 e). We concluded and reported in finding 1b, that because any system, regardless of size, would need to pursue corrosion control treatment within six months after the end of the monitoring period during which it exceeds the action level, DEQ should have required the Flint WTP to begin the corrosion control treatment after the first 6 month testing period.**

4. To be clear, with regard to MDEQ's interpretation of the LCR, did you find that Department failed both to correctly interpret the LCR and, more importantly, to even abide by its own interpretation of that rule? It appears that MDEQ incorrectly interpreted the LCR to require an analysis of the results of two six month testing periods before making the decision of whether corrosion control treatment was needed. Under that interpretation, only if the results for both periods did not exceed 5ppb could the water system forego corrosion treatment. Do you agree that, even under MDEQ's interpretation, it should have begun using corrosion control treatment after the first results came back at 6ppb (i.e., at that point, MDEQ knew that regardless of what the results from the second testing period were, it would inevitably have had to require treatment)?

**Page 11 of the performance audit specifically identifies our position that DEQ incorrectly interpreted the LCR. It does appear; however, that DEQ consistently abided by its interpretation until the public, medical profession, and others came forward to question the water's potability. As we indicated above in question 1, DEQ "...have always waited for 2 rounds of results...", therefore they did not appear willing to deviate from this course of action.**

5. The EPA in a November 3, 2015 letter stated in regards to the Flint water switch, "This type of situation rarely arises and the language of the LCR does not specifically discuss such circumstances... it appears that there are differing possible interpretations of the LCR with respect to how the rule's optimal corrosion control treatment procedures apply

to this situation..." Based on your review of the LCR, do you agree with the EPA letter that the rule is ambiguous as to how it should have been applied to the Flint situation?

**Our review of the LCR and how to apply it to the Flint situation did not consider past practices, meaning we did not allow DEQ's LCR application in other instances to influence our conclusion.**

**Regarding ambiguity, our scope was not to review the LCR's clarity and formally issue corresponding findings and recommendations. We would have needed to deliberate and support such conclusions with sufficient, appropriate evidence. Generally, the criteria is a factor in determining that evidence is sufficient and appropriate; however, because the LCR was the criteria, it made it difficult, if not impossible, to render an audit conclusion under auditing standards. Instead, we chose to point out the concerns in an observation to ensure that they are part of the public, policy, and legislative discussions and solutions going forward.**

**Because the EPA chose to clarify its direction and they have publically reported that a more comprehensive overhaul is underway, they likely believe that the rules are ambiguous. We authored the Observations as suggestions for either improvements to the LCR or considerations for Michigan laws to overlay the LCR.**

6. Did your previous testimony indicate that you do not agree with the EPA that the LCR is ambiguous? (See page 11 of the Report and Q3 from Dec. 23 letter).

**See question 5. We reported in our previous testimony, the performance audit, and the two letter responses, that we believe DEQ misinterpreted the LCR. Our intent, either written or oral, is not to provide a formal position regarding the LCR's ambiguity or lack thereof.**

7. Did the MDEQ give Flint an opportunity to demonstrate it didn't need corrosion control? As the EPA said, "This type of situation rarely arises and the language of the LCR does not specifically discuss such circumstances." If we assume for sake of argument only, that there were legitimately different interpretations for the LCR, how would you classify DEQ's interpretation?

**Through requiring the two 6-month monitoring periods, DEQ gave the Flint WTP the opportunity for the system to be deemed to have optimized corrosion control, without installing treatment, if it could have demonstrated in the two consecutive 6-month monitoring periods that the difference in the 90<sup>th</sup> percentile lead level and the highest source water lead concentration (0 ppb for Flint) is less than the Practical Quantitation Level (5 ppb).**

**As to the classification of DEQ's interpretation, we indicated in our response to question 1, DEQ "...have always waited for 2 rounds of results...", therefore they did not appear willing to deviate from this course of action. The OAG respectfully encourages the Committee to pose this question to DEQ, because the internal, in-person discussions that helped drive these decisions were not sufficiently documented for us to provide the Committee with a definitive response as to how to classify DEQ's interpretation.**

8. Was it more or less stringent than the other possible interpretations?

**See the answer to question 7.**

9. Based on your review of the LCR, discussions with the MDEQ, and reviewing emails and other documents, does it appear that the MDEQ, for whatever reason, may have done the least it possibly could?

**We reported in finding 1 of the performance audit that we believe that MDEQ should have required the Flint WTP to maintain corrosion control after switching from the DWSD, and when that did not occur, the DEQ should have required that the Flint WTP implement a corrosion control treatment plan after the results of the first 6 month testing period.**

**We have no basis to factually address whether DEQ may have done the least it possibly could. As stated in response to question 1, DEQ "...have always waited for 2 rounds of results...", therefore they did not appear willing to deviate from this course of action. We respectfully suggest that the committee pose this question to DEQ.**

10. If the MDEQ had required the maintenance of corrosion control from the beginning, how long could MDEQ have given the Flint water treatment plant to *implement* that treatment and still be in compliance with the lead and copper rule?

**The chart in Observation 1 page 19, shows the maximum allowable time to complete implementation for first time corrosion control treatment. If a corrosion control study is not conducted, the maximum time would be 2.5 years---6 months for DEQ to designate optimal corrosion control treatment and 2 years for the water system to install optimal corrosion control treatment.**

**As stated in finding 1, we reported that because the Flint water system already had corrosion control treatment under DWSD, this part of the LCR was not applicable to the switch. The LCR does not allow for a lapse in corrosion control treatment when making a change in source water or treatment; DEQ should have required corrosion control treatment to be installed before the Flint WTP began distributing water from the Flint River.**

11. What was the quickest MDEQ could have reasonably required implementation?

**See the answer to question 10.**

12. In your December 23rd response to questions from Sen. Ananich, you responded that the DEQ should have required corrosion control treatment to be maintained. If so, should the DEQ have still given the Flint water treatment plant an opportunity to demonstrate through monitoring that it didn't need corrosion control treatment?

**Because we believe that corrosion control treatment should have been maintained at the time of the switch, DEQ should not have given Flint that opportunity.**

13. Under the state Safe Drinking Water Act and its rules, does the DEQ have the discretionary authority to require additional actions and speed up the process if necessary to protect public health?

**See the answer to question 10.**

14. The Governor's Flint Water Advisory Task Force's December 29 letter stated:

*"We believe that in the Office of Drinking Water and Municipal Assistance (ODWMA) at MDEQ, a culture exists in which "technical compliance" is considered sufficient to ensure safe drinking water in Michigan. This minimalist approach to regulatory and oversight responsibility is unacceptable and simply insufficient to the task of public protection. It led to MDEQ's failure to recognize a number of indications that switching the water source in Flint would—and did—compromise both water safety and water quality. The MDEQ made a number of decisions that were, and continue to be, justified on the basis that federal rules "allowed" those decisions to be made."*

Based on your audit, do you agree with that statement?

**The OAG does not have a formal position on the Task Force's report, because we are not familiar with the underlying due process they used in reaching their conclusions. We believe that our performance audit, letters to Senator Ananich, and testimony to this Committee accurately reflect our position.**

15. Did you ever have any sense that the DEQ felt compelled or limited to following what it believed was the letter of the law and rules even when faced with mounting evidence that their interpretation may be harming the public health?

**We respectfully suggest that the Committee pose this question to DEQ. We do not have a sufficient basis to respond.**

16. In your audit, did you review what the protocols were for making decisions in the ODWMA? If so, what are those protocols?

**Decision protocols were not a specific part of our scope. We are not aware of formal policies that identify required approvals based on key ODWMA decisions. For our Senator Ananich letter responses, we did review policies for escalating major infractions up the chain of command and concluded that DEQ did not have a formal policy. DEQ reported that its informal policy was to notify the proper level of management.**

17. Were there any individuals you wanted to talk with during your audit that you were unable to talk to? Who were they?

**We had full access to all relevant State-level personnel. DEQ was very cooperative and responsive to our requests throughout the course of our work.**

**We recognize the limitations imposed because our authority is not extended beyond State of Michigan branches, departments, and agencies. Actions occurring at the local level have a significant impact on this situation and we respectfully encourage the Committee to explore reaching out to those parties.**

18. In conducting the audit, did you uncover any actual or conceivable rationale for why MDEQ decided to wait for the results of the second testing period, knowing that the results of the first testing period necessitated the eventual use of corrosion control treatment under its own interpretation of the LCR?

**We alluded to this in our answer question 1 and others. It appears that because the initial results were 6 ppb, which DEQ indicated was only slightly above the 5 ppb threshold, and still well below the 15 ppb lead action level, that the second 6 month results would provide a more clear direction as to appropriate next steps. DEQ also indicated to us that the improving TTHM and ph levels were factors in their decision.**

19. The question of why the audit did not cover issues relating to water quality aside from lead contaminants was asked last week. While MDEQ's failures with regard to the LCR are significant and well-known, was it the case that those prior issues (e.g., chloride levels, E. Coli, and TTHM) were locally-caused and thus outside the scope of the audit's assessment of MDEQ's performance under the Safe Drinking Water Act? Or did MDEQ have a bigger role to play at that point aside from requiring that the city issue boil-water advisories and other notifications relating to the City's violations of the Act?

**The scope of the audit included a review of DEQ's monitoring of E Coli/Nitrate violations which are considered tier 1 public notice violations because they have significant potential to have serious adverse effects on human health as a result of short-term exposure. We also included lead and copper exceedances even though they are a tier 2 public notice violation, which means that they have potential for serious adverse effects on human health after continuous exposure. We included this tier 2 violation because of the Flint water transition, and potential increased risk statewide. We did not select TTHM monitoring because it was a tier 2 violation and based on our review of correspondence with DEQ the TTHM issues at that time were beginning to fall back into normal ranges.**

**For community water supplies, we selected 6 E Coli violations (including one from the City of Flint) and 4 lead action level exceedances for 4 district offices. We tested to determine if DEQ verified sample population and sizes, ensured that the supply timely submitted samples to the lab and DEQ, timely collected repeat samples if necessary, properly notified the public, and added additional testing if necessary. For the community water supplies we did not note any exceptions with DEQ's monitoring or the systems responses to the violations.**

**For non-community water supplies we selected 7 E coli violations and 5 lead level exceedances at 10 Local Health Departments. We noted exceptions in this sample and reported our findings in finding 4 (d) of the performance audit report.**

20. In light of recent revelations and the concerns voiced at the prior committee hearing, are there any outstanding questions or issues about MDEQ's actions relating to Flint that you would go back and cover in the audit if you could?

**The benefit of hindsight also impacts auditing. We believe that the core issue we reported, i.e. that the department misinterpreted guidance, which DEQ and the EPA indicated could be subject to misinterpretation, remain significant factors even today. In this instance, we felt it important to compile our work and report material issues that existed within the department, thereby delivering timely, relevant information to decision. We appreciate the Committee's questions and interaction as helpful to us in assessing risk for future projects.**

21. Based on your expertise in assessing departmental performance and the information reviewed during the course of this audit, what would you point to as MDEQ's single biggest failure relating to the Flint water crisis?

**Not developing an alternative plan to more promptly assess the water conditions and react accordingly, such as a 3-month testing period, given the system's size and previously unused water source.**

## ADDITIONAL QUESTIONS

In committee you had said that you had used an algorithm to find DEQ emails for the purposes of your audit. Please share your algorithm with us and any emails that the algorithm produced.

**We obtained all available messages for 18 DEQ employees. This included over 700,000 emails, attachments, calendar items, notes, tasks, and contacts. We then refined our review to emails received, sent, deleted or recovered on or after January 1, 2013 and that the subject or body of the email included at least one of the following key words: fraud, expose, hide, illegal, Del Toral, Miquel, Walters corrosion control, phosphate, certify, Flint.**

**We chose the key words to address the risk of wrong doing and to help focus the review on the issue of lead contamination and the LCR. We reviewed over 7,500 emails for information relevant to answering Senator Ananich's questions and meeting our performance audit objectives. We included the emails that represented the most sufficient and appropriate audit evidence in support of our conclusions in our audit work papers. We will provide the emails from our workpapers after they have been prepared for distribution.**

**Releasing the over 7,500 emails in the filtered population will take a significant amount of time and audit resources to review and identify information that we cannot disclose because of confidentiality laws. We will await direction from the Committee before undertaking this project.**

Please provide us with a list of all persons that you interviewed or tried to interview for your audit.

**For the Community and Non-Community Water Supply performance audit and the two previous Senator Ananich letter responses, we were able to interview all persons that we felt necessary to achieve our objectives. We interviewed the following:**

- Adam Rosenthal, DEQ
- Liane Shekter-Smith, DEQ
- Steve Busch, DEQ
- Jim Sygo, DEQ
- Richard Benzie, DEQ
- Mike Prysby, DEQ
- Heather Bishop, DEQ, Kalamazoo
- Ryan Tetrault, Calhoun County Public Health Department
- Sheryl Dodds, Genesee Co. Health Department
- Rebecca Kaiser, DEQ, Saginaw/Bay
- Jon Bloemker, DEQ, Saginaw/Bay
- Robert London, DEQ, Saginaw/Bay

**We also corresponded and held status meetings with several individuals. Based on a question for the Hearing on March 15, 2016, we are preparing for distribution a listing of all interviews and correspondence, including transcripts, summaries and copies of correspondence.**

In a 2010 audit of MDEQ (attached), the EPA found that, in regards to the MDEQ Drinking Water Program:

- Due to funding cuts and resource shifts, vacant positions are filled with staff from other programs that have been cut or eliminated. While this practice preserves jobs, it decreases the technical knowledge of staff and requires tremendous resources to train these staff. In this paradigm, continued and directly applicable training becomes very important. "
- Did your office find any limitations with the funding the DEQ receives, its staffing and experience levels and how those two factors may have contributed to lax enforcement of regulation?

**As noted in Observation 2 of the performance audit, fees are not sufficient to cover the costs of the monitoring program.**

**The 2010 EPA report was issued at the time the department was merging with DNR into the DNRE. The departments were subsequently split back into two departments. One of the EPA reports stated more significant concerns related to the fact that there was no direct reporting line from the district offices to DEQ central office. We validated during our audit that a direct reporting line now exists.**

**We did not include an objective related to evaluating staff qualifications, experience, or training records, therefore we cannot comment on its impact on ODWMA's operations.**

In the same 2010 audit the EPA also found numerous issues with how the DEQ enforced and interpreted the LCR. Did you find any safeguards or processes that were implemented by the DEQ to ensure proper interpretation and enforcement of the LCR following the EPA's audit?

**Under the LCR section of the report there were 4 recommendations. We followed up on 3 of the 4 recommendations in our audit:**

1. **Recommendation: All 90<sup>th</sup> percentiles must be calculated according to federal regulations.**

**Our follow up: We validated that the 90<sup>th</sup> percentile calculations are now calculated in accordance with federal regulations.**

2. **Recommendation: Milestones should be reported to SDWIS/Fed, as required by federal regulations. MDNRE has committed to report LCRMR milestones, as resources allow.**

**Our follow up: We validated that agreed-to milestones were reported to the EPA.**

3. **Recommendation: All systems on annual or triennial monitoring should sample in the summer months of June to September, or an alternate designated four-month time frame.**

**Our follow up: We reviewed DEQ's oversight of public water systems and report exceptions in findings 3 and 4.**

4. **Recommendation: If a system is repeatedly not conducting its annual or triennial lead and copper monitoring, the state should consider placing the system on six-month monitoring until it has two, clean six-month rounds of monitoring.**

**Our follow up: We ensured that the 22 sites we visited were properly testing.**