CITY OF FLINT, MICHIGAN

Dr. Karen W. Weaver
Mayor

August 2, 2018
Mr. Eric Oswald, Director
Drinking Water and Municipal Assistance Division
525 West Allegan Street, P.O. Box 30817
Lansing, MI 48909-8311

RE: MDEQ July 23, 2018 letter regarding Lead Service Line Identification and Replacement Program

Dear Mr. Oswald:

The City is in receipt of the MDEQ's July 23, 2018 letter regarding the Lead Service Line Identification and Replacement Program requesting clarity on several issues. Your letter describes the requirement under the new Lead and Copper Rule that mandates all public water systems to conduct a 'materials inventory' to identify lead service lines, which is a means of reducing risk to public safety. You also stated the MDEQ anticipates hydro-excavation to be a cost-effective means to conduct materials inventory. However, for the safety of City residents, the method(s) used to undertake the materials inventory must accurately reflect the composition of the pipe. Therefore, if the MDEQ chooses to limit its exploration to hydro-excavating, it will be jeopardizing the public's health for the sake of the financial bottom line.

The City acknowledges the MDEQ's belief that hydro-excavation is an effective and efficient method to identify the composition of service lines. But the MDEQ must also take into consideration the health and safety of the people as the first priority – not only for the City of Flint residents, but for all public water systems and for residents throughout the State. The MDEQ has already led the City down this road once before, and the MDEQ must not prioritize cost before the health and safety of the people again.

Notwithstanding this issue, your letter also made a request to determine if the inspectors are conducting an in-home verification when copper is identified at the curb stop.

AECOM, the City's program management team, uses two databases to collect and import information on in-home verification checks when copper is found at the curb stop. Since 2018, inspectors and civil engineers, using the Survey 1, 2, 3 and Collector software, enter the home with the consent of the home owner, observe the pipe, use a file to scrape the in-home pipe to confirm the pipe composition from the floor to the meter, and photograph the pipe. In addition, Goyette, one of the City's contractors under AECOM's supervision, has conducted in-home verification checks. The contractor's data is also merged into the Survey 1, 2, 3 program for one centralized database.

Thus far in 2018, the inspectors, civil engineers and contractors have received a total of 1,530 HVI explorations. Of the 1,530 HVI explorations, there have been a total of 873 copper-to-copper lines at the curb stop. Of the 873 copper-to-copper, there have been 536 total attempts to complete in-home checks. There have been a total of 189 completed in-home checks, 143 second-attempts, 49 third-attempts, 21 declinations, 1 abandoned home, 12 crawl spaces, 2 exhausted-all-visits, 2 no access to the meter, and 2 vacant homes.

Your letter also requested more clarification on the City's position that the use of traditional excavation—which extended the uncovering of the service line to 10 feet—would be more reliable than hydro-excavation. It further asked for clarification on how the City's revised requirement of traditional excavation to a minimum of 10 feet is more protective of public health than the hydro-excavation method.

During the hydro-excavation process, the soil is suctioned out of the hole and in many cases the sidewalls collapse or cave in, covering the service line, not allowing for an accurate identification. Depending on the period of installation, the composition of service line material, and oftentimes service lines are not installed in a straight line. The inspected service line may curve (as there was no previous requirement for the service line to be connected in a straight line). Other obstructions to the identification of the line composition, include but are not limited to large diameter tree roots, tube alloy, sidewalks, and driveways limiting the hydro-excavators' ability to expose the service line. In addition, visibility can be obscured because of water covering the hole or filing the hole back up while the hydro-excavating is still underway. As a result, the hydro-excavation does not reveal an adequate portion of the service line to confirm that the line is completely copper.

So far in 2018, the inspectors, civil engineers and contractors have discovered six (6) copper-to-copper service lines due to splicing of the service line. Three were discovered through hydro-excavation and three through traditional open cut excavation.

Addresses	Date of Discovery
4011 Circle Drive	June 7, 2018
510 Hobson	June 8, 2018
1016 Avenue A	June 4, 2018
820 Cottage Grove	July 11, 2018
3705 Colorado	July 25, 2018
509 Bangs Street	July 27, 2018

But-for the usage of the traditional open cut excavation at the 820 Cottage Grove address, it would not have been discovered that the line was spliced because the lines were not installed perpendicular to the property. The hydro-excavation process would not have exposed the splice, because the process bores holes 12 to 18 inches in diameter. Attached are photographic examples of non-copper splices.

Furthermore, at the June 15, 2018 FWICC meeting, Max Elisner, a FAST Start contracted plumber, detailed the discovery of spliced service lines after the lines were verified as copper-to-copper connections through hydro-excavation. Mr. Elisner stated that certain areas and certain places where the service lines were hydro-excavated, and were identified as copper-to-copper, are not truly copper. Mr. Elisner acknowledged that copper can be found at the curb stop and inside the home, but the lines in question may still be found to contain lead or galvanized steel because, in some cases, the service line was patched more than one time. Mr. Elisner stated that he has seen this happen at least a dozen times. Mr. Elisner even brought an example of a portion of such a service line to the FWICC meeting, demonstrating how the patch work was completed on a service line using a dresser coupling (joint) as a connector from the copper to the galvanized steel pipe. Therefore, the City and the MDEQ must not overlook this important health concern and leave a single residence with lead or galvanized pipe in the ground. The residents' health and well-being must be put first.

With regard to the AWWA Standards – AWWA/ANSI Standard 810C-17, published in November 2017, recommends that more than one method be utilized to identify the likelihood and verify the presence of non-copper service lines to protect the public health and the customers of public water systems. For those systems required to identify and replace their non-copper service lines, the protocols should consider utilizing some or all of the following information:

a. Collection, digitizing, and statistical analysis of their historical public works and property tax records,

b. as-builds drawings,

c. curb box checks via hydrovac explorations,

d. predictive model development,

e. partial open cut explorations,

f. full open cut service line explorations,

g. in-home checks, and

h. in-home sampling.

The AWWA standard recommends that on a community-by-community basis, a combination of these methods be used in conjunction to triangulate the findings to

increase the probability of discovering non-copper service line materials, and to lower the risk of leaving non-copper service line materials in the ground.

In summation, the residents are the most valuable resource that we have in the City of Flint. We must learn from the mistakes that caused the water crisis, and never again allow concerns for profit to come before the people. Therefore, it is my recommendation that MDEQ take into consideration the safety of the public first when determining how it will comply with the revised Lead and Copper Rule to complete a state-wide materials inventory.

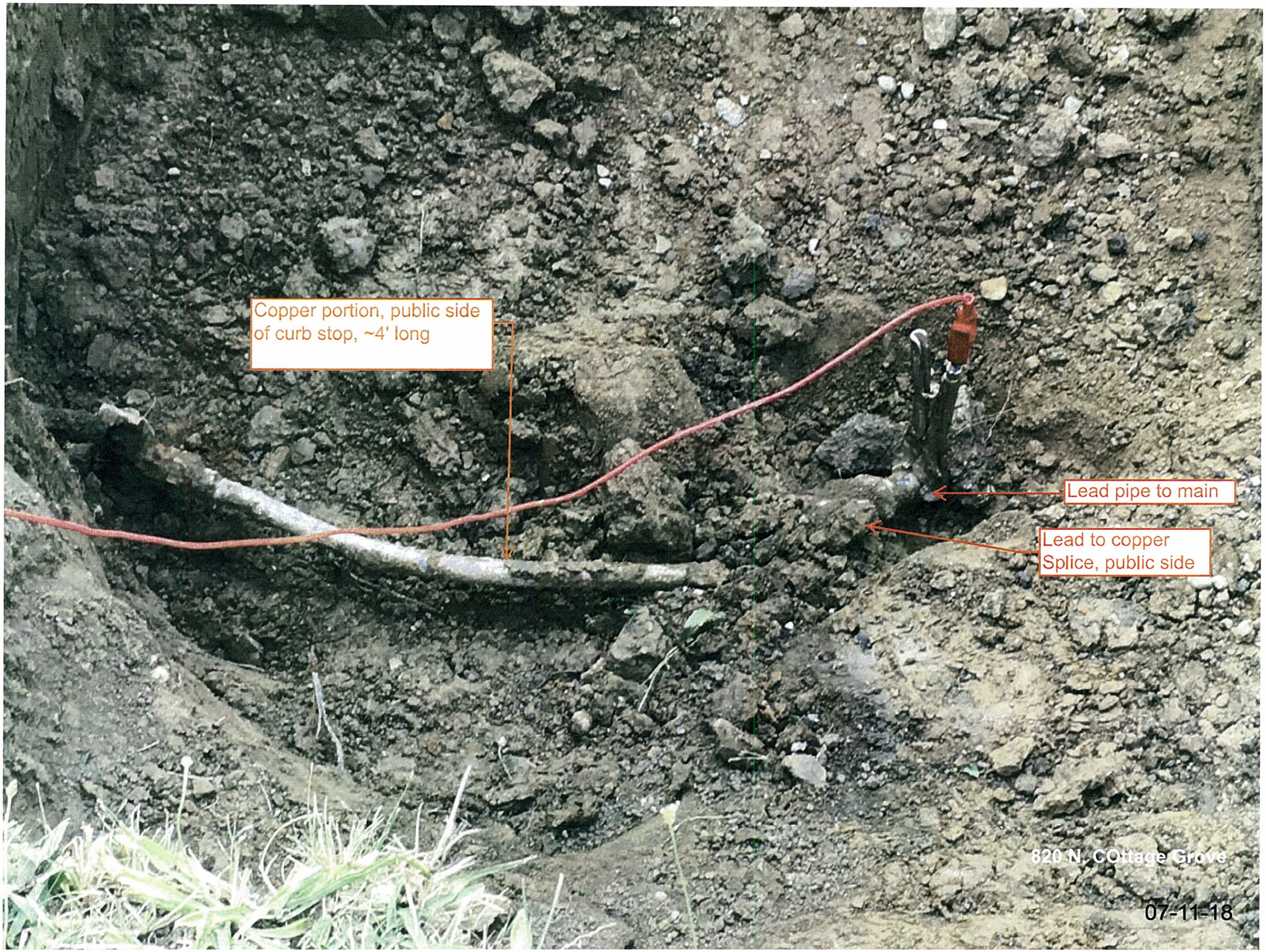
Sincerely,

Karen W. Weaver

Dr. Karen W. Weaver
Mayor

Encl. Photographs of discovery of non-copper service lines after copper check at curb stop and in home check

Cc: Mr. Mark Adas, City Engineer, City of Flint
Mr. Robert Bincsik, Director of Public Works, City of Flint
Mr. Hughey Newsome, Chief Financial Officer, City of Flint
Mr. Steve Branch, City Administrator, City of Flint
Mr. Herbert Winfrey, City Council President, City of Flint
Ms. Linda Holst, Acting Director, Water Division, Region 5, USEPA
Mr. Tom Poy, USEPA
Mr. Anthony Ross, Deputy Project Manager, Region 5, USEPA
Mr. Richard S. Kuhl, Michigan Department of Attorney General
Ms. C. Heidi Grether, Director, MDEQ
Ms. Amy Epkey, Administration Deputy Director, MDEQ
Mr. Aaron Keatley, Chief Deputy Director, MDEQ
Mr. Michael McClellan, Environmental Deputy Director, MDEQ
Mr. Gary Peters, U.S. Senator
Ms. Debbie Stabenow, U.S. Senator
Mr. Dan Kildee, U.S. Congressman
Mr. Jim Ananich, State Senator
Mr. Phil Phelps, State Representative
Mr. Sheldon Neeley, State Representative


Copper portion, public side of curb stop, ~4' long
Lead pipe to main
Lead to copper Splice, public side
820 N. COttage Grove
07-11-18

509 Bangs - Public side lead splice under curb/utility.