January 23, 2016

Dear Philadelphia residents:

Most people just want to know "is my water safe?"

That is not a simple question to answer when it comes to lead at the tap. I am writing this letter to you in the hopes that I can give you some tools to look into the safety of your drinking water in an informed and valid way.

Yesterday *The Guardian* reported that your water utility, the Philadelphia Water Department (PWD), tests your drinking water for lead using a method that can miss lead problems.

Today the *Metro* featured PWD's assurances that a) it is in compliance with the Environmental Protection Agency (EPA) Lead and Copper Rule (LCR), b) it monitors over 50 "vulnerable" city homes, and c) it uses water treatment that successfully keeps "lead levels to a minimum."

Since you are now faced with two confusing claims pertaining to the safety of your water, and since I am directly involved in raising questions about PWD's sampling practices, I'd like to take the opportunity to shed more light on the matter, and encourage you to ask PWD and your city leaders for answers that back up the assurances you have received.

First, let me make clear that I do not know, or claim to know, what levels of lead are flowing out of Philadelphia home taps. I (and my colleagues) are simply concerned that the method PWD uses to monitor for lead is scientifically questionable and may yield both unreliable results and misleading assurances of safety (see PWD's sampling instructions with my comments below).

The LCR requires water utilities to sample for lead from locations that have the *highest* risk of elevated lead levels. EPA defines a "proper" lead-in-water sample in the following way:

> The LCR also defines a proper sample as a first draw sample, 1 liter in volume, that is taken after water has been standing in plumbing for at least six hours, and from an interior tap typically used for consumption – cold water kitchen or bathroom sink tap in residences. [40 CFR 141.86(b)(2)] There is no outer limit on standing time.

If you compare this definition to PWD's sampling instructions, you'll see three differences – residents are instructed to:

1. **Remove aerators prior to sampling** (an aerator is the small circular screen at the end of your tap). As *The Guardian* reported, EPA issued guidance against this practice in 2006 (see EPA's guidance below):

   > "…if customers are only encouraged to remove and clean aerators prior to drawing a sample to test for lead, the public water system could fail to identify the typically available contribution of lead from that tap, and thus fail to take additional actions needed to reduce exposure to lead in drinking water. Therefore public water systems should not recommend that customers remove or clean aerators prior to or during the collection of tap samples for lead."

2. **Run the water for 2 minutes** before the 6+ hour stagnation period required for proper sampling. This practice is called "pre-flushing." It is known to temporarily reduce lead-in-water levels at the tap. It was used in the Flint, MI testing too, which resulted in false

assurances that lead levels fell within EPA standards. It was not, however, used in the Virginia Tech testing, which according to Marc Edwards is one of the main reasons his team was able to identify Flint's lead-in-water contamination.

If you'd like to know more about pre-flushing, you can take a look at the letter a coalition of Washington, DC groups sent to EPA in 2008 demanding an end to our own water utility's pre-flush (see below). As reported by *The Guardian*, EPA's response to this letter was that while pre-flushing:

> "…may fall within a strict legal interpretation of the regulations, we believe that it goes against the intent of the monitoring protocol, since it changes the normal water use of the homeowners in the sample" (see below).

Indeed, since that time, DC Water has abandoned pre-flushing. So has Chicago's water utility.

3. **Fill the sampling bottle slowly**. This practice is also known to miss lead problems that may be present under normal water use conditions (e.g., when you fill up a glass of water or a pot for cooking). Simply put, this is because medium-to-high water flow is more likely to "scrape off" lead from plumbing. For more information about this issue, you might want to take a look at this study.

Given PWD's sampling protocol, there is a possibility that PWD misses lead-in-water problems that EPA's proper sampling protocol would capture.

The Lead and Copper Rule (LCR) was passed in 1991 to protect the public from lead in drinking water. In 2004, a *Washington Post* investigation also raised concerns about PWD's implementation of the regulation.

You are entitled to correct implementation of the LCR and to accurate information about lead levels in your drinking water. You are also entitled to know:

- Why PWD is using the above three practices
- How these practices comply with the intent of the LCR monitoring requirement
- What evidence PWD can provide to show that its sampling method does *not* underestimate lead levels in tap water
- What specifically PWD's sampling results "prove" (I am using the wording from today's *Metro* article)
- What evidence PWD can provide to show that it meets LCR standards as they are defined
- What evidence PWD can provide to show that the homes it monitors for lead meet the LCR's criterion of "high-risk," and how the utility obtained this evidence for each of the 50+ homes it samples.
- What evidence PWD can provide to show that its corrosion control treatment technique "keeps lead levels to a minimum" as defined by the LCR, especially in light of the 2015 statement by nationally-recognized EPA lead corrosion expert Mike Schock that:

> ***"By no legitimate scientific definition" has any large water utility carried out necessary studies to identify corrosion control treatment that results in the lowest possible levels of lead at consumer taps (without violating any other national primary drinking water regulation).***

Clear and complete answers from PWD are necessary for ensuring that its assurances in today's *Metro* have backing.

In the meantime, please know the following facts:

- There is no safe level of lead in drinking water.

- Lead in drinking water poses a well-documented and serious public health risk, especially to fetuses, infants dependent on reconstituted formula, and young children. Recent investigations in the US have shown that lead in water used for drinking or cooking can be the primary source of lead for children with elevated blood lead levels.[1]

- Although the populations most vulnerable to harm from lead ingest drinking water on a daily basis, the monitoring practices in place for the detection of lead in water and lead in blood, are not well designed to capture links between the two. In fact, it can be argued that these practices are designed to miss such links.

- Water utilities achieve compliance with the LCR when over 90% of high-risk homes they sample release lead levels equal to or below 15 parts per billion. ***This means that when a water utility assures its customers that it meets LCR standards, all of the homes it serves may dispense between zero and 15 parts per billion lead, and 10% of the homes it serves may dispense any concentration of lead whatsoever***.

- Lead can leach from plumbing in high concentrations, even when a water utility implements optimal corrosion control treatment.

- There are no regulations requiring the control of lead in water in US day care centers and schools.

- If you want to protect yourself from lead in water, there are several actions you can take. Here's a brief summary for your information.

Warm regards,

Yanna Lambrinidou

Yanna Lambrinidou, PhD
Affiliate faculty, Virginia Tech
President, Parents for Nontoxic Alternatives

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[1] Hanna-Attisha, M., J. LaChance, R. C. Sadler, and A. C. Schnepp. 2016. Elevated Blood Lead Levels in Children Associated With the Flint Drinking Water Crisis: A Spatial Analysis of Risk and Public Health Response. *American Journal of Public Health* 106(2):283-290.
Triantafyllidou, S. and M. Edwards. 2012. Lead (Pb) in Tap Water and in Blood: Implications for Lead Exposure in the United States. *Critical Reviews in Environmental Science and Technology* 42:1297-1352.
Brown, M.J. et al. 2011. Association Between Children's Blood Lead Levels, Lead Service Lines, and Water Disinfection, Washington, DC, 1998-2006. *Environmental Research* 111(1):67–74.
Edwards, M., et al. 2009. Elevated Blood Lead in Young Children Due to Lead-Contaminated Drinking Water: Washington, DC, 2001−2004. *Environmental Science and Technology* 43(5):1618−1623.

Water Sampling Instructions

A. 6 or more hours BEFORE the water sampling:

This step can result in missing and underestimating lead-in-water problems. In 2006, EPA issued national guidance against aerator removal prior to sampling.

1. **Disconnect any faucet attachments** (e.g. ice maker, water filter...) and **isolate any leaks** in the house.
2. **Remove the aerator** from the faucet. Leave the aerator off until sampling is completed.
3. Run only the cold water for **2 minutes**. **Cold water** should be the last water run through this faucet before the 6 or more hours stagnation period.
4. Turn the faucet off and **do not run water anywhere in your house until after the sample has been taken.** Do not run the dishwasher or clothes washer, use hot water, take a bath or flush toilets.
5. Make a note of the time on the **Chain of Custody Form**.

This is the practice of "pre-flushing." A 2-min pre-flush can clear out lead particles and will miss the vast majority of lead service line water. When it comes to lead in water, lead particles and lead service line water pose the greatest risk to public health.

B. How to collect the water sample:

1. First, **at least 6 hours** must have passed since you stopped using water before collecting the sample. If cold or hot water was used by accident after you stopped using water, you can reschedule the sample collection to another day.
2. If everything is OK then proceed with sample collection. **Write on the label on the bottle**: your **Loc ID and the Date and Time** of sample collection.
3. Carefully uncap the bottle and keep the cap clean.
4. Slowly fill the bottle with only cold water to the **RED mark** on the neck of the bottle.
5. Turn off the faucet.
6. Replace the bottle's cap and tighten.
7. Replace the aerator on your faucet.
8. Fill out the **Chain-of-Custody Form**. **If you have any questions please call 215-685-1406.**
9. Place the sample bottle in the box, along with the completed **Chain-of-Custody Form** and set it outside of your front door in a place where we can pick it up without bothering you.

Low-flow when sampling for lead in water can fail to capture lead particles that would normally enter a consumer's glass or cooking pot. This step too can miss and underestimate lead-in-water problems.

C. Call for sample pick-up:

1. When you call for pick-up, please let us know the **ID number** that is located on the label on the sample box, **your name**, **address** and a **contact number** where we can reach you. The sample will be picked up from the front door on the day of your call or the following business day.
2. **For pick-up call 215-685-1400. If no one picks up call 215-685-1406 and leave a message.**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

WSG 178
Date Signed: October 20, 2006

OCT 20 2006

OFFICE OF
WATER

MEMORANDUM

SUBJECT: Management of Aerators during Collection of Tap Samples to Comply with the Lead and Copper Rule

FROM: Stephen Heare, Director
Drinking Water Protection Division
Office of Ground Water and Drinking Water

TO: EPA Drinking Water Branch Chiefs
Regions I-X

The Lead and Copper Rule requires monitoring at customer taps to identify levels of lead that may result from corrosion of lead-bearing components in the distribution system or household plumbing. Public water systems are not allowed to use sampling sites that include faucets that have point-of-use or point-of-entry treatment devices designed to remove inorganic contaminants (40 CFR § 141.86(a)), as these faucets will have removed the lead.

It has come to our attention that some EPA guidance documents have included information that may have led public water systems to give customers directions that inadvertently reduce the potential to identify lead in drinking water provided at customer taps – taps that are otherwise eligible for inclusion as a sampling site.

Lead-bearing particulate matter may end up in drinking water from physical corrosion of leaded solder in household pipes. Many kitchen and bathroom taps that are used to provide water for human consumption have an aerator as part of the faucet assembly. Aerators serve to introduce air into the water flow, which makes it feel as if a larger water flow is coming out of the tap. The use of aerators is widely viewed as an effective water conservation practice. Although not intended to remove inorganic contaminants, screens that are part of the aerator may trap particulate matter or debris within the faucet.

EPA recommends that homeowners regularly clean their aerators to remove particulate matter; however, neither EPA's regulations nor the Agency's *Lead and Copper Monitoring and Reporting Guidance for Public Water Systems* (EPA-816-R-02-009) provide public water systems with specific instructions on how to consider the

aerator during the collection of tap samples. However, a Pocket Sampling Guide for Small Systems developed through an EPA grant in 2004[1] and a recently released CD based on that guide[2] do include information recommending removal of the aerator prior to sampling for lead. Additionally, the Agency released guidance last December for schools that receive water from a public water system that included advice to remove the aerator prior to sampling.

We have also recently seen some public water system homeowner sample collection instructions which recommend that homeowners remove the aerator from the tap prior to sampling. Removal and cleaning of the aerator is advisable on a regular basis. However, if customers are only encouraged to remove and clean aerators prior to drawing a sample to test for lead, the public water system could fail to identify the typically available contribution of lead from that tap, and thus fail to take additional actions needed to reduce exposure to lead in drinking water. Therefore, public water systems should not recommend that customers remove or clean aerators prior to or during the collection of tap samples for lead.

If the results from the initial sample are above the action level, the public water system may want to consider taking a second sample to determine whether particulate matter is the source of lead. For this sample, the aerator would be cleaned or removed prior to sampling so that the two samples could be compared. The system may also want to test any debris to determine if it is lead-bearing. This would allow the public water system to better identify appropriate advice to give the homeowner and the community about measures they can take to reduce their exposure to lead. Note that the results of both samples would be included in the set of samples used to determine the 90th percentile (i.e., the first could not be invalidated on the basis of presence of lead-bearing debris in the aerator).

As noted earlier, although EPA's regulations and Lead and Copper Rule guidance for public water systems have not included advice about managing aerators during sampling, some EPA guidance documents have included such information. This is an error and we are currently revising those guidance documents to advise that aerators remain in place during initial sampling for lead from taps.

EPA's recommendation about the consideration of aerators during water sampling applies only to samples that are collected to identify lead and copper in drinking water. It does not apply to tap samples that may be collected to support the public water system's optimal water quality parameter monitoring program. The aerator should be removed, and the faucet outlet cleaned and thoroughly flushed to remove scale particles, prior to collection of samples that may be monitored for pH and/or dissolved oxygen.

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[1] Pocket Sampling Guide for Operators of Small Systems, New England Water Works Association, 2004

[2] EPA's Interactive Sampling Guide for Drinking Water System Operators, US EPA, EPA 816-C-06-001, 2006

WSG K
Date Signed: October 20, 2006

As an attachment to this memorandum, we are providing EPA's suggested directions for collecting tap samples for lead in drinking water that has been amended to specifically address aerators. Please share this information with your state drinking water program directors. We will also include this information in any future revisions of the *Lead and Copper Monitoring and Reporting Guidance for Public Water Systems*. If you have any questions, please contact Ron Bergman, Chief of the Protection Branch, at 202-564-3823.

Attachment

cc: James Taft, Association of State Drinking Water Administrators
Steve Via, American Water Works Association

WSG K

Date Signed: October 20, 2006

Suggested Directions for Homeowner Tap Sample Collection Procedures

These samples are being collected to determine the lead and copper levels in your tap water. This sampling effort is required by the U.S. Environmental Protection Agency and your State, and is being accomplished through the cooperation of homeowners and residents.

Collect samples from a tap that has not been used for a minimum of 6 hours. Because of this requirement, the best time to collect samples is either early in the morning or in the evening upon returning from work. Be sure to use taps that have been in general use by your household for the past few months. The collection procedure is described in more detail below.

1. Prior arrangements will be made with the customer to coordinate the sample collection event. Dates will be set for sample kit delivery and pick-up by water department staff.
2. There must be a minimum of 6 hours during which there is no water used from the tap the sample is taken from and any taps adjacent or close to that tap. The water department recommends that either early mornings or evenings upon returning home are the best sampling times to ensure that the necessary stagnant water conditions exist.
3. A kitchen or bathroom cold-water faucet is to be used for sampling. If you have water softeners on your kitchen taps, collect your sample from the bathroom tap that is not attached to a water softener, if possible. **Do not remove the aerator prior to sampling**. Place the opened sample bottle below the faucet and gently open the cold water tap. Fill the sample bottle to the line marked "1000-mL" and turn off the water.
4. Tightly cap the sample bottle and place in the sample kit provided. Please review the sample kit label at this time to ensure that all information contained on the label is correct.
5. ***IF ANY PLUMBING REPAIRS OR REPLACEMENT HAS BEEN DONE IN THE HOME SINCE THE PREVIOUS SAMPLING EVENT, NOTE THIS INFORMATION ON THE LABEL AS PROVIDED. ALSO IF YOUR SAMPLE WAS COLLECTED FROM A TAP WITH A WATER SOFTENER, NOTE THIS AS WELL.***
6. Place the sample kit outside of the residence in the location of the kit's delivery so that department staff may pick up the sample kit.
7. Results from this monitoring effort will be provided to participating customers when reports are generated for the State. However, if excessive lead and/or copper levels are found, immediate notification will be provided (usually 10 working days from the time of sample collection).

Call _____ at _____ if you have any questions regarding these instructions.

TO BE COMPLETED BY RESIDENT

Water was last used: Time_____ Date_____
Sample was collected: Time_____ Date_____

I have read the above directions and have taken a tap sample in accordance with these directions.

Signature _____ Date_____

Alliance for Healthy Homes
Clean Water Action
Friends of the Earth
Lead Safe DC
Parents for Nontoxic Alternatives
Washington DC Chapter of the Sierra Club

1 August 2008

Stephen Heare, Director
Drinking Water Protection Division
Office of Ground Water and Drinking Water
US Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington DC 20460-0003

Jeffrey Kempic, Treatment Technology and Cost Team Leader
Standards and Risk Management Division
Office of Ground Water and Drinking Water
US Environmental Protection Agency
1200 Pennsylvania Avenue NW
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Dear Sirs,

We, the undersigned, are deeply concerned that DC WASA's purported compliance with EPA Lead and Copper Rule (LCR) federal regulations is tainted by a misguided and inappropriate sampling protocol that requires, among other things, a 10-minute remedial flush of the home plumbing lines on the eve before compliance sampling. Flushing of plumbing lines to remove soluble lead and accumulated lead sediment is well-known to temporarily decrease lead levels in water, and for this reason it is frequently mentioned as a short-term remedy to reduce human lead exposure. It is undeniable that requiring consumers to pre-flush 10 minutes will reduce lead-in-water values measured in Washington DC for DC WASA's LCR compliance samples.

With good reason, pre-flushing is not part of EPA's standard LCR monitoring requirements (40 CFR 141.86). On 7/9/08, we asked EPA Region III directly whether they support DC WASA's instruction to homeowners to pre-flush; in response, EPA Region III informed us that they are not required to approve or disapprove DC WASA's sampling protocols for LCR compliance (Appendix 1). At the same time, EPA Region III refuses to endorse DC WASA's 10-minute pre-flush. This is the second year in a row that we find ourselves in this bind. In 2007, we tried to confirm that EPA Region III had endorsed DC WASA's 45+ minute pre-flush the eve before sampling in DC public schools (DCPS), but we had no success (Appendix 2).

It is our belief that:

a) Residents of Washington DC deserve to be protected by the same lead-in-water standard that is set by EPA's LCR federal regulations and which applies elsewhere in the United States;
b) As the agency with primacy over the District's drinking water, EPA Region III has a responsibility to ensure that DC WASA's LCR sampling methodology is scientifically sound, and must be accountable for it;

c) As long as DC WASA's LCR compliance data are based on a sampling protocol that requires a 10-minute flush the night before sampling (a deviation from normal-water-use protocols) the data fail to capture worst-case lead as is the intention of the LCR, and the reported 90%'ile lead values may severely understate the District's current lead-in-water problem;
d) The gaming of 90%'ile lead values using this flawed protocol leaves District residents exposed to a substantial public health risk, without appropriate warnings to flush or use lead filters for their protection from unnecessary lead exposure.

In light of the fact that the LCR is the only official assessment of the safety of Washington DC's drinking water relative to lead, and DC WASA and EPA Region III's repeated assertion that DC water has been safe to drink since 2005 is based on the reported LCR 90%'ile lead value, we ask EPA HQ for a clear policy statement prohibiting pre-flushing of any duration the night before sampling for lead.

I. Lead in the District's Drinking Water

DC WASA claims that it has met LCR requirements via improved corrosion control since early 2005 and, as a result, most warnings about potential dangers from elevated lead in DC water, public education about the need for flushing, and distribution of lead filters ended in early 2006. Since that time, DC WASA and EPA Region III have repeatedly said that the District's water is safe to drink based on compliance with the EPA LCR action level. However, independent tests and DC WASA's own data show that in the last three and a half years, hazardous concentrations of lead have been detected at many taps across the city and call into question the integrity of the reported 90%'ile lead values. Specifically:

- **University of California, Berkeley study**
  In 2004 and 2005, independent researchers at UC Berkeley conducted a study that analyzed approximately 150 drinking water samples from DC homes and schools. Results from samples collected in 2005 revealed high levels of lead, despite DC WASA's assurances that DC water was once again meeting federal standards. According to the authors, "Despite reports that lead levels have fallen significantly over the past year, 63% of all homes tested during the second year of our study [2005] still contained lead levels that exceed the EPA limit. In addition, drinking water collected from a well-used fountain at an elementary school site that a local government reported as lead free contained lead concentrations greater than 5 times the EPA action limit two years in a row (Adarkwah, N. E., et al. 2005. *Investigation of Higher than Standard Lead Concentrations in Drinking Water from Washington, DC*. American Geophysical Union presentation, Fall 2005).

- **Customer service samples**
  In the 2nd half of 2006, the 90th'ile of DC WASA's customer service samples, which represent a random pool of homes where one would not expect to find water lead levels nearly as high as in the high-risk homes targeted by the LCR, exceeded EPA's action level for both 1st draw (16 ppb) and 2nd draw (19 ppb). Five 1st draw samples (3%) had levels above 200 ppb. DC WASA's LCR data for the same time period, which are supposed to capture the worst case, showed the 90th'ile to be 12 ppb and found no 1st draw measurements above 20 ppb. This data proves that in 2006, DC WASA's first draw sampling measurements did not capture the worst case lead in the District's water.

- **LCR samples**
  In 2007, 7% of 1st draw LCR samples exceeded 100 ppb. In the second half of 2007, DC WASA's 2nd draw 90th'ile LCR compliance samples exceeded EPA's action level (17 ppb). Although 2nd draw samples are not counted for LCR compliance, these samples are more representative of the water District residents use for drinking and cooking and, as such, are a cause for concern.

- **Schools**
  In 2006-2007, FOIA requests revealed that 77% of DC public school buildings had at least one tap with lead levels exceeding the EPA action limit of 15 ppb, and 10% of schools had at least one tap with lead levels above 700 ppb. When a piece of jewelry is found to leach an equivalent amount of

lead (i.e., over 175 ug Pb, which is 700 ppb lead in 250 mLs for water samples in schools), the *Consumer Product Safety Commission* considers fining the manufacturer and issuing a recall because of concern over acute health effects in children who might ingest the jewelry. Two taps at DCPS dispensed water with such high concentrations of lead (i.e., over 10,000 ppb) that it can literally be classified as "hazardous waste." In 38 schools more than 20% of taps tested high for lead, and in 7 schools elevated levels of lead in water were measured in at least 60% of taps. These very high lead measurements were obtained despite a controversial 45+ minute pre-flush the night before sampling, which, as we later discovered, was dictated to DCPS by DC WASA.

In 2008, and after the expenditure of several million dollars for remedial action and installation of lead filters, independent follow-up testing by Parents for Nontoxic Alternatives and Virginia Tech revealed that in 5 of the 6 high-risk schools sampled, 11% or above of taps continue to dispense elevated levels of lead. In one school, 40.5% of taps dispensed lead above the DCPS failure criteria of 15 ppb lead in a 250 mL sample. 15% of taps measured over 100 ppb, and 2% of taps measured over 1,000 ppb. By and large, problem taps were ones that lack a lead filter. In our sampling in 2008, we did not flush the school plumbing lines before sampling the next day. While the situation at DCPS today is much improved due to the installation of lead filters, the remaining taps with high lead are similar to fixtures in many homes without lead service lines throughout Washington DC. While the current sampling results at DCPS are nothing to brag about and suggest that DC's water continues to be corrosive, we wonder how much worse the situation would be if the Mayor had not spent several million dollars on comprehensive remediation. By extension, we are very concerned about the actual levels of lead in thousands of homes that have not received such intensive remediation.

- **Homes of children with elevated blood lead levels**
  In 2007-2008 (to date), drinking water was implicated as either the only identified environmental source or a plausible contributing source of lead for 11% of the District's children who had elevated blood lead levels and whose home tap water was analyzed (water samples were collected in only 60% of cases). Three children with lead poisoning had water as the only identified lead hazard in the home.

  In July 2008, independent testing by Parents for Nontoxic Alternatives and Virginia Tech at the home of a child with lead poisoning revealed that 3 out of the 9 taps in the home dispensed excessive levels of lead. One of the three taps, which is used by the child for drinking, measured at 947 ppb for the 1st draw and 51.99 ppb for the 2nd draw. Although this home was also severely contaminated with lead-containing dust, regular consumption of the water alone could have easily caused lead poisoning (> 25 ug/dL).

II. The Problem with Pre-flushing

Flushing is a ***remedial measure*** recommended by the EPA as a short-term solution to known lead-in-water problems. In 2007, when DC WASA instructed DCPS to pre-flush all buildings for 45+ minutes the night before sampling, much of the language they used to train "flushing volunteers" was taken word-for-word from language in EPA's "3Ts for Reducing Lead in Drinking Water in Schools" (www.epa.gov/OGWDW/schools/pdfs/lead/toolkit_leadschools_guide_3ts_leadschools.pdf). DC WASA's flushing time the night before sampling, however, was even longer than the ***remedial*** flushing time recommended by EPA to temporarily reduce lead exposure for school children. In section "5.2 Interim (Short-Term) Control Measures," the EPA manual features "Exhibit 5.1" with flushing instructions for remediation of high lead. The table below juxtaposes EPA's language in this exhibit with DC WASA's language in the 2007 PowerPoint presentation to volunteers. With good reason, the EPA lead-in-schools instructions do not recommend exhaustive remedial pre-flushing the night before sampling, as that would obviously hide lead problems at some taps that would occur during normal usage.

EPA flushing instructions (REMEDIAL ACTION) to control lead in water	DC WASA flushing instructions for lead-in-water sampling at DCPS
"Locate the faucet furthest away from the service line on each wing and floor of the building…"	"Locate the faucet furthest away from the service line. (This has to be done for each wing and floor of the building)"
"…open the faucets wide, and let the water run for **10 minutes**."	"Open the faucet and let the water run for **forty five (45) minutes**."
"Open valves at all drinking water fountains without refrigeration units and let the water run for roughly **30 seconds to one minute**, or until cold. Let the water run on all refrigerated water fountains for **15 minutes."**	"Open the valves on all bubblers and fountains for **five (5) minutes** and… "… water coolers for **fifteen (15) minutes**."
"Open all kitchen faucets (and other faucets where water will be used for drinking and/or cooking) and let the water run for **30 seconds to one minute**, or until cold."	"Open all faucets found in kitchens, nurses offices, and any other locations where water will be used for drinking or cooking. Let the water run for **five (5) minutes**."

Moreover, in 2004 Dr. Marc Edwards of Virginia Tech collected data specific to Washington DC that documented the effect of pre-flushing time on lead-in-water levels at a DC home with an intact lead service line (Attachment 1). This graph illustrates what common sense tells us is obvious. Using a 10-minute flush immediately prior to the start of stagnation causes a dramatic – albeit temporary – reduction of lead levels at the tap. ***In single-family homes, the 10-minute pre-flush virtually eliminates any chance of finding lead in the first draw sample that is derived from the lead service line. According to EPA and DC WASA, lead from the service line is the key contributor to first draw lead in the city, and was the primary source of public health concern in 2004.*** In real life, since running the kitchen tap for 10 minutes every evening is something most people do not do, many first 1st draw samples without this instruction would contain significant levels of lead from the service line, representing the serious exposure that can occur from the ingestion of 1st draw water. Moreover, 1st and 2nd draw water collected under typical conditions in Washington DC can often contain particles of metallic lead that are occasionally dislodged from the service line, lead solder or lead rust, especially in homes with relatively low water usage. The potential contribution of particulate lead from the lead service line is also almost completely eliminated via exhaustive pre-flushing (essentially sweeping the plumbing clean of such particles) the eve before sampling. Dr. Edwards communicated his grave concerns (and experimental data) about the 10+ minute pre-flush on the evening before WASA's LCR sampling to EPA Region III in March 2007.

Despite DC WASA's and EPA Region III's dogged resistance to reveal whether DC WASA requires pre-flushing for LCR compliance sampling (Appendix 3 and 4), we now have confirmation that DC WASA pre-flushed during the following sampling rounds:

Date	Sampling Event	Duration of Pre-Flush	Expert Comments
2004	DC public schools and apartments	10 minutes	"They flushed the devil out of those schools" (anonymous consulting engineer quoted in *Environmental Science & Technology* 5/31/06) "The survey of lead in D.C. school drinking water was unlikely to reveal both the actual previous situation to which children and teachers were really exposed, not to mention the worst-case scenario, which is the intention of the law" (anonymous scientist quoted in *Environmental Science & Technology* 5/31/06)
2005	LCR compliance	10 minutes	
2006	LCR compliance	10 minutes	
2007	LCR compliance	10 minutes	
March 2007	DC public schools	45 minutes (plus 5-15 minutes at each tap)	
2008	LCR compliance	10 minutes	
March 2008	homes with partial pipe replacements	10 minutes	"As I have known since 2004, a 10 minute+ pre-flush has one effect and one effect only in Washington D.C.....to eliminate any chance of finding lead in the first draw sample from the lead service line." … "…after WASA was roundly criticized for the 10+ minute pre-flush instruction during the lead in school water sampling in 2004, which helped to hide lead hazards in DC schools for years, it would have been reasonable to expect this nonsense to stop. Instead, WASA recommended 55+ minute pre-flush for DCPS in 2007, and persists in the 10+ minute pre-flush instruction to the present day, even in a study purportedly designed to identify problems with lead leaching from the service line" (6/5/08 e-mail from Marc Edwards, Virginia Tech, to Joseph Cotruvo, DC WASA Board of Directors).

DC WASA was criticized publicly by independent experts for pre-flushing in 2004 and 2007 (http://pubs.acs.org/subscribe/journals/esthag-w/2006/may/science/rr_mislead.html, http://www.washingtonpost.com/wp-dyn/content/article/2007/04/28/AR2007042800929.html). In 2007, DC WASA claimed adamantly that their sampling instructions for DCPS (with a 45+ minute pre-flush) had been approved by EPA Region III, something that EPA Region III later publicly denied. As the 4/28/07 *Washington Post* article reveals, when confronted about the exhaustive pre-flush of the schools, DC WASA pointed their finger to EPA Region III and EPA Region III pointed their finger to DC WASA, while DC school children were left in harm's way. The same unacceptable sequence of events is taking place right now relative to DC residents and the LCR compliance data. DC WASA told us repeatedly that EPA Region III approved their LCR sampling instructions. Here are some examples of their statements:

- 6/6/08 e-mail from the DC WASA Board to Dr. Edwards:

  "EPA has recently stated on the record that they have no difficulty with the procedures being followed and the lead compliance data that DCWASA is producing. EPA is fully aware of and allows the night-before flush in the compliance protocol. It is consistent with the requirements and the intent of the rule."

- 7/4/08 e-mail from the DC WASA Board to the Alliance for Healthy Homes:

  "They [DC WASA staff] will also respond to your preflush question, although, as I have said before, it is not an issue relative to the compliance determination. The Lead Copper regulation compliance testing requires at least 6 hours stagnation. WASA's compliance sampling plans are submitted to EPA and have been approved, so EPA has officially accepted the protocol that includes preflush the night before. I have also discussed it with EPA. They are definitely aware of it and they have no objection, because it meets or exceeds the requirement in the regulation."

- 7/8/08 e-mail from the DC WASA Board to the Alliance for Healthy Homes:

  "You will need to deal directly with EPA if you wish additional information about their acceptance and interpretation of the pre flush prior to 6 hours. Dr Jennie Saxe's statement at the May 1 hearing was to the effect that EPA accepts the LC Rule monitoring and the data that are being generated by DCWASA without equivocation. I believe that would be considered a first hand position statement from EPA."

Given our experience with EPA Region III and DC WASA in 2007, we asked that the DC WASA Board obtain a written statement from EPA Region III that specifically supported the 10-minute pre-flush. The DC WASA Board would not do so, so we asked EPA Region III directly for confirmation of their approval. The written communication from EPA Region III was hardly reassuring. EPA Region III explicitly denied approving DC WASA's LCR compliance pre-flush. Below are excerpts from Dr. Jennie Saxe's 7/16/08 e-mail to the Alliance for Healthy Homes and Parents for Nontoxic Alternatives that directly contradict the statements attributed to them by DC WASA:

> ***"My testimony presented at the May 1 DCWASA board hearing did not specifically address the issue of flushing prior to the stagnation period required prior to Lead and Copper Rule (LCR) tap sampling." … "The LCR does not require submission of sampling plans or instructions prior to sampling; thus, the regulations do not require EPA to approve or disapprove DCWASA's sampling plans." … "DCWASA has provided its sampling plans for the sampling required by 40 CFR 141.86 to EPA for review and comment. EPA has***

not commented on the 'flushing prior to stagnation' portion of the sampling instructions. Although EPA has offered comment, EPA has neither 'approved' or 'disapproved' DCWASA's sampling plans."

We also requested that the DC WASA Board find us an example of any other large city in the United States that instructs consumers to pre-flush for 10 minutes the night before collecting LCR compliance samples. They could not, or would not, do so. Parents for Nontoxic Alternatives then conducted its own survey of LCR sampling instructions from several large US cities. So far, we have encountered none that require customers to pre-flush for 10 minutes in order to meet the EPA LCR.

It seems unconscionable to us that EPA Region III, the agency that provides ***direct oversight*** of DC water, can claim that they have no obligation (or even authority) to ensure that the methods by which water samples are collected in the District yield accurate lead-in-water measurements. If Washington DC were a state, EPA Region III would have oversight of the state LCR process, and we would appeal this unacceptable situation to EPA Region III. However, since EPA Region III has direct oversight of the District water, we feel it is appropriate to direct our appeal to EPA HQ. We hope you would agree that DC WASA's flawed sampling protocol and EPA Region III's unwillingness to take a stance on it, leaves the District's population uniquely unprotected by the use of an unconventional sampling instruction that can hide lead and, to our knowledge, is not used anywhere else in the United States.

III. Analogies between Pre-flushing and Removal of the Aerator before LCR Sampling

In light of the fact that DC WASA's LCR compliance data do not seem to capture the severity of the lead-in-water problems detected by independent tests (e.g., the UC Berkeley study in 2004-2005; customer service samples in 2006; DC public schools in 2008; homes of children with elevated blood lead levels in 2007 and 2008), we strongly suspect that DC WASA's 10-minute pre-flush may be hiding serious lead-in-water problems. This same general issue of adding a new instruction to the accepted EPA sampling protocol, with a known capacity to temporarily reduce lead at the tap, using words that are neither required nor explicitly banned by EPA, was raised two years ago in relation to the removal and cleaning of aerators just prior to an LCR sampling event. After a North Carolina child was lead poisoned from water, in part, because the sampling protocol hid lead-in-water problems, in October 2006 EPA acted quickly and decisively to ban this extra instruction (Attachment 2).

We are requesting that EPA take the same decisive stance on pre-flushing. If it does not, there is nothing to prevent DC WASA – and potentially other utilities around the country – from continuing to engage in this and even more egregious pre-flushes. Where will it end? Is it acceptable for all US utilities to start requiring a 45+ minute pre-flush for LCR compliance sampling, similar to that which DC WASA used at DCPS in 2007?

DC WASA has told us on numerous occasions that pre-flushing is defensible because it is not explicitly prohibited by the LCR. In the words of the Chair of the DC WASA Board's ad hoc Water Quality Committee:

"By definition, collection of a 1st draw sample after at least 6 hours of stagnation meets or exceeds the regulatory requirement. Clearly a pre flush prior to 6 hours stagnation is not excluded by the rule" (7/8/08 e-mail to the Alliance for Healthy Homes).

We find this argument to be specious. For example, we also do not see language in the LCR that says a utility may not truck in water to fill consumers' pipes with a highly non-corrosive lead-free water containing 5 mg/L of orthophosphate at an unrepresentative non-corrosive pH, then sample that water the next day after 6 hours of stagnation for EPA compliance. Similarly, we do not see language in the LCR that explicitly prohibits suspending sampling during a month of the year when a utility knows it would be most likely to find lead. But we strongly believe that such actions would be unethical and would clearly violate the intent of the LCR.

The first of the LCR's four main functions is to "determine tap water levels of lead and copper at customers who have lead service lines or lead-based solder in their plumbing systems" by "measuring overall corrosivity of the treated water using **worst-case** lead and copper sample site data" (www.epa.gov/dclead/oversight.htm). There is no valid argument to be made that flushing 10+ minutes the night before sampling in every single home, which virtually wipes out all contributions of lead from the lead service line in the first draw sample the next day, is "worst case."

IV. Why There is an Urgent Need for an EPA Policy Statement on Pre-Flushing

If DC WASA's 10-minute pre-flush temporarily lowers lead levels at the tap, as common sense and the evidence presented above strongly suggests, then the data that DC WASA uses to claim that DC's water is safe to drink is in substantial doubt. We know that lead-contaminated water – especially at the levels we have found in DC schools and homes – can pose an acute health risk and is sometimes a major contributor to childhood lead poisoning. We can think of no defensible reason to continue to allow DC WASA – or any other water utility – to engage in aggressive remedial actions that temporarily reduce first draw lead on the night before sampling.

Dr. Saxe suggested that we submit our input on this important issue to your office for the next LCR revision phase. Although we appreciate EPA Region III's suggestion, we are aware that the revision process takes time. Given the serious public health implications and the clear analogy with decisive prior action by EPA HQ on the aerator removal and cleaning issue, we ask that the EPA Office of Ground Water and Drinking Water issue an immediate policy statement prohibiting pre-flushing of any duration the night before sampling for lead.

If you have any questions, please feel free to contact Yanna Lambrinidou at 202.997.1834 or Ralph Scott at 202.347.7610.

Sincerely,

Patrick MacRoy
Executive Director
Alliance for Healthy Homes
202.347.7610

Andrew Fellows
Chesapeake Regional Director
Clean Water Action
202.895.0420

Brent Blackwelder
President
Friends of the Earth
202.422.7753

Harrison Newton
Program Director, Lead Safe DC
Chair, DC Lead Elimination Task Force
202.994.5188

Yanna Lambrinidou
President
Parents for Nontoxic Alternatives
202.997.1834

Lisa Swanson
Political Committee Chair and Chapter Vice Chair
Washington DC Chapter of the Sierra Club
202.291.5972

cc. Ben Grumbles, Assistant Administrator for Water, United States Environmental Protection Agency

Appendix 1

Subject: response to questions
Date: Wednesday, July 16, 2008 2:26 PM
From: Saxe.Jennie@epamail.epa.gov
To: rscott@afhh.org, pnalternatives@yahoo.com
Cc: joseph.cotruvo@verizon.net

Mr. Scott and Dr. Lambrinidou –

I apologize for the delay in response.

I'd like to provide you some clarifying information in response to your request:

- My testimony presented at the May 1 DCWASA board hearing did not specifically address the issue of flushing prior to the stagnation period required prior to Lead and Copper Rule (LCR) tap sampling.
- Post-partial lead service line replacement sampling (performed pursuant to 40 CFR 141.84(d)(1)) is not intended to assess corrosion control. The intent is to alert customers to possible elevated lead levels after construction. Flushing after construction activities is encouraged to remove particulates associated with pipe cutting.
- **The LCR does not require submission of sampling plans or instructions prior to sampling; thus, the regulations do not require EPA to approve or disapprove DCWASA's sampling plans.**
- Neither the LCR nor the LCR guidance address flushing prior to stagnation.
- DCWASA has provided its sampling plans for the sampling required by 40 CFR 141.86 to EPA for review and comment. EPA has not commented on the "flushing prior to stagnation" portion of the sampling instructions. Although EPA has offered comment, EPA has neither "approved" or "disapproved" DCWASA's sampling plans.
- EPA invites stakeholder input into potential further revisions to the LCR. Those comments are best directed to the Office of Ground Water and Drinking Water in EPA Headquarters' Office of Water.

If you have any questions, please feel free to contact me.

Sincerely,
Jennie Perey Saxe, Ph.D.
Environmental Scientist
Drinking Water Branch (3WP21)
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103
215-814-5806 (phone)
215-814-2318 (fax)
saxe.jennie@epa.gov

Appendix 2

Subject: Immediate action requested about lead in DCPS
Date: Friday, April 27, 2007 9:45 AM
From: "Yanna Lambrinidou" <pnalternatives@yahoo.com>
To: Johnson.Karend@epamail.epa.gov
Cc: Corey.Buffo@dc.gov, pschwartz@cleanwater.org, linda.singer@dc.gov, adrian.fenty@dc.gov, jim@grahamwone.com, afellows@cleanwater.org, lnurnb@wamu.org, leonnigc@washpost.com, rrenner@nasw.org, jmcelhatton@washingtontimes.com, victoriasolomon@currentnewspapers.com, haynesd@washpost.com, pnalternatives@yahoo.com, satuhw@yahoo.com, mollyrauch@hotmail.com, kathleensong@yahoo.com, hannahstebbins@yahoo.com, christopher.vanarsdale@verizon.net, thomas.walker47@verizon.net, edwardsm@vt.edu, Blette.Veronica@epamail.epa.gov, Kempic.Jeffrey@epamail.epa.gov, Dougherty.Cynthia@epa.gov, Dare.Larry@epamail.epa.gov, Robert.bobb@k12.dc.us, Paul.Taylor@k12.dc.us, clifford.janey@k12.dc.us, cmabeus@dcexaminer.com, dwysham@seen.org, bmyers@dcexaminer.com, aaron.prichard@mail.house.gov, mcheh@dccouncil.us, elliot.doomes@mail.house.gov, ehmartel@imap.mail.rcn.net, mfiil@fwwatch.org, cweiss@foe.org, kbrown@dccouncil.us, sgonzalez@chej.org... more

Dear Ms. Johnson,

We, the undersigned, have joined together in our grave concern for the health and welfare of school children in the District of Columbia.

While we understand your position that EPA does not have legal jurisdiction over schools served by public water systems, it is increasingly unclear based on your responses whether you share the view that we are all ethically obligated to ensure the provision of safe water to school children in the District of Columbia.

Although we are committed to maintaining cordial and productive communications with all relevant parties in this issue, we must inform you that many of us were outraged by your response of April 9th. Instead of declining to comment or emphasizing why you lack jurisdiction, EPA Region III should be using its position and authority, as it did in Philadelphia, to help mitigate a serious public health risk from lead in District of Columbia Public Schools (DCPS).

What Washington residents have painfully learned in the last few years is that there are sampling protocols that find lead problems when they exist and there are sampling protocols that miss lead problems when they exist. The Environmental Protection Agency (EPA) Region III approved the 2004 DCPS lead protocol, which included two additional steps (i.e., flushing the pipes 10+ minutes and removing aerators the night before sampling) that many experts thought would miss lead problems (see, http://pubs.acs.org/subscribe/journals/esthag-w/2006/may/science/rr_mislead.html). The mis-leading results of that study were touted – under oath as “good news” – by the District of Columbia Water and Sewer Authority (WASA) before the DC City Council in 2004.

At that same Council meeting, EPA Region III testified under oath in response to direct questions by then Council member Adrian Fenty that the 2004 protocol was “consistent with” EPA national protocol. All of Washington DC, assured by EPA’s seal of approval, came away with an understanding that the lead-in-schools problem had been fairly investigated and dealt with.

Yet when a 2005 Freedom of Information Act (FOIA) request first revealed the two steps in the 2004 DCPS sampling protocol that can hide lead problems and EPA Region III was confronted about them by an Environmental Science & Technology reporter, an EPA Region III official anonymously admitted that the modifications to the 2004 sampling were made so it would not reflect lead in the water that children

were being exposed to at the time. Rather, the official stated, ***"That study was designed to look at exposure in the future, not exposure in the past"*** (see, http://pubs.acs.org/subscribe/journals/esthag-w/2006/may/science/rr_mislead.html).

Remarkably, despite the fact that EPA Region III knew that its own interpretation of the sampling results differed markedly from WASA's "good news" declaration in 2004, we are not aware of any attempt by your agency to publicly correct WASA's misrepresentation. Please inform us if such an attempt was made and to what effect. In the end we, District residents and parents of DC school children, were never informed that the protocol EPA Region III approved in 2004 had been modified to measure our children's lead exposure "in the future." From a parent's perspective, the goal is to measure lead exposure in the here and now. Period. "Exposure in the future" is meaningless and offensive.

"The future" arrived in 2007 when yet another FOIA request revealed 2006/2007 data showing alarming levels of lead at taps in a majority of 16 sampled DCPS schools. Given the high levels of lead that were discovered after removal of the worst fixtures and installation of more lead filters in 2004, and after 2+ years of corrosion inhibitor, it seems undeniable that the 2004 protocol hid lead problems, just as the experts thought it would. It is noteworthy that the mid-2006 to early 2007 DCPS results are worse than levels of lead encountered in Philadelphia schools, site of Region III headquarters, where EPA threatened the use of emergency powers in 1999 due to the "imminent and substantial" endangerment that lead in water posed to school children.

Shockingly, it appears that our children have been drinking lead-tainted water in DC schools for three years (2004-2007) without our knowledge, in large part because of modifications to the national EPA lead-in-schools protocol that EPA Region III approved. This protocol included, in addition to 10-minute pre-flushing, the removal of aerators – a step that was disallowed by EPA headquarters in 2006 precisely because it can hide problems with lead. Information in the EPA lead-in-schools documents, Dr. Edwards' experimental data, and common sense indicate that the 45+ minute flushing of the schools the night before sampling in 2007 may also have hidden lead problems. It is disconcerting that after EPA and WASA were publicly criticized by experts for allowing a 10-minute pre-flush in 2004, WASA successfully argued to ***increase*** the 2007 pre-flush to 45+ minutes, and EPA did nothing to prevent this.

The 2007 lead-in-schools protocol, which you continue to paradoxically defend yet not defend, approve yet not approve, is more of what we saw in 2004. Your apparent insistence that water "homogeneity" – and thus pre-flushing the night before sampling – is a necessary or even desirable precondition to testing is incorrect. EPA's own lead-in-schools testing protocol includes no such requirement and school districts around the country test for lead without cleaning out their systems for 45+ minutes the night before testing. ***Water in our school fountains should test safe when children actually drink it in the mornings, not after removing aerators or pre-flushing that occurs only on the eve of lead testing***. EPA, with primacy over the quality and safety of Washington DC water, should not have allowed the rigor of the school testing to be compromised by WASA's erroneous and misguided technical advice. EPA literature and common sense tell us that 45+ minutes of pre-cleaning the night before sampling hides lead problems. We understand that Dr. Edwards recently gave you data showing this trend clearly. We are not aware of any evidence supporting the assertion that pre-cleaning will not decrease detectable lead levels in water during sampling the next morning. We are also unaware of data to back up your statement that EPA's protocol allows for this extra step. It would seem that since your position is contrary to conventional wisdom and EPA's own literature, the burden of proof falls on you to prove that pre-cleaning does not hide problems with high lead in water and thus constitutes an acceptable pre-sampling practice.

The statement that the EPA protocol is only a "guide" that school districts may adapt to their specific needs makes sense, but only up to a point. EPA's guidance would completely lose its effectiveness if parties overseeing the sampling altered it in any way they saw fit. When modifications to the guide are so gross that they hide the very problems they are supposed to detect, EPA, at the very least, has an ethical responsibility to say so. For example, there is no explicit language in the guide saying schools should not install lead filters on the fountains the night before sampling, causing the water to test low for lead the

next morning, and then remove the filters the next afternoon. Such action would be unethical and could leave our children in harm's way. The decision to remove the aerators and to allow pre-flushing can and did have the exact same practical effect.

We request that EPA Region III immediately recommend that DCPS test the worst case lead in school water that our students are actually drinking, so the hard work of assessing and dealing with the problem can begin. Please advise us in writing of your action plan and dates for completion of each step by Friday, May 4. EPA Region III should enforce the true intent of rules and procedures, based on sound science, to protect our children. Do not repeat the errors of 2000-2004, when Region III acknowledged it had failed to act aggressively in overseeing and mitigating Washington DC lead-in-water problems.

As a result of the inadequate and misleading testing so far, ***we intend to conduct our own verification sampling***. Specifically, we will test a representative number of the 87% of taps in DC schools presently being touted as "safe" according to the 2007 DCPS protocol. When we test, we will use the real EPA lead-in-schools protocol. We want assurance that DCPS school water tests safe in the here and now. We hope that EPA Region III will contribute to this process in a positive way, by providing sound science and advice that will help DCPS, the DC City Council, the Mayor, and DC residents seek a long-term resolution to this vexing problem.

Sincerely,

Yanna Lambrinidou
President
Parents for Nontoxic Alternatives
202-997-1834

Paul Schwartz
National Policy Coordinator
Clean Water Action
202-895-0420 x105

Stacey Vaeth Gonzalez
Child Proofing our Communities Campaign Coordinator
Center for Health, Environment and Justice
703-237-2249 x21

Wenonah Hauter
Executive Director
Food & Water Watch
202-797-6550

Erich Martel
Social Studies Teacher
Woodrow Wilson High School
202-258-4750

Chris Weiss
DC Issues Coordinator
Friends of the Earth
202-222-0746

Appendix 3

I.

Personal Communication between Ralph Scott, Community Projects Director, Alliance for Healthy Homes and Charles Kiley, Assistant General Manager, DCWASA

At DC WASA's ad hoc Water Quality Committee meeting on 6/30/08, Mr. Charles Kiley, DC WASA's Assistant General Manager presented to the Board DC WASA's Jan-Jun 2008 LCR compliance data. At the end of the presentation, Mr. Scott asked if DC WASA's 2008 LCR instructions told customers to pre-flush. Dr. Cotruvo, the Chair of the meeting, responded by saying that Mr. Scott's question would be noted and answered at a later time (the question has still not been answered). At the end of the meeting, Mr. Scott approached Mr. Kiley directly with the same question. Mr. Kiley's response was something to the effect of, "I am sure you will find out sooner or later…, just like you always do."

II.

E-mail Communication between Yanna Lambrinidou, President, Parents for Nontoxic Alternatives and Joseph Cotruvo, Chair, ad hoc Water Quality Committee, DC WASA Board of Directors

Subject: a question
Date: Thursday, July 24, 2008 2:32 PM
From: "Yanna Lambrinidou" <pnalternatives@yahoo.com>
To: joseph.cotruvo@verizon.net

Dear Joe,

Could you please tell me if in its 2007 LCR compliance sampling instructions to customers, DC WASA required a 10-minute flush immediately prior to stagnation?

Thanks for your help,

Yanna

Yanna Lambrinidou PhD
Parents for Nontoxic Alternatives
PO Box 6283
Washington DC 20015
P 202.997.1834
E yanna@nontoxicalternatives.org

•••

From: Joseph Cotruvo <joseph.cotruvo@verizon.net>
Subject: Re: a question
To: pnalternatives@yahoo.com
Date: Thursday, July 24, 2008, 2:36 PM

I don't recall when it was initiated..

Joe

Dr. Joseph A. Cotruvo

Joseph Cotruvo & Associates, LLC.
Water, Environment, Public Health
5015 46th Street, NW
Washington, DC 20016
Phone/Fax - (202) 362-3076
email - joseph.cotruvo@verizon.net
- josephcotruvo@yahoo.com

●●●

Re: a question
Date: Thursday, July 24, 2008 3:02 PM
From: "Yanna Lambrinidou" pnalternatives@yahoo.com
To: "Joseph Cotruvo" <joseph.cotruvo@verizon.net>

Thanks. So you only know that the 10 minute pre-flush was used for LCR compliance sampling in Jan-Jun 2008, but you don't know how far back it goes? Am I understanding you correctly?

Regards,

Yanna

●●●

From: Joseph Cotruvo <joseph.cotruvo@verizon.net>
Subject: Re: a question
To: pnalternatives@yahoo.com
Date: Thursday, July 24, 2008, 3:20 PM

It should all be in the compliance reports that they provide to EPA that includes the protocol. I assume you have received them.

Joe

Dr. Joseph A. Cotruvo
Joseph Cotruvo & Associates, LLC.
Water, Environment, Public Health
5015 46th Street, NW
Washington, DC 20016
Phone/Fax - (202) 362-3076
email - joseph.cotruvo@verizon.net
- josephcotruvo@yahoo.com

●●●

Re: a question
Date: Thursday, July 24, 2008 6:00 PM
From: "Yanna Lambrinidou" <pnalternatives@yahoo.com>
To: "Joseph Cotruvo" <joseph.cotruvo@verizon.net>

Dear Joe,

I have not received the compliance reports.

All I asked for was confirmation that I understood the facts you relayed to me. Why are you now referring me to EPA for answers to simple questions about DC WASA's sampling protocol that we have been discussing together for weeks?

A water utility's sampling protocol is public information.

All the utilities I have called so far to ask for their LCR sampling protocol have e-mailed it to me within hours after my request. Ralph asked you for the 2007 and 2008 LCR sampling protocols about 3 weeks ago. We still haven't seen them. I am sure you are busy and understand that these things can take a bit of time, but now it looks like you do not intend to give a simple answer to a simple question.

I am confused.

Regards,

Yanna

•••

From: Joseph Cotruvo <joseph.cotruvo@verizon.net>
Subject: Re: a question
To: pnalternatives@yahoo.com
Date: Thursday, July 24, 2008, 8:55 PM

Yanna,

Please don't be upset. I do not have them. Ask WASA for them.

Joe

Dr. Joseph A. Cotruvo
Joseph Cotruvo & Associates, LLC.
Water, Environment, Public Health
5015 46th Street, NW
Washington, DC 20016
Phone/Fax - (202) 362-3076
email - joseph.cotruvo@verizon.net
- josephcotruvo@yahoo.com

•••

Re: a question
Date: Friday, July 25, 2008 10:51 AM
From: "Yanna Lambrinidou" <pnalternatives@yahoo.com>
To: "Joseph Cotruvo" <joseph.cotruvo@verizon.net>

Joe, I am not upset. I am really confused. I was just counting on the Board for straight answers. Regards, Yanna

•••

From: Joseph Cotruvo <joseph.cotruvo@verizon.net>
Subject: Re: a question
To: pnalternatives@yahoo.com

Date: Friday, July 25, 2008, 10:58 AM

Yanna,

You know that I am straight with you. I just don't have that specific info on exactly when they started the pre-flush.. Suggest you ask WASA directly. It is certainly public info. As you know I have asked them to produce a very detailed report on the partials results. They should also be describing that kind of detail in that report.

Joe

Dr. Joseph A. Cotruvo
Joseph Cotruvo & Associates, LLC.
Water, Environment, Public Health
5015 46th Street, NW
Washington, DC 20016
Phone/Fax - (202) 362-3076
email - joseph.cotruvo@verizon.net
- josephcotruvo@yahoo.com

•••

Re: a question
Date: Friday, July 25, 2008 11:18 AM
From: "Yanna Lambrinidou" <pnalternatives@yahoo.com>
To: "Joseph Cotruvo" <joseph.cotruvo@verizon.net>
Cc: "Ralph Scott" <rscott@afhh.org>

Joe, thanks. Maybe we are miscommunicating. I apologize if that's the case. My question to you was not about when exactly DC WASA started pre-flushing (although Ralph has certainly asked you and others this before and we would still like an answer). My question to you was whether in its 2007 LCR compliance sampling instructions, DC WASA included a 10-minute pre-flush. That's all. I assume you know the answer to this question. Or do you only know that the 10-minute pre-flush was included in the 2008 LCR compliance sampling instructions? And you don't know anything about previous years? I am trying to understand... If you could give me clear answers to these questions, I would appreciate it.
Regards, Yanna

•••

From: Joseph Cotruvo <joseph.cotruvo@verizon.net>
Subject: Re: a question
To: pnalternatives@yahoo.com
Cc: "Ralph Scott" <rscott@afhh.org>
Date: Friday, July 25, 2008, 11:43 AM

I don't know the exact date when they started before 2008. This info should be in the report that is being prepared. It is probably in the FOIA data that Ralph was to pick up last week.

Dr. Joseph A. Cotruvo
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Water, Environment, Public Health
5015 46th Street, NW
Washington, DC 20016
Phone/Fax - (202) 362-3076

email - joseph.cotruvo@verizon.net
- josephcotruvo@yahoo.com

●●●

Re: a question
Date: Friday, July 25, 2008 11:51 AM
From: "Yanna Lambrinidou" <pnalternatives@yahoo.com>
To: "Joseph Cotruvo" <joseph.cotruvo@verizon.net>
Cc: "Ralph Scott" <rscott@afhh.org>

Joe, I am interested in DC WASA's LCR compliance sampling, not the 3/08 testing of homes with partial pipe replacements. So all you know is that DC WASA used a 10-minute pre-flush for their Jan-Jun 2008 LCR compliance sampling round? Is that what you're saying? Yanna

●●●

Re: a question
Date: Friday, July 25, 2008 11:54 AM
From: "Joseph Cotruvo" <joseph.cotruvo@verizon.net>
To: pnalternatives@yahoo.com
Cc: "Ralph Scott" <rscott@afhh.org>

Just ask them directly so you will get the precise information.

Dr. Joseph A. Cotruvo
Joseph Cotruvo & Associates, LLC.
Water, Environment, Public Health
5015 46th Street, NW
Washington, DC 20016
Phone/Fax - (202) 362-3076
email - joseph.cotruvo@verizon.net
- josephcotruvo@yahoo.com

Appendix 4

Re: response to questions
Date: Friday, July 25, 2008 10:26 AM
From: "Yanna Lambrinidou" pnalternatives@yahoo.com
To: Saxe.Jennie@epamail.epa.gov
Cc: "Ralph Scott" <rscott@afhh.org>

Dr. Saxe,

Thank you.

At the urging of Dr. Cotruvo, we are writing to ask you about some specifics concerning DC WASA's 10-minute pre-flush. Can you please clarify for us the following:

When you say that "DCWASA has provided its sampling plans for the sampling required by 40 CFR 141.86 to EPA for review and comment. EPA has not commented on the “flushing prior to stagnation” portion of the sampling instructions," you are referring to DC WASA's LCR compliance sampling plans for what years?

Have DC WASA's EPA compliance sampling plans included a 10-minute pre-flush every year since 2005 (or before), or are there years/semesters that did not include this pre-flush?

We would appreciate your responses to both questions.

Thank you in advance for your help.

Regards,

Yanna Lambrinidou
Ralph Scott

•••

Re: response to questions
Date: Monday, July 28, 2008 12:16 PM
From: Saxe.Jennie@epamail.epa.gov
To: pnalternatives@yahoo.com
Cc: "Ralph Scott" <rscott@afhh.org>

Dr. Lambrinidou and Mr. Scott -

Since DCWASA is the owner of the documents you request, I'd suggest you ask them for the documents, first.

If you've already asked or you've been unsuccessful in obtaining the documents from DCWASA, please make the request of us through the EPA Region 3 FOIA office. (Please note that we've provided similar documents to other FOIA requestors with whom you've been collaborating on lead-in-drinking water issues in the District.) Please be as specific as possible in your request. We are obligated to provide documents in our possession, but we are not obligated to create documents (summary tables, summary papers, interpretations of documents, figures, etc.) in response to your request.

Sincerely,
Jennie Perey Saxe, Ph.D.

Environmental Scientist
Drinking Water Branch (3WP21)
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103
215-814-5806 (phone)
215-814-2318 (fax)
saxe.jennie@epa.gov

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[**Note:** The only FOIA requestor we know who has obtained any DC WASA LCR compliance sampling instructions from EPA Region III is Dr. Edwards at Virginia Tech. However, with the exception of DC WASA's 8/2005 instructions, the documents EPA Region III released to Dr. Edwards do not indicate which years DC WASA's 10-minute pre-flush has been carried out and when this instruction first began. Dr. Edwards has attempted to obtain clarification from EPA Region III about this matter, but because the agency is "not obligated" to create "interpretations of documents," they have never answered his questions].

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 12 2008

OFFICE OF
WATER

Ralph Scott
Community Projects Director
Alliance for Healthy Homes
50 F Street, NW, Suite 300
Washington, DC 20001

Dear Mr. Scott:

Thank you for your letter of August 1, 2008, to Benjamin Grumbles, Assistant Administrator for Water, Steve Heare, and Jeffrey Kempic, in which you expressed concerns about directions that the DC Water and Sewer Authority (WASA) is providing to customers engaged in their compliance monitoring program for the Lead and Copper Rule. Like you, the Environmental Protection Agency (EPA) has an active interest in ensuring that public water systems are meeting regulatory requirements.

The purpose of the monitoring protocol is to determine if corrosion control is effective in reducing lead and copper leaching at times and locations where we would expect levels to be greatest under normal conditions. Therefore, we believe that homeowners collecting samples should use their water as they would normally, with the exception that the regulations require the water to stagnate for a minimum of six hours prior to collection of the sample.

We do not understand why DC WASA believes it should be necessary to request flushing only in households participating in the sampling. While this may fall within a strict legal interpretation of the regulations, we believe that it goes against the intent of the monitoring protocol, since it changes the normal water use of the homeowners in the sample. We will discuss this matter with their water quality manager to determine if there is a rationale that we should consider as we evaluate this issue. We also want to make sure that you are aware that we are considering additional actions we can take to further reduce lead and copper in drinking water and will be holding a stakeholder meeting on October 14-15 to initiate the effort.

Thank you for bringing this matter to our attention. However, we hope that this new issue does not deflect from the importance of addressing more serious sources of lead in housing that your association has highlighted in the past. The nation has a goal of eliminating childhood lead poisoning by 2010 and, while our program is focused on reducing exposure from drinking water, it is critical for us to not lose sight of the importance of directing resources and attention at more serious sources.

Sincerely,

Cynthia C. Dougherty, Director
Office of Ground Water and Drinking Water