Institutional Scientific Misconduct at U.S. Public Health Agencies: How Malevolent Government Betrayed Flint, MI

"If you want a picture of the future, imagine a boot stamping on a human face—forever."
— George Orwell, 1984

The world is watching the Flint, MI 2015 Water Crisis unfold with astonishment. How is it possible, that the system designed to protect America's children from the best known neurotoxin (lead) in their drinking water, has betrayed us?

The answer? Institutional Scientific Misconduct[1] perpetrated by the U.S. Centers for Disease Control (CDC), U.S. Environmental Protection Agency (EPA), primacy agencies and water utilities. The very agencies paid to protect us, not only failed to do so, but also revealed their callous indifference to the plight of our most vulnerable.

Events in Flint, were inevitable, due to a lack of scientific integrity at the highest levels of these agencies, as illustrated by falsified reports exposed by my work over the last decade.

These include:

1) The "scientifically indefensible" CDC 2004 ***Morbidity and Mortality Weekly Report*** (MMWR), that asserted 3 years of exposure to very high levels of lead in Washington D.C. drinking water, did not elevate blood lead of D.C. residents over CDC levels of concern.[2]
2) A peer reviewed paper by a consultant to the Washington D.C. Water and Sewer Authority, published in the journal ***Environmental Health Perspectives***, presenting a falsified narrative and conclusion from the 2001-2004 Washington D.C. Lead Crisis. (Appendix A).
3) An Orwellian re-write of history by CDC in a 2010 MMWR report, that claimed the conclusion of their 2004 report, was the exact opposite of what they actually wrote (Appendix B).
4) An EPA report written to support an EPA policy on partial pipe replacements in Washington D.C., that ultimately wasted over $100 million dollars while increasing the incidence of childhood lead poisoning. After nearly a decade of denials, EPA finally acknowledged that the data supporting this report did not exist. Even so, EPA has refused to retract a report that has no data. (Appendix C).
5) Some of the same EPA contractors, who authored the falsified EPA report supporting partial pipe replacements, wrote another peer reviewed article that reached the same falsified conclusion. The ***Journal of the American Water Works Association*** allowed publication of my "Discussion" of this paper (Appendix D), but refused to investigate the matter further or take decisive action.

While misconduct has always been a problem, at some level, since the earliest days of the scientific revolution, the rise of institutional scientific misconduct is a relatively new phenomenon. Clearly, we do not have adequate checks and balances on the power of these agencies, nor do we hold them accountable for their unethical actions.

There is s price to be paid for scientific misconduct, and unfortunately it is borne by the poorest amongst us, not by its perpetrators. We have to get this problem fixed, and fast, so that these agencies can live up to their noble vision and once again be worthy of the public trust.

[1]*Lewis, D. Science for Sale (2014).*

[2]*Blood Lead Levels in Residents of Homes with Elevated Lead in Tap Water --- District of Columbia, 2004. April 2, 2004 / 53(12);268-270*

Testimony of Marc Edwards 2-3-2016

Appendix A

Possible Undisclosed Conflicts of Interest and Other Concerns Related to a Publication in *Environmental Health Perspectives*

Elevated Lead in Drinking Water in Washington, DC, 2003–2004:
The Public Health Response

Tee L. Guidotti, Thomas Calhoun, John O. Davies-Cole, Maurice E. Knuckles, Lynette Stokes, Chevelle Glymph, Garret Lum, Marina S. Moses, David F. Goldsmith, and Lisa Ragain

Published May 2007

Marc Edwards
Charles Lunsford Professor of Civil Engineering
Virginia Polytechnic Institute and State University
March 20, 2009

Yanna Lambrinidou, President of Parents for Nontoxic Alternatives, Washington DC, contributed to the writing of this report

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1. INTRODUCTION

In late January 2004, the *Washington Post* published a series of investigative articles on the issue of elevated lead in Washington DC drinking water from 2001-2004. The articles, which were critical of the Washington DC Water and Sewer Authority (DC WASA) and the Washington DC Department of Health (DC DOH), triggered public outrage, hundreds of newspaper articles, several Congressional hearings, and lawsuits. In response, DC WASA hired a public relations firm for $100,000 to assist with "crisis communication," and also awarded another consultancy agreement (initially for 6 months and $135,000) to Tee L. Guidotti, MD, MPH and his colleagues at the George Washington University (GWU) Department of Occupational and Environmental Health.

As part of their work for DC WASA on this contract, Dr. Guidotti and his colleagues prepared a manuscript entitled *Elevated Lead in Drinking Water in Washington, DC, 2003–2004: The Public Health Response*. This manuscript was eventually published in *Environmental Health Perspectives (*Volume 115, Number 5, Pages 695-701, May 2007)**.**

1.1. Timeline Relative to Disclosure of Potential Conflicts

A Freedom of Information Act (FOIA) request revealed that Dr. Guidotti claimed "no" competing financial interest on behalf of the co-authors when he first submitted the draft manuscript to EHP via the internet on 10/6/2005:

Competing Financial: No

The "Acknowledgements" section of this first draft included a reference to a contract between DC WASA and the Center for Risk Science and Public Health (CRSPH). The "Acknowledgements" also referred to the DC WASA contract in the past tense (i.e., "*were* under contract"), and included a specific reference to "the period described in this paper," which implied that the financial relationship between DC WASA and CRSPH was limited to 2003-2004.

Acknowledgements

The following contributed to the analysis reported in this paper: staff of the Bureau of Epidemiology and Health Risk Assessment including Garret Lum, MPH, LaVerne Jones, MPH, Kerda DeHaan, MS, Samuel Washington, MPH, Gebreyesus Kidane, PhD, MPH, Christine Yuan, MPH; other Department of Health staff, including Daniel R. Lucey, MD, MPH; Sherry Adams, MPH; and staff of the Center for Risk Science and Public Health (CRSPH), including Polly Thibodeau. The CRSPH, including the authors identified, were under contract to DC WASA providing services in risk management during the period described in this paper.

The wording was highly misleading, because the contract between CRSPH and DC WASA was essentially continuous from 2004 to the present day. Cumulative financial support through 2006 was $714,288 and sources tell me that the total exceeds $1 million. The vast majority of the payments from DC WASA to GWU on the contract were made *after* the 2003-2004 time period covered in the EHP paper.

Gail Alexander-Reeves
05/01/2006 11:33 AM

To: Maxine Buchanan/PROCUREMENT/DC/WASA@WASA, Tamara Stevenson/PA/DC/WASA@WASA
cc: Johnnie Hemphill/GM/DC/WASA@WASA
Subject: GW Contract_Spending

Fiscal Year		Spending		
2004	$	136,994		
2005	$	339,150		
2006	$	238,142	estimated	YTD - $134,844.95
	$	714,286		

PURCHASE ORDER INFORMATION

	PO N0.	Start Date	End Date	Amount	Total
	51161	4/1/05	9/30/05	$75,000.00	75,000.00
Rev.1	51161	"	"	68,858.00	141,858.00
	60599	10/1/05	3/31/06	238,142.00	380,000.00
Rev.1	60599	10/1/05	9/30/06	-62,046.58	317,953.42
	70707	10/1/06	3/31/07	200,000.00	517,953.42

Indeed, if the Guidotti et al. Jan/Feb 2008 peer-reviewed paper, "DC Water and Sewer Authority and Lead in Drinking Water: A Case Study in Environmental Health Risk Management" *(J. Public Health Management Practice*, 14(1):33-41) is correct, DC WASA's financial support to CRSPH actually started in 2002, years before the extent of the lead-in-water problem was first revealed to the public through the *Washington Post*.

This study was supported by a contract between the DC Water and Sewer Authority and the Center for Risk Science and Public Health, which was first retained in 2002 to provide assistance to the DC WASA in risk management. We thank DC WASA for technical information and figures. The findings presented are solely the responsibility of the authors.

Corresponding Author: Tee L. Guidotti, MD, MPH, Department of Environmental and Occupational Health, School of Public Health and Health Services, The George Washington University, 2100 M St, NW, Suite 203, Washington, DC 20052 (eohtlg@gwumc.edu).

It is important to note that Dr. Guidotti himself received a significant fraction of his income from the contract with DC WASA after 2003-2004. For example, from April 2005 to March 2006 this source supported well over 20% of his overall salary.

Prepared By: DAB
4/26/2006 11:50 AM

PERSONNEL LISTING - WAS-05-018-AA-MB

Schedule # 1

26571-1-CCNS90275A

Invoice # 005

NAME/TITLE	PERIOD	HOURS	Payments	CUMULATIVE
Guidotti, Tee	04/01/05 - 04/30/05	34.80	$ 2,780.46	
(Fringe @23.7 Salary)	05/01/05 - 05/31/05	34.80	$ 2,780.46	
	06/01/05 - 06/30/05	34.80	$ 2,780.47	
	07/01/05 - 07/31/05	35.00	$ 2,881.67	
	08/01/05 - 08/31/05	34.80	$ 2,881.68	
	09/01/05 - 09/30/05	34.80	$ 2,881.68	
	10/01/05 - 10/30/05	34.80	$ 2,881.68	
	11/01-05 - 11/30/05	34.80	$ 2,881.68	
	12/01/05 - 12/31/05	34.80	$ 2,881.68	
	01/01/06 - 01/31/06	34.80	$ 2,881.68	
	02/01/06 - 02/28/06	34.80	$ 2,881.68	
	03/01/06 - 03/31/06	34.80	$ 2,881.68	
				$ 34,276.50

In late November of 2005, I started questioning DC DOH employee and EHP co-author Lynette Stokes, PhD, MPH about specific issues related to data that appeared in the EHP publication. I also questioned Dr. Stokes about the possibility that the financial relationship between Dr. Guidotti and DC WASA had been extended beyond 2003-2004. Unable to get answers, in early December of 2005, I submitted two FOIA requests to DC DOH for the data that appeared in the EHP paper and which were prominently referenced in public presentations. I also asked for all e-mail communications between EHP co-authors Dr. Stokes and Dr. Guidotti. Three months after my FOIAs and five months after Dr. Guidotti first submitted his paper to EHP, Dr. Guidotti finally corrected the statement that he and his co-authors had "no" competing financial interests. On March 1, 2006, he filled out a "competing financial interest declaration" that explicitly acknowledged the "contract support" that he had received from DC WASA (see page 4).

It is not clear whether Dr. Guidotti's belated disclosure of this competing financial conflict was immediately accompanied by a correction of the misleading statement in the "Acknowledgements" section of his EHP paper, which implied that the payments from DC WASA had ended in 2004. In a version of the manuscript dated February 10, 2006, the misleading language was still present. In fact, as late as August 29, 2006, six days after the manuscript had been officially accepted by the EHP editor, Dr. Guidotti claimed that the "original checklist and financial interest declarations" were still valid:

Subject: Re: Ms. No. 8722 – reconciled text
Date: Tuesday, August 29, 2006 5:36 PM
From: Tee Guidotti <eohtlg@gwumc.edu>
To: <EHPManuscripts@niehs.nih.gov>
Conversation: Ms. No. 8722 – reconciled text

Attached are the versions and figures as requested.

This ms. is a revision and still conforms to the original checklist and financial interest declarations previously provided.

Fax #: 919 541-0273

8722

Environmental Health PERSPECTIVES

Journal of the National Institute of Environmental Health Sciences

Competing Financial Interests Declaration

Environmental Health Perspectives maintains that authors are accountable for the articles submitted to the journal and requires authors to declare competing financial interests that might be construed as influencing the results or interpretation of a reported study. As stated in the Instructions for Authors, "competing financial interests may include, but are not limited to, grant support, employment (recent, present, or anticipated), payment for expert testimony, and personal financial interests by the authors, immediate family members, or institutional affiliations that may gain or lose financially through publication."

Corresponding authors are required to submit this declaration of competing financial interests form on behalf of all authors involved. Failure to declare a competing financial interest could result in a ban on publication for 3 years and a retraction of the article. Further, the corresponding author shall certify that the authors' freedom to design, conduct, interpret, and publish research is not compromised by any controlling sponsor as a condition of review and publication.

"Lead in Drinking Water ..." 8722ART
Manuscript Title

TL Guidotti, T Calhoun, JO Davies-Cole, MB Knuckles, L Stokes, C Glymph, T Cate, MS Moses, DF Goldsmith, L Regain
Authors

Please check one of the following:

✓ Authors declare they have a competing financial interest, as defined in the Instructions to Authors: Details are provided below. Disclosed in "Acknowledgments"

____ Authors declare they have no competing financial interest.

Specify the competing financial interest, include the name of entity, who is involved, and current interest:

Employment by DC Dept. of Health: T Calhoun, JO Davies-Cole, MB Knuckles, L Stokes, C Glymph, T Cate
Contract support from DC WASA: TL Guidotti, MS Moses, DF Goldsmith, L Regain

Are there any other relevant disclosures that should be brought to the Editor's attention?

Signature

1 March 2005
Date

TEE L. GUIDOTTI
Print Name

George Washington Univ.
Affiliation

Although I cannot be sure exactly when the change occurred, at some point between February 10, 2006 and submission of the paper's final version on January 9, 2007, Dr. Guidotti did revise the "Acknowledgements" section to explicitly reveal his long-term and ongoing financial relationship with DC WASA (my emphasis denoted in underlined bold and italicized text):

> The Center for Risk Science and Public Health (CRSPH) ***held and still holds*** a contract with the DCWASA to provide consulting services in risk management. Services in support of this contract and the preparation of this manuscript were provided by staff of the CRSPH, including P. Thibodeau, M. Greer, and R.J. Bruhl.
>
> ***T.L.G., M.S.M., D.F.G., and L.R. received contract support for this study from the DCWASA.***

In conclusion, while the correct information was ultimately disclosed in the acknowledgement section relative to the DC WASA contract, it is not clear that the editors or reviewers were ever made aware of the on-going nature of this potential financial conflict when the paper was being considered for publication. I wonder whether this potential conflict would have ever been disclosed, had I not submitted a FOIA for e-mails between Drs. Stokes and Guidotti (3 months before they first admitted to a potential financial conflict). Moreover, as will be revealed in the pages that immediately follow, numerous other conflicts were never revealed.

1.2. Organization of This Report

Section 2 details the financial and non-financial conflicts of interest that, insofar as I know, were not properly disclosed to the EHP editor. Section 3 calls into question whether anyone (EHP editors, individual scientists, the journals, and society) should have "complete faith" that the published paper represents "open, honest, and unbiased" research. Section 4 discusses possible actions EHP could take in relation to this peer reviewed article.

2. POSSIBLE UNDISCLOSED CONFLICTS OF INTEREST

The following Table summarizes possible undisclosed financial and non-financial conflicts of interest. Each of these is described separately in the sections that immediately follow.

Possible Undisclosed Conflict	**Relevant Authors/ Organization**
2.1. Compromised ability to publish research	Tee L. Guidotti/DC DOH
2.2. Lawsuit: *Amy Harding-Wright et al. v. DC WASA*	Tee L. Guidotti/DC WASA
2.3. Lawsuit: *Regina Lewis v. the District of Columbia and DC WASA*	DC DOH/DC WASA/ Tee L. Guidotti
2.4. Discussion of joint George Washington University/DC DOH faculty position to be partly funded by DC WASA	Tee L. Guidotti/ DC DOH
2.5. DC WASA-funded "DC DOH" environmental assessments at the homes of children with elevated blood lead levels	Tee L. Guidotti/DC WASA, DC DOH
2.6. Potential conflict of interest with CDC	Tim Cote (removed author)/DC DOH

2.1. Tee L. Guidotti/DC DOH: Compromised Ability to Publish Research

The official agreement between DC WASA and CRSPH at GWU explicitly states, "Publication or teaching of information specific to DCWASA, specifying DCWASA by name…must first be approved in writing by DCWASA." Below is an excerpt from the contract between DC WASA and GWU from FOIA documents.

ATTICLE 15
PUBLICATION

Publication or teaching of information specific to DCWASA, specifying DCWASA by name and directly derived from work performed or data obtained in connection with services under this Agreement, must first be approved in writing by DCWASA.

Such contract language is a well-known concern amongst health professionals relative to disclosure for potential conflicts of interest, because "the sponsorship agreement may serve to limit the publication of findings that are 'negative' from the sponsor's perspective" (Schulman et al., *Journal of the American Medical Association*, 1994;272:154-156).

When Dr. Guidotti first submitted the EHP manuscript, according to EHP policy, he was also explicitly certifying that his ability to "design, conduct, interpret, and publish research is not compromised by any controlling sponsor" (see page 4).

In addition to the explicit DC WASA contract language requiring written approval for publication, there are numerous worrisome indications that the EHP paper publication process was at least partly controlled by DC WASA. While I have only limited records of e-mail communications between Dr. Guidotti and his DC WASA client regarding the EHP paper (and

some e-mails provided were completely redacted), it is clear that Dr. Guidotti kept DC WASA closely informed of the paper's evolution. For example, below is an illustrative exchange in which Dr. Guidotti sent copies of the EHP manuscript to DC WASA for review nine months after the original manuscript was submitted. It is currently unclear from the existing written record available to me if DC WASA actually edited any versions of the EHP paper, or if DC WASA verbally recommended changes to the paper at the weekly meetings held between GWU and DC WASA.

"Tee Guidotti"

<eohtlg@gwumc.edu To:
<Johnnie_Hemphill@dcwasa.com>

> cc: "Marina Moses"
<eohmsm@gwumc.edu>

Subject: New version of
the BLL paper

07/10/2006 06:59

Johnnie - here is the latest version. It is substantially changed - I have dropped almost everything that does not directly deal with the issue of blood leads, in order to stay within limits and still provide detail that the reviewers wanted. The tone has also shifted - I am trying to find common ground with the reviewers.

Thanks for confirming the Weston report date.

TLG

In another e-mail titled "Urgent: Case Study for Publication" dated 4/6/06 and addressed to DC WASA's Chief of Staff Johnnie Hemphill (see full document on page 8), Dr. Guidotti acknowledged his paper was being reviewed by DC WASA's staff and legal counsel for "accuracy and legal liability." The process was taking longer than Dr. Guidotti anticipated and led him to express concern that the delay was jeopardizing publication. Specifically, he noted that "the delay is becoming a problem" because "reviewers for the paper are throwing up roadblocks that discourage acceptance of the paper….We think that it is very important to get the story out as soon as possible and completely as possible." He then ended by asking, "Could we nudge the office of WASA legal counsel to move things along a bit?"

"Tee Guidotti"
<eohtlg@gwumc.edu>

04/06/2006 11:07 AM

To: <Johnnie_Hemphi
cc: "David Goldsmith"
<eohmsm@gwumc.edu>, "Polly Thibodeau" <EOHPMT@gwumc.edu>
Subject: Urgent - Case study for publication

Johnnie - We have encountered a problem in publishing the blood lead case study. This has caused us to change strategy. We now need to move the overall case study ahead as quickly as possible. We know that counsel is reviewing the case study for accuracy and legal liability but the delay is becoming a problem.

Briefly, the problem is that reviewers for the paper are throwing up roadblocks that discourage acceptance of the paper. We think that they are reluctant to see a paper in the literature that suggests that there has been no demonstrable effect from lead in drinking water because they are worried that it will undermine efforts to eliminate all lead sources. The editor depends on the opinion of reviewers to determine whether a paper is publishable and so has rejected the paper. It is extremely unusual to reject a paper at this late stage, after we have already complied with the revisions recommended in the earlier review. So we have gone back to the editor and requested another round of revisions, outlining what we have in mind in the way of clarifying language but also drawing a line at changing the basic conclusion of the paper.

One of the reviewers also wants us to do a different analysis on the data, which we feel is not necessary. We also do not want to go back to the Dept. of Health to ask them to run the numbers again, as it will take months and we will have to go back to every listed coauthor again to get approval. We are trying to persuade the editor that he is wrong but editors are generally protective of reviewers and very reluctant to overturn their recommendations. (A close reading of the same reviewer's text shows that it resembles the wording of one of the advisors to the plaintiffs in the now-dismissed lawsuit, so we think it may be the same person and that would be a clear conflict of interest. However, we do not know his identity for sure.)

If the editor sends back a message that he will not even consider allowing a resubmission with further revisions, then we will have to start over again with a new journal, which would take several months. (We are thinking of submitting it to a British journal, where there is less likelihood of political correctness bias.) If the editor allows a resubmission, we are not out of the woods and even a successful outcome would take another two months. Either way, there will be further delay.

In view of this unexpected setback, we believe that the best strategy would be to submit the overall case study to Public Helath Reviews because that would get things on the record (before the EPA-Cadmus version) and because there is a short paragraph in it that summarizes the blood lead data, while not providing enough information to constitute dual publication.

We think that it is very important to get the story out as soon as possible and completely as possible. Could we nudge the office of WASA legal counsel to move things along a bit? They did not seem to feel the same need to review it three months ago, so if they do not object perhaps we should just go ahead and submit it.

I will be around for a 10:00 meeting on 11 April, and I hope we can do so. I will be away on 18 April. I think that I will be around on 25 April, 2 May (there is some doubt), and 16 May. I will be out of town or otherwise committed almost every Tuesday after that until the end of June, with some exceptions.

TLG

I would also like to elaborate on another unusual aspect of the DC WASA contract with CRSPH. The FOIA documents revealed that this contract was titled "***Strategic Environmental Health Risk Management Assistance to D.C. WASA.***" As select excerpts below indicate, "Public Affairs Department Support" to DC WASA, including *advocacy* for DC WASA, was an integral part of the work plans. The contract openly discussed the "professional credibility" that the CRSPH would bring "as an academic entity" if selected as DC WASA's consultant. And that the CRSPH would be creating "strategic communications strategy."

Strategic Environmental Health Risk Management Assistance to DC WASA

Advantages of the CRSPH as consultant to WASA for environmental health risk management include the following:

- Staff of the CRSPH are already highly familiar with the challenges facing WASA and the problems inherent in simultaneous compliance issues. There is no need to come up to speed.

- As an academic entity, the CRSPH brings professional credibility to the task and excellent connections to the community and to government agencies, particularly in public health.

'05 Public Affairs Department Support:

1) Risk Communications
2) Plan/Document Review
3) EPA Research Agenda
   - WASA Advocacy Position
   - Joint advocacy effort recommendations

To: WASA Team
From: GWU Team
Re: Public Health/Risk Communication Messages
Date: April 4, 2005

This memo is in response to a request by WASA to the GW team to address DC DOH's plan to initiate a public health outreach effort on drinking water and health in the District.

.....

- Create a strategic communications strategy for public interaction, such as radio, community meetings, etc. that address the specific needs of susceptible populations and the general public.

The EHP paper is also frequently mentioned in the FOIA documents. For example, in a document dated 1/11/05 describing "WASA activities for '04 and '05," under "Description from WASA" the EHP paper is described as a "'05 Health Message." It is mentioned elsewhere in the scope of work as a "Health Message" as well.

WASA Activities for '04 and '05 — 1/11/05

Description from WASA	GWU Lead	Due	Status
'04 Scope of Work			
1-Evaluation and recommendations on outreach activities	LR	12/10	Completed
2-Evaluation of sampling protocols (and application)	DG-Case Study	12/31	Completed
3-Evaluation of sampling program process and procedures	DG-Case Study	12/31	Completed
4-Review of sample data in compliance year 03- Implications for distribution system	DG-Case Study	12/31	Completed
5-Review of sample data in compliance year 03- Implications for appropriate Authority Conclusions about tap water concentrations	DG-Case Study	12/31	Completed
6-Third party review work by all agencies to determine cause of exeedance	MM	11/27	Completed
7-Advise on likely health risks associated with lead in drinking Water/other exposures	TG/MM	12/14	Completed
8-GWU Response to Appleseed	LR/MM/TG		Completed
9-September 20, 2004 WASA Pre-Workshop	PT		Completed
10-October 12-13 WASA Workshop	PT		Completed
'05 Health Message			
1-GWU Work with DOH (specific project/publication)			

OTHER MENTIONS OF EHP PAPER

Assistance to DC Water and Sewer Authority (WASA) Lead Services Program
The George Washington University (GWU)
School of Public Health and Health Services (SPHHS)
Scope of Work

.....

Health Message:

1) GWU Work with DOH (specific project/publication)
2) Independent GWU outreach
3) Support for WASA outreach (creating reference point for WASA publications)

In conclusion, the explicit language of the DC WASA/CRSPH contract indicates that Dr. Guidotti was not able to operate with freedom from his client. The e-mails further indicate that he did not do so. Moreover, the initial description of the EHP paper by DC WASA was as a "Health Message," under a scope of work that had a clear "public relations" component.

2.2. Tee L. Guidotti/DC WASA: *Amy Harding-Wright et al. v. DC WASA*

On March 8, 2004, a lawsuit was brought against DC WASA and the DC Government by DC residents Amy Harding-Wright et al. The subject of the lawsuit was clearly related to the subject of the EHP paper, as revealed by the original complaint that states in part:

> ***1. This case arises from the failure of the District of Columbia Water and Sewer Authority ("WASA" or "DC WASA") and the government of the District of Columbia (the "District") (collectively, "Defendants"), to provide safe drinking water to the residences, offices and schools of the District of Columbia. In particular, Defendants have taken actions that have caused the delivery of unsafe water to drinking water taps within a vast number of private residences, businesses, offices, and schools in the District of Columbia. Defendants have negligently or willfully refrained from taking actions that would have remediated the problem more quickly, thereby causing further harm to those consuming WASA water.***
>
> ***2. WASA and District officials, by their actions and inactions have endangered all users of District water, particularly pregnant women and children. They have hidden and dissembled about their awareness of these issues, thereby increasing the risk of injury to users of District water; have failed and are continuing to fail, to meet federal standards and guidelines for the protection of human health from exposure to lead in drinking water;***

I can find no reports or disclosures to EHP of Dr. Guidotti's involvement, financial or otherwise, in this lawsuit. Yet there is unequivocal evidence that DC WASA identified Dr. Guidotti as "WASA's health expert" for the case and that Dr. Guidotti filed an affidavit on behalf of his client, DC WASA.

UNITED STATES DISTRICT COURT
DISTRICT OF THE DISTRICT OF COLUMBIA

AMY HARDING-WRIGHT, ALFONSO WRIGHT, ELLEN SHAW, and PRANAV. BADHWAR,

Plaintiffs,

v.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY AND MAYOR ANTHONY WILLIAMS,

Defendants.

Case No. 04-CV-558 (HHK)

MOTION OF DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY FOR LEAVE TO FILE A SUR-REPLY IN OPPOSITION TO PLAINTIFFS' MOTION FOR PRELIMINARY INJUNCTION

Defendant District of Columbia Water and Sewer Authority ("WASA") respectfully moves this Court for an order granting WASA leave to file a five-page Surreply in connection with Plaintiffs' Motion for Preliminary Injunction, along with (1) a Supplemental Declaration of Dr. Tee Guidotti (WASA's health expert), and (2) a copy of WASA General Manager Jerry

It is also clear that Dr. Guidotti's affidavit was on the issue of health effects from lead in water, the very subject addressed in the EHP paper, as revealed in this document through FOIA.

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA
Amy Harding-Wright, et al.Plaintiffs,v.District of Columbia Water and Sewer Authority, et al.Defendants. Civil Action No. 04-00558 (HHK)

SECOND DECLARATION OF DR. JOHN F. ROSEN
I, John F. Rosen, declare and state as follows:
1. This response incorporates all the text and references of my previous affidavit, dated March 25, 2004.
2. **I have reviewed the affidavit of Dr. Tee L. Guidotti filed with the District of Columbia Water and Sewer Authority's Memorandum of Points and Authorities in Opposition to Plaintiff's Motion for Preliminary Injunction dated May 7, 2004** ("WASA Memo"). I set forth herein my responses to the assertions of Dr. Guidotti. My discussion below is based on my extensive experience in the field of the clinical evaluation and treatment of pediatric exposure to lead contamination.
3. Dr. Guidotti is apparently not a board-certified pediatrician, nor does he have any apparent experience in the diagnosis, management, treatment or outcomes of excessive lead exposure in young children.
4. Dr. Guidotti has failed to include any citations in his affidavit. As a result, his statements about the real or potential impacts of excessive lead levels in Washington DC's drinking water on the health of young children and the developing fetus appear to me to be wholly unsubstantiated.
5. In paragraph 3 of his affidavit, Dr. Guidotti equates childhood lead poisoning with the symptoms of lethargy, anemia, abdominal pain...at blood lead levels above 60 ug/dl. This statement is, at the very least, about 20 years out of date….

Finally, Dr. Guidotti's involvement in the lawsuit was essentially confirmed by Dr. Guidotti himself in his 4/6/06 e-mail to DC WASA (see page 8). In that e-mail, Dr. Guidotti lamented that one of the EHP reviewers who requested "a different analysis on the data" might have a "conflict of interest." Dr. Guidotti arrived at this concern through "a close reading" of the reviewer's comments that "resemble[d] the wording from one of the advisors to the plaintiffs in the now-dismissed lawsuit" about lead in water.

In a July 8, 2005 *Washington Post* article on the *Amy Harding-Wright et al. v. DC WASA* lawsuit, DC WASA was quoted saying that "the lawsuit has cost more than $1 million to defend." Moreover, they revealed that "the cost of defending the utility against the lawsuit included expenses for outside lawyers and experts." Was Dr. Guidotti paid as an expert witness

by DC WASA, either directly or via his contract with GWU? Even if Dr. Guidotti volunteered his time on behalf of his client, he was ethically obligated to disclose his direct involvement in the DC WASA lawsuit to the EHP editor, the reviewers and the readers. His DC DOH co-authors, as employees of DC Government (a defendant in the lawsuit), were also obviously obligated to disclose this potential financial and non-financial conflict. Further, Dr. Guidotti's failure to disclose his involvement was especially egregious, because his 2004 affidavit put forth an opinion about the health effects of lead in water that was highly favorable to his client.

It is also revealing that when Dr. Guidotti first submitted the EHP manuscript for review in late 2005, he specifically requested that John F. Rosen, MD (Environmental Sciences Professor of Pediatrics and nationally renowned expert on childhood lead poisoning) be "restricted." In other words, Dr. Guidotti did not want Dr. Rosen to be considered as a reviewer for the paper. As the plaintiffs' health expert in the lawsuit, Dr. Rosen had direct knowledge of Dr. Guidotti's involvement in *Amy Harding-Wright et al. v. DC WASA* lawsuit and could have revealed the potential conflict of interest to the EHP editors.

Reviewers:

Restrictions: John F. Rosen

2.3. DC DOH/DC WASA/Tee L. Guidotti: *Regina Lewis v. the District of Columbia and DC WASA*

Regina Lewis, the mother of a Washington DC child with lead poisoning and possible permanent brain damage who was allegedly harmed by a combination of DC WASA and DC DOH negligence, sued the District of Columbia (i.e., DC DOH) and DC WASA for $5 million each ($10 million total) in 2004. This lawsuit is on-going. The plaintiff alleged that high lead in water was a contributing factor to the permanent brain damage and elevated blood lead of her child (Appendix 2.3.A). I can find no evidence that Dr. Guidotti, DC WASA's "health expert" and recipient of DC WASA contract support for the EHP paper, or his DC DOH co-authors who were defendants in this lawsuit, revealed this direct and obvious financial conflict of interest to the EHP editors.

The EHP authors knew about the child because they discuss his case in the EHP paper (also discussed in section 3.3.1). DC DOH co-author Dr. Stokes oversaw the DC DOH lead-screening program and the handling of the child's case from 2002 until about 2007 when she left her DC government post (see separate pdf attachment for details). Dr. Stokes' intimate knowledge of the case was revealed in a press conference she held on the child's status in early 2004. DC Government's legal counsel also requested production of documents from DC DOH staff on this child's case in October 2004 (Appendix 2.3.B). The request for legal documentation from DC DOH and the filed lawsuit was part of the child's DC DOH case file, which Dr. Stokes maintained. DC WASA's legal counsel, who reviewed and approved Dr. Guidotti's EHP paper, was also certainly aware of the *Regina Lewis v. the District of Columbia and DC WASA* lawsuit.

The failure of the EHP co-authors to reveal this financial conflict of interest is especially egregious, given that they also made numerous false statements about this child in their EHP paper as will be discussed in section 3.3.1.

Aside from their failure to disclose the financial conflict of interest, the EHP co-authors flip-flopped on whether these lead-in-water lawsuits (against DC DOH and DC WASA) should even be mentioned in the paper. For example, in an early version of the EHP manuscript, one lawsuit (i.e., the *Amy Harding-Wright et al. v. DC WASA*) received the following innocuous reference:

> crisis after an article appeared in the *Washington Post*, January 31, 2004. Many events ensued, including a lawsuit (now withdrawn), investigations, public meetings, DC Council hearings, Congressional hearings and finally an administrative order with the EPA Region III office on 17 June 2004.

"Lawsuits" (plural) was then mentioned in a later version of the EHP paper, along with the parenthetical disclaimer that "the most visible" of them "has now been withdrawn." This "most visible" lawsuit was the *Amy Harding-Wright et al. v. DC WASA.*

> *Washington Post*, January 31, 2004. Many events ensued, including lawsuits (the most visible of which has now been withdrawn), investigations, public meetings, DC Council

Clearly then, the co-authors of the EHP paper were well aware of other lead-in-water lawsuits that affected DC WASA and DC DOH (the only other lawsuit I am aware of is *Regina Lewis v. DC WASA*).

Furthermore, the following e-mail exchanges between Dr. Guidotti and his DC DOH co-author Thomas Calhoun, MD in 2005 and 2006 clearly discuss whether to even mention the *Amy Harding-Wright et al. v. DC WASA* lawsuit.

>>> "Calhoun, Thomas (DOH)" <thomas.calhoun@dc.gov> 10/31/2005 11:38 AM
>>>
Tee, my apologies for not having responding with a final comment. I do not have any additions to the article as written ; I do however, as I mentioned earlier, think we should remove any comment about a law suit.
Hopefully this will be received for publication.
Thanks, Tom Calhoun.

From: Tee Guidotti [eohtig@gwumc.edu]
Sent: Monday, October 31, 2005 2:14 PM
To: thomas.calhoun@dc.gov
Subject: RE: BLL paper for EHP - version 4 - please review and confirm you r participation

Tom - I just got back from a series of meetings out of town. Plan to wrap this up at the end of the week.

No problem with dropping mention of lawsuit as far as I am concerned.

-----Original Message-----
From: Tee Guidotti [mailto:eohtlg@gwumc.edu]
Sent: Sunday, February 19, 2006 3:10 PM
To: thomas.calhoun@dc.gov
Cc: Briant.Coleman@dc.gov
Subject: RE: Message #2 Revised EHP Mss. on BLL - Please respond by next Monday!
Importance: High

** High Priority **

Tom - I will do what I can. The journal is very particular about changes and told me before that no changes in authorship were possible. I will make the changes you suggest when I return from travelling. We will see if the journal accepts a change in authorship. It would be much easier to honor Mr. Coleman's contribution in an acknowledgement.

I mentioned the lawsuit so that we would not be open to criticism for having ignored it. Some people in the activist community believe that the lawsuit stimulated the response by the Dept. of Health, which, of course, is not true. This paper might be read by those same people as a refutation of the allegations in the lawsuit, by those who knew about it. By briefly mentioning it and the fact that it has been withdrawn, we send a signal that this paper has nothing to do with the lawsuit.

TLG

Tee L. Guidotti, MD, MPH, Professor
Chair, Dept. of Environmental and Occupational Health Director, Division of Occupational Medicine and Toxicology (Dept. of Medicine)
The George Washington University Medical Center 2100 M St., NW, Ste. 203 Washington DC 20052 tel. 202 994-1765 or -1734 fax 202 994-0011 (open), -5579 (confidential) cell 202 262-2709

]

>>> "Calhoun, Thomas (DOH)" <thomas.calhoun@dc.gov> 2/21/2006 10:28 AM
>>>
I think that will be acceptable, but not optimal, that is acknowleging his efforts, and I appreciate your efforts.
It is entirely your call on the lawsuit, and from WASA`s perspective I can see the value in noting it.
I have read Dan`s responses also and of course respect his opinions, as well as the response from Robert Bobb.
I think the paper should go forward and can be of value to others who may read it.
Tom.

Dr. Guidotti should have been highly sensitized to public concerns about clear disclosure of involvement in lawsuits by the time he submitted his final version of the EHP manuscript on January 9, 2007. First, Dr. Guidotti considers himself an expert on the intersection of law and medicine, and has publicly cited a book he edited titled "*Science on the Witness Stand: Evaluating Scientific Evidence in Law, Adjudication, and Policy*" (OEM Press 2001). This book features excerpts from the guidelines for expert science witnesses provided by the American College of Occupational and Environmental Medicine (ACOEM), an organization of which Dr. Guidotti was the president in 2006. They read:

> ***"He or she can have no direct personal or pecuniary interest in the outcome of the case, and their review of the medical facts should be thorough, fair, impartial, and should not exclude any relevant information in order to create a view favoring any party. …The physician expert must demonstrate adherence to the strictest of personal and professional ethics….The medical expert must strive to avoid even the slightest appearance of impropriety or partiality."***

"*Science on the Witness Stand*," further states that:

"Expert witnesses must not become "spin doctors" for either side." "Materials not subject to peer review…should not be presented as widely accepted scientific publications."

Dr. Guidotti's actions and words sometimes seem to contradict the established ethical standards listed in his own book. For example, on the front page of the January 9, 2007 *Wall Street Journal*, Dr. Guidotti expressed a controversial opinion, indicating that disclosure of involvement in lawsuits is not necessary for authors of peer reviewed papers. He did hedge his opinion, however, by saying that such disclosure is unnecessary if a paper represents a "consensus of its membership" and not the opinion of individual authors:

COURT OF OPINION

Amid Suits Over Mold, Experts Wear Two Hats

TUESDAY, JANUARY 9, 2007 - VOL. CCXLIX NO. 7

The paper has become a key defense tool wielded by builders, landlords and insurers in litigation. It has also been used to assuage fears of parents following discovery of mold in schools. One point that rarely emerges in these cases: The paper was written by people who regularly are paid experts for the defense side in mold litigation.

The ACOEM doesn't disclose this, nor did its paper. The professional society's president, Tee Guidotti, says no disclosure is needed because the paper represents the consensus of its membership and is a statement from the society, not the individual authors.

The dual roles show how conflicts of interest can color debate on emerging health issues and influence litigation related to it. Mold has been a con-

In any event, at 5 pm on the very day that he was cited on the front page of the *Wall Street Journal* in an article that was critical about failures of authors to disclose conflicts of interest in relation to legal cases, Dr. Guidotti submitted the final version of his EHP paper without a mention of the lawsuits against his DC DOH co-authors or his DC WASA client.

Sent from my GoodLink synchronized handheld (www.good.com)

-----Original Message-----
From: Tee Guidotti [mailto:eohtlg@gwumc.edu]
Sent: Tuesday, January 09, 2007 05:09 PM Eastern Standard Time
To: Jim (NIH/NIEHS) Burkhart
Cc: Chevelle Glymph; Lum, Garret; John Davies-Cole; Maurice Knuckles; Tom Calhoun; Tim Cote; Lynette Stokes; David Goldsmith; Marina Moses; Lisa Ragain
Subject: Re: EHP Manuscript #8722

I am pleased to convey the revised paper. The following changes have been made:

The issue of legal action was raised amongst the EHP authors in another context. In response to a popular press publication of my own research that showed gross inaccuracies in data presented in earlier versions of the EHP paper, Dr. Guidotti spelled out exactly what the errors might mean to his client, DC WASA. Specifically, he stated that "***the lawyers will use this in future legal actions***" and "***WASA will be vulnerable forever***" and "***nobody will believe DOH or WASA in the future.***" It is particularly revealing that he spelled out DC WASA's legal concerns in a sentence that also discussed his ability to publish the EHP paper. This is because the EHP paper was, first and foremost, a public relations "hit" for DC WASA.

>>> Tee Guidotti 09/22/06 10:53 AM >>>
Marina - for reasons I don't pretend to understand, your email was not copied to the others and when I tried to respond by punching "Reply" it kept bouncing me out of the system. So, I have pasted your email below.

I think that EPA is making a mistake in underestimating this development. Taking the announdement off their website is the worst thing they could do in terms of appearances. They don't seem to realize that EPA's own credibility is on the line.

The issue is not really whether water was the source - that remains unlikely and the two cases did not, in my opinion, provide good evidence for this. The problem is that unless this is resolved, there will always be a cloud and confusion over what happened to DC residents. If we cannot resolve this issue, we will not be able to publish our BLL paper (which is essential to putting this matter to rest and describing what really happened), nobody will believe DOH or WASA in the future, the lawyers will use this in future legal actions, the scientific analysis will be clouded and will undermine EPA's own credibility, and WASA will be vulnerable forever.

An explanation of how the discrepancies MIGHT have occurred is not enough. It leaves open the possibility that the original contractors' reports were correct and that water was the source in those cases. DOH needs to present a direct, simple and accurate explanation of the discrepancies DID occur, no speculation. At this point it is essential for DOH to fix this.

TLG

The overall conclusion of Section 2.2 and 2.3 is that the EHP authors never revealed these obvious financial conflicts of interest. It is evident that the issue of the lawsuits did not slip their minds completely, since they had discussed the issue and decided to remove even innocuous references to legal actions. Finally, as evidenced by Dr. Guidotti's book and the *Wall Street Journal* article, it cannot be argued that the EHP paper's principal author lacked understanding about the implications of such an omission.

Appendix 2.3.

Appendix 2.3.A.

SUPERIOR COURT FOR THE
DISTRICT OF COLUMBIA

REGINA LEWIS,

Plaintiff,

v.

THE DISTRICT OF COLUMBIA

and

DISTRICT OF COLUMBIA WATER
AND SEWER AUTHORITY
5000 Overlook Avenue, S.W.
Washington, D.C. 20032

Serve On:
Jerry N. Johnson
5000 Overlook Avenue, S.W.
Washington, D.C. 20032

Defendants.

: Civ. A. No.: 04-005507
Cal: 2
: Judge: Michael L. Rankin

OFFICE OF THE
ATTORNEY GENERAL FOR THE
DISTRICT OF COLUMBIA
2004 SEP 23 P 3:53

******oooOooo******

COUNT I
Negligence
(District of Columbia)

12. In July 2003 the District of Columbia Health Department performed a Lead - Based Paint Inspection Evaluation at Douglas's home. That inspection revealed to the District of Columbia government numerous locations with poisonous lead-based paint that were an actual and imminent threat to Douglas.

13. Despite having performed the lead inspection at his home the District of Columbia negligently failed to: provide the results of the lead inspection to Ms. Lewis, as the tenant of the property; provide the results of the lead inspection to the owner of the property; and order the abatement of the existing lead hazards in Douglas's home.

16. Because of Douglas's extremely high lead levels in March 2004 he was admitted to Georgetown University Hospital on an emergency basis for chelation. As part of his chelation therapy Douglas received numerous, painful shots and underwent emotional stress.

22. The actions and inactions of The District of Columbia in this matter were negligent.

24. Had the District of Columbia carried out its legally mandated duties Douglas would have been removed from the home that was poisoning him in July 2004 and would have been spared the hospitalization and permanent brain damage that resulted from his continuing exposure to lead-based paint.

WHEREFORE, the minor plaintiff, Douglas Steele, by and through his mother and next friend, Regina Lewis, demands judgement against the defendant The District of Columbia in the sum of $5,000,000.00 plus interest and costs.

COUNT II
Negligence
(District of Columbia Water
and Sewer Authority)

and Sewer Authority)

31. The foregoing allegations of fact are incorporated by reference and realleged as if fully set forth herein.

32. At all times relevant to this Complaint water was suppled to the home in which Douglas lived by the D.C. Water and Sewer Authority ("WASA").

33. At all relevant times the WASA had a legal duty to deliver to Douglas's home water that complied with the restrictions found in the federal Safe Drinking Water Act ("SDWA"), 42 U.S.C. 300f *et seq*. Among the provisions of the SDWA are that drinking water should not contain more than 15 parts per billion of lead.

34. On information and belief, at all times pertinent to this Complaint the public water delivered to Douglas's home had lead levels that greatly exceeded those permitted by the SDWA.

35. On information and belief, WASA knew at least since 2001 that the water it was delivering to homes in the District of Columbia exceeded safe lead levels as established by the Environmental Protection Agency ("EPA"). Despite that knowledge, WASA actively concealed the unhealthy state of the water it was delivering to its customers.

36. Although those unhealthy lead levels were known to WASA, that entity deliberately failed to warn its customers, including Regina Lewis, that the water being delivered to their homes was contaminated with lead.

37. During his infancy Douglas was fed with formula that was mixed with tap water. He also drank tap water.

39. As a consequence of WASA's failure to either deliver water that complied with the SDWA or at least warn its customers, including Regina Lewis, of that failure, the minor plaintiff, ingested lead from his infant formula, which was made from tap water, and from his drinking tap water.

40. On information and belief, Douglas's ingestion of water delivered by WASA contributed to his significantly elevated blood lead levels, causing him great harm.

41. As a consequence of ingesting the water with abnormally high concentrations of lead the minor plaintiff has suffered lead poisoning, having lead content levels in his blood far in excess of the normal range. He has suffered brain damage and serious developmental and behavioral injuries.

42. During all pertinent times, defendants had a duty to use reasonable care to protect the minor plaintiff from exposure to water with excess levels of lead.

43. Defendant WASA breached its duty to plaintiff by exposing the minor to lead poisoning by negligently and carelessly:

a. failing to adequately maintain the municipal drinking water supply to prevent lead from leaching into water;

b. failing to deliver water to its customers that did not contain lead levels above those permitted by the EPA;

c. failing to warn D.C. residents and Regina Lewis about the known abnormally high lead levels in

drinking water supplied by WASA as required by the SDWA, 42 U.S.C. § 300g-6(a)(2).

30. As a direct and proximate result of the negligence and carelessness of defendant WASA as set forth herein, the minor plaintiff was caused to suffer great harm, including, but not limited to, pain, anguish, mental distress, and permanent physical, mental and development injury.

WHEREFORE, the minor plaintiff, Douglas Steele, by and through his mother and next friend, Regina Lewis, demands judgement against the defendant District of Columbia Water and Sewer Authority in the sum of $5,000,000.00 plus interest and costs.

Respectfully submitted,

Joseph B. Espo. Bar No. 29699
BROWN, GOLDSTEIN & LEVY, LLP
120 E. Baltimore Street, Suite 1700
Baltimore, Maryland 21202
(410)962-1030

Appendix 2.3.B.

10/28/04 FRI 12:15 FAX

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Office of the Attorney General

[redacted]
Assistant Attorney General
Civil Litigation Division

OFFICE OF GENERAL COUNSEL
2004 OCT 25 P 1:40

MEMORANDUM

TO: [redacted]

FROM: [redacted]

DATE: **October 25, 2004**

RE: [redacted]

Please find enclosed the complaint in the above-referenced lawsuit. Plaintiff has filed this suit on behalf of her minor child Douglas Steele, for permanent brain damage her child allegedly suffered as a result of exposure to lead-based paint.

According to the complaint, the D.C. Department of Health performed a lead-based paint inspection evaluation of plaintiff's home in July 2003, and the inspection revealed numerous locations with lead-based paint that were an imminent threat to the minor child. The complaint alleges that the Department of Health, however, failed to notify anyone of the results of the inspection, causing the child's blood-lead levels to rise to such high levels that he had to be hospitalized in March 2004.

In order to assist with the defense of this case, please forward all information you have concerning the allegations in the complaint within ten (10) days of receipt of this letter. In particular, please provide our Office with the following documentation and information:

1. Any lead-based paint inspection evaluations performed in plaintiff's residence, and the results thereof.
2. All notices provided to the owners/occupants of the residence regarding the results of any such inspection evaluations.
3. Written procedures for the initiation, conduct and reporting of lead-based paint inspection evaluations.
4. Contact person(s) within the division responsible for lead-based paint testing and notification.

Thank you for your assistance. If you have any questions, please call me at 724-6624.

2.4. Tee L. Guidotti/DC DOH: Discussion of Joint George Washington University/DC DOH Faculty Position to be Partly Funded by DC WASA

In mid-2006, when the EHP paper was still being reviewed and revised, DC DOH and Dr. Guidotti held discussions about the possibility that DC WASA would fund a joint faculty position through GWU/DC DOH. The DC DOH contact who was involved in this discussion was EHP paper co-author John Davies-Cole, PhD. Dr. Guidotti's request to DC WASA to fund this faculty position was forwarded directly to DC WASA General Manager Jerry Johnson on May 31, 2006 from DC WASA Chief of Staff Johnnie Hemphill. In his introductory comments to Mr. Johnson, Mr. Hemphill said, ***"I think we need to discuss this. I think this may be potential for protecting our interests a little better, but I haven't got into any details."*** This e-mail illustrates the complex financial entanglements between DC WASA, DC DOH and GWU. This potential financial conflict with DC WASA should have been revealed by Dr. Guidotti and his DC DOH co-authors.

From: Johnny Hemphill
Sent: Wednesday, May 31, 2006 7:13 PM
To: Jerry Johnson
Subject: Fw: Environmental Health Epidemiologist

Importance: High

Attachments: DC BEHRA Vacancies.doc

DC BEHRA
icancies.doc (35 KB)

I think weneed to discuss this. I think thir may be potential for protecting our inersts a little better, but I havent gotten into any details

----- Forwarded by Johnnie Hemphill/GM/DC/WASA on 05/31/2006 07:11 PM -----

"Tee Guidotti"
<eohtlg@gwumc.edu>

05/31/2006 04:29 PM

To: <Johnnie_Hemphi
cc:
Subject: Fwd: Environmental Health Epidemiologist

At one point we spoke with the GM about cost-sharing for a position in the DOH, together with a faculty appt at GW. Is this still a possibility? TLG
----- Message from "Davies-Cole, John (DOH)" <john.davies-cole@dc.gov> on Thu, 25 May 2006 14:24:26 -0400 -----

To: 'Tee Guidotti' <eohtlg@gwumc.edu>
Subject: Environmental Health Epidemiologist

Tee,

We have a vacancy for an environmental health epidemiologist/program manager, please see attached information and forward to interested persons. The salary is $59,853 - $77,124. This is different from what we discussed some weeks ago. I hope you are still looking into the possibility of the shared position we discussed. In DOH, local funds that remain unspent for long periods are taken and used for something else. Is WASA still interested? We should start moving forward on it so we don't lose the money. Thanks.

John

2.5. Tee L. Guidotti/DC WASA/DC DOH: DC WASA-Funded "DC DOH" Environmental Assessments in the Homes of Children with Elevated Blood Lead Levels

The EHP paper states that the homes of all children and adults with elevated blood lead levels (BLL) were investigated by DC DOH between 2/3/04-7/31/04.

> The homes of all children and adults with elevated blood lead levels were investigated by the DC DOH. The results of public health investigations in the home for the elevated levels for adults and children were reviewed.

This, and similar public statements made by Dr. Guidotti, DC WASA and DC DOH about the "DC DOH" assessments, were false and misleading. In fact, almost all of the environmental assessments at the time were conducted by independent contractors directly hired by DC WASA (Appendix 2.5). They were prepared *for* DC WASA. They involved lead paint and dust sampling, but not always water testing. In fact, only a fraction (about 20%) of the DC WASA-funded risk assessments collected and analyzed drinking water in accordance with the standard EPA protocol. The DC WASA-funded assessments were apparently mailed to and housed at DC DOH.

Dr. Guidotti and his co-authors were obligated to tell the truth about DC WASA's direct financial role in the environmental assessments discussed in their EHP paper, the suboptimal quality of these assessments in relation to water testing, and DC DOH's lack of direct involvement in collection of data for the assessments. Moreover, they were obligated to disclose the potential conflicts of interest that the DC WASA contractors had in association with the interpretation of these assessments. As will be discussed later in Section 3.3, Dr. Guidotti and DC WASA also made numerous false statements about what the assessments revealed, not only in drafts of the EHP paper but also in sworn written testimony to the US Congress.

Appendix 2.5.

Lead-based Paint Inspection/Risk Assessment Report

Date: April 12, 2004

Prepared For:

D.C. Water and Sewer Authority
Office of Chief Financial Officer
5000 Overlook Avenue, 3rd Floor
Washington, DC 20032

Executive Summary

1. **Identifying Information**

   a) **Client Information**

   Progressive Environmental, LLC was contracted by:
   Maxine Buchanan
   DC WASA
   5000 Overlook Avenue, SW, 3rd Floor
   Washington, DC 20032

   Relationship – DC WASA is contract originator in response to a reported child with an Elevated Blood Lead Level (EBL) that resides or frequently visits the residence.

Lead Risk Assessment

[redacted]

Washington, DC

Prepared for – District of Columbia Water and Sewer Authority
DC Department of Health – Lead Division
51 N Street, NE
Washington, DC
Attn: Usen Bassey, Inspector

I. Introduction

The District of Columbia Water and Sewer Authority (DCWASA) has retained the services of Wallace & Prior Consultants, LLC to perform a lead paint inspection/risk assessment of the subject property to determine the presence of any lead hazards and to determine the source of the lead that caused the hazardous conditions.

2.6. Tim Cote (Removed Author): Potential Conflict of Interest with CDC

In e-mails to his EHP co-authors, Dr. Guidotti twice cited a "potential for conflict of interest with CDC" (10/5/06) and "concerned about a conflict of interest with CDC" (12/28/06) as the reason that Timothy R. Cote, MD, Senior Federal Advisor and CDC assignee to DC DOH asked to be removed as co-author from the EHP paper one year after the paper was submitted and six weeks after it was accepted. I am uncertain if Dr. Cote and Dr. Guidotti's concerns about the potential conflict of interest were disclosed to EHP staff.

Whatever the potential conflict with CDC may have been, removing Dr. Cote's name from the list of co-authors on the EHP paper at the last minute and after the paper was accepted, did not eliminate that conflict. Dr. Cote was obviously a contributing author on the draft and final versions of the manuscript. Rather, removal of his name only ***hid evidence*** of the potential conflict. I have found no disclosure of Dr. Cote's acknowledged potential conflict of interest with CDC to EHP readers, editors or reviewers.

From: Tee Guidotti [eohtlg@gwumc.edu]
Sent: Thursday, October 05, 2006 11:47 AM
To: chevelle.glymph@dc.gov; john.davies-cole@dc.gov; maurice.knuckles@dc.gov; thomas.calhoun@dc.gov; tim.cote@dc.gov; Stokes.Lynette@dol.gov; David Goldsmith; Marina Moses; ragain@speakeasy.net
Subject: BLL Paper - response from journal

.....

Tim Cote has asked to withdraw as an author in order to avoid any potential for conflict of interest with CDC, esp. insofar as they may issue their own report at some time in the future. He indicated no other reason for withdrawing.

From: Tee Guidotti [eohtlg@gwumc.edu]
Sent: Thursday, December 28, 2006 3:15 PM
To: John Davies-Cole
Subject: BLL paper

.....

Because Garret is putting so much additional time into this, and because Tim Cote has dropped out of authorship because he is concerned about conflict of interest with CDC, I would like to suggest that we insert Garret as a coauthor in Tim's place. Do you agree?

TLG

3. OTHER CONCERNS

The preceding section documents numerous undisclosed potential conflicts of interest. This section examines whether these potential conflicts and the associated lack of disclosure could shake the "***complete faith***" of EHP editors, individual scientists, the journals, and society that the "***research is not only of the highest quality but also is open, honest, and unbiased*** (see EHP editorial at http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1247576). Based on the evidence that follows, it would appear that the EHP paper is biased in a manner that is highly favorable to Dr. Guidotti's client, DC WASA.

Six sections that support this concern are provided in sequence:

3.1 Erroneous Timeline
3.2 DC WASA/Tee L. Guidotti: "No identifiable public health impact from elevated lead levels in drinking water"
3.3 Fabricated DC DOH "Study" of "65 Children" with Elevated Blood Lead Levels
3.4 The DC WASA "Correlation Analysis"
3.5 The Study of 210 (or 201) Residents with > 300 ppb Lead in Water
3.6 DC DOH Forgery of Blood Lead Records in 2003-2004

A final section discusses Dr. Guidotti's prior experiences and published opinions about biases in research that is conducted with industrial sponsors.

3.1. Erroneous Timeline

In the EHP paper, the authors put forth a lead-in-water timeline with incorrect dates. These dates, versus the actual events, are shown below in Figure 3.1.1.

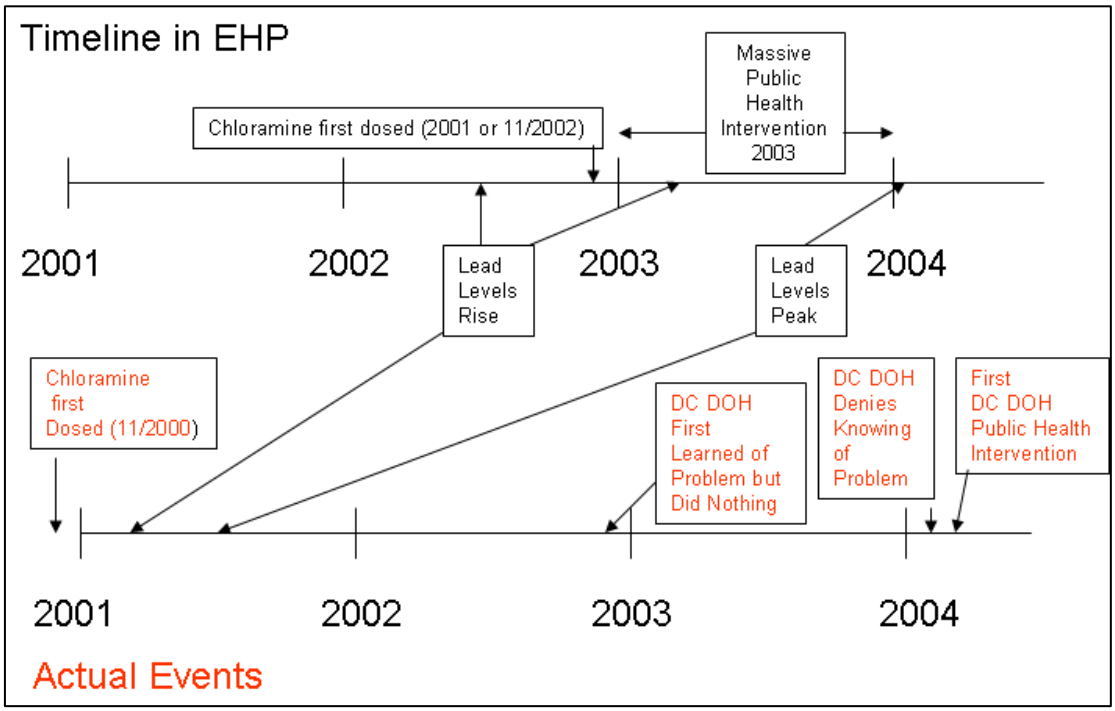

Figure 3.1.1. Comparison between EHP timeline and actual events.

Erroneous statements and dates in the EHP paper include the following:

1) That chloramine was first added to Washington DC's water supply on "1 November, 2002" (p. 695), and that the "change in water-disinfection treatment" took place "in 2001" (p. 695). **In fact, the actual date for the addition of chloramine to the water and the change in water-disinfection treatment was November 2000** (see Appendix 3.1.A).

2) That water lead levels (WLLs) showed an "abrupt rise" in 2003 (p. 695), and that lead concentrations in the water started to rise in 2002 (p. 695). **In fact, the rise in WLLs was first detected in early to mid-2001, but DC WASA hid the sampling results for the high lead** (see Appendix 3.1.B).

3) That "[a]t its peak in early 2004, the 90%'ile of homes sampled was 59 ppb" (p. 695) and that in 2002 the lead levels did not exceed the action level (p. 695). **This is incorrect, because DC WASA's own data show a 90%'ile level of 75 parts per billion (ppb) in July 2001-June 2002 and a level of 63 ppb in 2003** (see Appendix 3.1.C).

4) That "…in 2003 DC WASA implemented <<numerous health protective>> plans for families living in homes with lead lines or testing above the LAL (lead action level)" (p. 696). **In fact, the public health interventions listed by the authors did not begin until after the story was front page news in early 2004** (Table 3.1.1).

Table 3.1.1. Reported versus actual date of public health interventions

DC WASA-Implemented Public Health Intervention	**Reported Date EHP**	**Actual Date**
10 minute flushing advisory	2003	February 2004
Lead filters distributed	2003	March 2004
DC WASA voluntarily accelerated lead service line program	2003	July 2004
Offer to replace owner's lead service line at cost	2003	Required by Federal Law when action level is exceeded
Low cost financing	2003	November 2004
Free water testing offered to any customer	2003	February 2004

The net effect of these errors is that the actual events in DC from 2000-2004 were made unrecognizable in the narrative that is presented in the EHP paper. The paper also makes no mention of valid criticism regarding the DC DOH and DC WASA public health response. Any reasonable presentation of the public health response should have mentioned the following:

1) EPA's 2004 determination that DC WASA broke the law by failing to disclose to EPA the high lead-in-water samples that they collected in 2001 (Appendix 3.1.B);
2) DC WASA's firing in 2003 of a whistleblower who tried to reveal the high lead in water to EPA in 2003. The whistleblower was eventually vindicated and awarded hundreds of thousands of dollars in damages (Appendix 3.1.D);
3) The 2004 firing of two high level DC DOH employees for their failure to take the lead-in-water issue seriously in late 2003 (Appendix 3.1.D);

4) The fact that the substantive public health interventions were not initiated by DC DOH and DC WASA until more than a month after the high lead in water was front page news in 2004, and nearly 3 years after DC WASA first detected high lead in the water (Appendix 3.1.D);
5) The numerous congressional hearings and investigations into DC WASA and DC DOH actions.

One person who was intimately familiar with the actual timeline of events in DC was Dr. Daniel R. Lucey, MD, MPH, the Interim Chief Medical Officer for DC DOH in 2004 who actually led the District's public health response after the *Washington Post* broke the news in January 2004. Dr. Lucey was initially invited to be a co-author on the EHP paper and declined. Later he was included in the "Acknowledgements" section of the paper. But after seeing his name in a version that had already been submitted to EHP, with its erroneous dates and timeline, and other fabricated data, Dr. Lucey wrote an outraged e-mail message to the co-authors (see page 32).

In this e-mail, which was also copied to city administrators, Dr. Lucey demanded in capitalized letters that Dr. Guidotti "REMOVE MY NAME" from any place it appeared in the paper. He stated that ***"I do not want the journal editors, reviewers, or readers to think that I give my consent, even tacit consent, to this manuscript because I do NOT do so."*** Dr. Lucey further asked that Dr. Guidotti contact the editor of EHP, to clarify that he had not given permission for the use of his name. He closed by saying that, "I do NOT consent to the description of the DC Department of Health response….during the time that I was appointed by the DC City Administrator Deputy Mayor Robert Bobb to lead the DC Department of Health Response."

Although Dr. Lucey's name was removed from the "Acknowledgments" section, I can find no evidence that Dr. Guidotti ever complied with Dr. Lucey's request that he alert the EHP editors that Dr. Lucey had not given his approval to be mentioned anywhere in the paper.

From: Daniel Lucey [daniellucey@mac.com]

Sent: Friday, February 17, 2006 1:51 PM

To: Tee Guidotti

Cc: John Davies-Cole; Maurice Knuckles; robert.bobb@dc.gov; ragain@speakeasy.net; gochfeld@eohsi.rutgers.edu; Thomas Calhoun; Tim Cote; Edward Reiskin; 'Cheryl.Edwards@dc.gov'; Gregg Pane; Marina Moses; cschwartz@dccouncil.us; David Goldsmith; lynette.stokes@dc.gov

Subject: REMOVE my name from the DC Lead-in-the-water manuscript

Dear Dr. Guidotti:

Please REMOVE MY NAME from the "Acknowlegements" section, and any other place it might appear, in the revised manuscript titled "Elevated Lead in Drinking Water in Washington, DC: The Public Health Response, 2003-2004 that you sent earlier this week to me "as a courtesy" even though I had previously written to say that I declined authorship on this manuscript.

I do not want the journal editors, reviewers, or readers to think that I give my consent, even tacit consent, to this manuscript because I do NOT do so.

If the prior version of the manuscript you submitted to this journal included my name in the "Acknowledgements" section then please send an e-mail to the Editor, prior to resubmitting the revised manuscript, stating that I did NOT give approval to use my name in the "Acknowledgement" section of that prior submitted manuscript. Please copy me on this e-mail to the Editor.

While I respect the right of persons who are still working for the DC Department of Health to choose to be co-authors on this manuscript, I do NOT consent to the manuscript as described in the title as "The Public Health Response, 2003-2004" and particularly I do NOT consent to the description of the DC Department of Health response during the time (late February-April 30, 2004) that I was appointed by the DC City Administrator Deputy Mayor Robert Bobb to lead the DC Department of Health Response.

Daniel R. Lucey, MD, MPH

Appendix 3.1.

Appendix 3.1.A. Evidence that the date of chloramine addition was November 2000.

Excerpt from page 1 of final EPA Report at
http://www.epa.gov/safewater/lcrmr/pdfs/report_lcmr_elevatedleadindc_final.pdf.

- On November 1, 2000, WA converted the residual disinfectant from free chlorine to chloramines for the purpose of lowering disinfection byproducts to meet new regulatory requirements. This conversion facilitated a reduction in oxidation reduction potential (ORP) to a range that favors the predominance of Pb (II) scales, which are highly influenced by low and fluctuating pH levels. This conversion from free chlorine to chloramines likely changed the nature of the predominant scale from Pb (IV) to Pb (II) and thus facilitated an increase in the release of lead from the lead service lines into the water at consumers' taps.

Appendix 3.1.B. DC WASA withheld sampling results indicating high lead in early 2001.

EPA Concludes WASA Broke Lead Law
Order Cites Violations in Six Categories but Levies No Penalties
By Carol D. Leonnig Washington Post Staff Writer Friday, June 18, 2004; Page B01
"EPA officials said their most troubling discovery was that WASA officials withheld six crucial test results from customers' homes showing elevated lead levels in late 2000 and early 2001. If reported as legally required, EPA officials said, the results would have put Washington over the federal action level, forcing WASA to address the lead problem."

Appendix 3.1.C. Excerpt of data from EPA report on lead in D.C. Water. P 15.
http://www.epa.gov/OGWDW/lcrmr/pdfs/report_lcmr_elevatedleadindc_final.pdf

	DCWASA Results			HDR/EES Results			Reason for Different Results
Monitoring Period	**N**	**90th Percentile Lead (µg/L)**	**% Samples Lead Conc. > 15 µg/L**	**N**	**90th Percentile Lead (µg/L)**	**% Samples Lead Conc. > 15 µg/L**	
							Result not affected.
Jan – Jun 1999	**106**	**5**	**6**	**81**	**<10**	**4**	Difference in total number of valid samples and conversion from ppb to mg/L. 90th percentile result affected.
Jul–Sep 1999	55	12	5	55	12	5	NA
Jul 2000 – Jun 2001	50	8	8	50	8	8	NA
Jul 2000– Jun 2001 (revised calculations - see 2.2.2)	**52**	36	17	**53**	36	17	One additional sample included. 90th percentile result not affected.
Jul 2001 – Jun 2002	53	75	49	53	75	49	NA
Jan – Jun 2003	104	40	26	104	40	26	NA
July – Dec 2003	108	**63**	32	108	**61**	32	Difference in 90th percentile calculation method. 90th percentile result affected.
Jan – Jun 2004	108	**59**	68	108	**58**	68	Difference in 90th percentile calculation method. 90th percentile result affected.
Jul – Dec 2004	**130**	**59**	**31**	**142**	**51**	**28**	Difference in number of valid samples due to difference in hard copy versus Excel spreadsheet data. 90th percentile result affected.

N = Number of samples used in 90th percentile calculation; NA = Not Applicable
*Note: **Bold:** Values in bold font indicate differences between HDR/EES and DCWASA calculations.*

Appendix 3.1.D.

Manager's Firing Defended by WASA

Woman Told EPA of Problems With Water
By David Nakamura Washington Post Staff Writer Saturday, March 6, 2004; Page A05

WASA Whistle-Blower Wins Vindication, Reinstatement

By David Nakamura Washington Post Staff Writer Thursday, November 3, 2005; Page B02

A water quality manager fired by the D.C. Water and Sewer Authority in 2003 was ordered reinstated and awarded hundreds of thousands of dollars yesterday by a judge who said she was improperly terminated after warning federal authorities about excessive lead in the District's tap water

D.C. Knew Of Lead Problems In 2002 Timing of E-Mails Contradicts Claims

By Carol D. Leonnig and David Nakamura Washington Post Staff Writers
Monday, March 29, 2004; Page A01

Senior D.C. government officials knew that the city's water contained unsafe levels of lead 15 months before the public learned of the problem but failed to flag the issue as a major concern, according to internal documents that contradict the account provided recently by top managers.

Officials at the D.C. Department of Health, who have publicly maintained that they did not know of the lead problem until this year, first discussed the contamination in October 2002 with the D.C. Water and Sewer Authority, according to e-mails between the two agencies.

But after assisting WASA in drafting a 2002 educational brochure that has since been criticized for glossing over the high lead levels, Health Department officials largely ignored the mounting health threat last year and failed to issue clear instructions to residents about how to reduce their risk of lead poisoning.

D.C. Assailed for 25-Day Delay in Acting

Former Health Directors, Others Chide City, Saying Warnings Were Long Overdue
By Avram Goldstein Washington Post Staff Writer Thursday, February 26, 2004; Page A08

City health officials took center stage in addressing excessive lead in the District water supply yesterday, but many in the medical community criticized the 25-day delay in their response. Several public health specialists, including former directors of the D.C. Health Department, expressed relief that lead in drinking water is finally being treated as a full-fledged public health concern and that residents are being given guidelines on how to protect themselves. But they said it had taken the city far too long to act.

City officials said yesterday they will mail letters this week to 23,000 homes with lead water service lines, advising pregnant women and children younger than 6 not to drink unfiltered tap water.

Georges C. Benjamin, former director of the District and Maryland health departments and now executive director of the American Public Health Association, **said the actions should have occurred promptly after excessive lead in drinking water was reported Jan. 31.**

"That should have been done on Day One," Benjamin said yesterday. "That's Public Health 101."

Washington fires health chief over handling of lead in drinking water

By Brian Wingfield New York Times March 27, 2004

The mayor's office acknowledged it dismissed James A. Buford, the health director

3.2. DC WASA/Tee L. Guidotti: "No identifiable public health impact from elevated lead levels in drinking water"

In early 2006, DC WASA issued a press release stating that their research funded at DC DOH had ***"confirmed that there was no identifiable public health impact from elevated lead levels in drinking water."***

District Drinking Water Meets Federal Requirements for Lead Levels:
WASA Fulfills Community Water Pledge

FOR IMMEDIATE RELEASE January 10, 2006

Contact: Michele Quander-Collins (202) 787-2200

"In 2004, WASA funded a Department of Health program that conducted voluntary blood lead level screenings of more than 6,800 District residents. The results of the tests confirmed that there was **no identifiable public health impact from elevated lead levels in drinking water**."

Dr. Guidotti's original EHP submission contained nearly the exact same declaration as DC WASA's 2006 press release:

There appears to have been no identifiable public health impact from the elevation of lead in drinking water in 2003 and 2004. However, the screening program developed

This and revised versions of the EHP manuscript were unequivocally rejected by the EHP reviewers and EHP in April of 2006, as evidenced by the following e-mail to Dr. Guidotti from EHP editor Burkhart:

From: Burkhart, Jim (NIH/NIEHS) [E]
Sent: Monday, April 3, 2006 3:18 PM
To: eohtlg@gwumc.edu
Cc: [redacted] (NIH/NIEHS) [C]; [redacted] (NIH/NIEHS) [C]
Subject: EHP ms 8722

Dear Dr. Guidotti,

I sent your revised manuscript for additional review. I have enclosed the reviewer comments for you. As you can see from the reviewer comments below I must reject this manuscript.

Dr. Guidotti then asked to be given another chance to respond to the reviewer criticisms, and EHP editor Burkhart granted it to him:

Subject: Re: EHP ms 8722
Date: Thursday, April 6, 2006 10:05 AM
From: Tee Guidotti <eohtlg@gwumc.edu>
To: <burkhart@niehs.nih.gov>
Cc: < [NKCE] @niehs.nih.gov>, <[NKCE] @niehs.nih.gov>
Conversation: EHP ms 8722

We are, of course, dismayed and disappointed by the editorial decision. We spent considerable time and effort in revising the manuscript in response to reviewers. We wonder if our [References Eval. Comments] (requested by Reviewer 3) made it more difficult for reviewers to see the degree to which we did, indeed, respond to their original points. With your indulgence, we would like to respond to the comments and request from you consideration of our request to be allowed to make a further revision in the manuscript.

We are aware that the incident described in this ms. is important and of reader interest, so that an acceptable ms. based on this timely case would be attractive to the journal and to the environmental health community. On our side, it is to our advantage to attempt another revision rather than start over again with another journal and lose more time. We therefore request to be allowed to take the ms. through another round of revisions, if you would permit this.

Subject: EHP ms 8722
Date: Thursday, April 27, 2006 4:23 PM
From: Burkhart, Jim (NIH/NIEHS) <burkhart@niehs.nih.gov>
To: Tee Guidotti <eohtlg@gwumc.edu>
Cc: [NKCE] < [NKCE] @niehs.nih.gov>
Conversation: EHP ms 8722

Dear Dr. Guidotti,

I have discussed your manuscript 8722 "Elevated Lead in Drinking Water in Washington, DC: The Public Health Response, 2003–2004" with another editor. After again reading the reviewer comments and responses I will permit a second revision to address the reviewer comments. It was reviewed by qualified colleagues familiar with the issues. All the reviewers were interested in seeing the manuscript published in some form. However, both reviewers 1 and 3 were not satisfied with the responses.

Sincerely,

Jim Burkhart

In order to address the reviewer criticisms and have the manuscript re-considered for publication in EHP, Dr. Guidotti, in collaboration with DC WASA, set out to submit a revised version of the manuscript on July 10, 2006.

"Tee Guidotti"

<eohtlg@gwumc.edu To:
<Johnnie_Hemphill@dcwasa.com>

> cc: "Marina Moses"
<eohmsm@gwumc.edu>

Subject: New version of
the BLL paper

07/10/2006 06:59

PM

Johnnie - here is the latest version. It is substantially changed - I have dropped almost everything that does not directly deal with the issue of blood leads, in order to stay within limits and still provide detail that the reviewers wanted. The tone has also shifted - I am trying to find common ground with the reviewers.

Thanks for confirming the Weston report date.

TLG

"Tee Guidotti"
<eohtlg@gwumc.edu>

To: <Johnnie_Hempl
07/11/2006 01:29 PM cc:
Subject: Re: New version of the BLL paper

Details, details. TLG

>>> <Johnnie_Hemphill@dcwasa.com> 7/11/2006 1:15 PM >>>
I think you forgot to attach the paper!

The revised manuscript was finally re-submitted to EHP on July 23, 2006. In his e-mail to the EHP editor, Dr. Guidotti urged vigilance for "unjustified assumptions and prejudgment on the part of reviewers with their own agendas."

------ Forwarded Message
From: Tee Guidotti <eohtlg@gwumc.edu>
Date: Sun, 23 Jul 2006 14:27:36 -0400
To: <burkhart@niehs.nih.gov>
Subject: Resubmission of EHP ms. 8722

Attached please find the revised manuscript, with a statement documenting changes and response to reviewers.

We are hopeful that these revisions will be viewed as responsive. At the same time, we trust in the editorial process to separate evaluation of the manuscript as it is written from unjustified assumptions and prejudgment on the part of reviewers with their own agendas.

Dr. Guidotti and DC WASA's 7/23/06 manuscript was apparently successful at addressing some of the reviewer concerns, but still inadequate, as indicated by an 8/22/06 e-mail from Dr. Guidotti to EHP about "reconciled text." In this chain of e-mails, Dr. Guidotti told the EHP editor that he had changed a "Key sentence." Specifically, he stated that he had removed "***There appears to have been no identifiable public health impact from the elevation from lead in drinking water***" and replaced it with, "***Measures to protect residents from exposure to lead in drinking water may have prevented more frequent elevations in blood lead.***" Because of this and a few other changes, on August 23, 2006 the EHP editor deemed the manuscript acceptable for publication:

>
> ------ Forwarded Message
> From: Tee Guidotti <eohtlg@gwumc.edu>
> Date: Tue, 22 Aug 2006 16:33:57 -0400
> To: <burkhart@niehs.nih.gov>
> Subject: Ms. No. 8722 - reconciled text
>
> Dr. Burkhart:
>
> I have substituted the Key sentence: "There appears to have been no
> identifiable public health impact from the elevation of lead in drinking
> water." with the following replacement sentence:
>
> "Measures to protect residents from exposure to lead in drinking water
> may have prevented more frequent elevations in blood lead."
>
.....

>
> I attach a newly wordsmithed version of the ms. with these changes and
> a few minor corrections, which I have tracked. We sincerely hope that
> these changes are responsive, render the manuscript acceptable for
> publication, and that we can now proceed.
>
> TLG

> From: "Burkhart, Jim (NIH/NIEHS)" <burkhart@niehs.nih.gov>
> Date: Wed, 23 Aug 2006 15:13:07 -0400
> To: [illegible] < [illegible] @niehs.nih.gov>
> Conversation: Ms. No. 8722 - reconciled text
> Subject: FW: Ms. No. 8722 - reconciled text
>
>
> -- I'm going to go with this one so you'll need to get final PDF etc. so we
> can finish.
>

>>> NIEHS EHP Manuscripts <EHPManuscripts@niehs.nih.gov> 8/24/2006 4:39 PM >>>
Dear Dr. Guidotti,

Dr. Burkhart is satisfied with your changes/additions, so please send the
required files for your revision to me at EHPManuscripts@niehs.nih.gov.

In the fall of 2006, my research into DC WASA's environmental assessments revealed that, contrary to DC WASA and Dr. Guidotti's public claims in the EHP paper, not all children with elevated BLL had sources of lead exposure other than water in their homes. When my findings were disclosed, Dr. Guidotti asked EHP for guidance on what revisions he was permitted to make to the accepted paper. EHP's editor consented to certain revisions "as long as nothing substantive changes within the paper:"

"Burkhart, Jim (NIH/NIEHS)" <burkhart@niehs.nih.gov> 12/5/2006 9:34 AM I think everything will be fine as long as nothing substantive changes within the paper. As you know I'm officially retiring in January, but will continue under cover to take care of several outstanding issues - this being one. I hope you are soon successful. Regards, Jim Burkhart

At some point in the post-acceptance revision process, the controversial statement that, "There appears to have been no identifiable impact from the elevation of lead in drinking water," which had been removed in August 2006 in order to get the paper accepted, was reinserted in the manuscript. The final version of the paper was published with DC WASA's 2006 press release

statement virtually word for word. Moreover, the sentence that Dr. Guidotti had told EHP would be substituted for it had been deleted.

From the final version of the EHP manuscript:

"There appears to have been ***no identifiable public health impact from the elevation of lead in drinking water*** in Washington, DC, in 2003 and 2004. This may reflect effective measures to protect the residents, as 153 reported compliance with recommendations to filter their drinking water" (p. 701).

How did DC WASA's misleading 2006 press release statement get back into the EHP paper, after Dr. Guidotti explicitly told EHP that he had removed it? Did Dr. Guidotti and DC WASA slip the phrase back into the manuscript, counting on the fact that the editors would simply trust that he would not make "substantive changes" to the accepted version of the paper? As evidenced from the e-mail below, DC WASA was given yet another version of the paper on September 12, 2006, after it had been accepted. Did DC WASA request that their 2006 press release statement be put back into the EHP paper?

"Tee Guidotti"
<eohtlg@gwumc.edu>

09/12/2006 04:18 PM

To: <Johnnie_Hemphi
cc: "Marina Moses" <
Subject: Re: Fw: Comments on LCR Short-Term Revisions

We are studying the LCR revisions and will report back shortly.

Also, here is the summary of the blood lead study, as promised.

DC WASA's 2006 press release words, legitimized by inclusion in the peer reviewed EHP paper, have been used by DC WASA and Dr. Guidotti to maximum public relations effect. First, DC WASA posted the EHP paper on their website. They also handed it out to DC residents at public meetings on lead in water. Dr. Guidotti made numerous PowerPoint presentations and repeatedly mentioned the wording. Finally, he and his GWU colleagues discussed the EHP paper in a follow-up article in the *Journal of Public Health Management and Practice* (Jan/Feb 2008;14(1):33-41). This article describes "the lessons learned during a case study in environmental health risk management by the DC Water and Sewer Authority." After a discussion that includes a citation of the EHP paper, the co-authors state that "No public health impact has, therefore, been identified from the elevation."

DC Water and Sewer Authority and Lead in Drinking Water: A Case Study in Environmental Health Risk Management

Tee L. Guidotti, Marina S. Moses, David F. Goldsmith, and Lisa Ragain

No public health impact has, therefore, been identified from the elevation.

This incident illustrates how Dr. Guidotti successfully used EHP, a respected peer-reviewed journal, as a vanity publication for his DC WASA client. He inserted the words from the 2006 DC WASA press release into the body of the paper after acceptance by EHP, when this acceptance was made under the express condition that these words not be included.

3.3. Fabricated DC DOH "Study" of "65 Children" with Elevated Blood Lead Levels

One basis for Dr. Guidotti's (and DC WASA's) assertion that no public harm could be identified in DC from the years of elevated lead in water, was a purported study of environmental assessments conducted in the homes of "65" (or "64" – both numbers have been used at different times) children under the age of 6 who were identified with elevated BLLs between 2/3/04 and 7/31/04. This study was cited in sworn written testimony before the US Senate by DC WASA General Manager Mr. Johnson (7/22/04) and by Dr. Guidotti, in response to an investigation conducted by the DC Office of the Inspector General (1/5/05). Dr. Guidotti invariably included the "no harm" from water "conclusion" of the assessments in his public presentations made on behalf of DC WASA. Representative excerpts of Mr. Johnson's and Dr. Guidotti's statements are provided below:

Mr. Jerry Johnson's Written Testimony to the US Senate, July 22, 2004.

Only sixty-five children (five of whom were identified through the very extensive schools testing) under the age of six have elevated blood lead levels, and only twenty of them live in homes with a lead service line. However, each member of the target population screened resides in a property that shows lead dust and/or soil that exceed federal guidelines.

Although the public health objective is to limit lead exposure from any source, the data strongly suggests that there is no correlation between the presence of lead service lines in the District and elevated blood levels.

Dr. Tee Guidotti's response to DC Office of Inspector General on behalf of his client, DC WASA, "Audit of Elevated Levels of Lead in the District Water January 5th, 2005"

The public health risk of lead, and the level in blood of District children has been dropping in the District for many years. Screening for elevated blood lead levels is required in the District for children one and two years of age. The blood lead levels have continued to fall through the period when elevated lead occurred in some households. During the same period, the screening program identified 64 children aged less than six years old whose lead levels were above the CDC level of concern (10 ug/dL). Most, 70 percent, lived in homes without lead service lines. In all 64 cases, a source other than drinking water was documented, usually lead paint in the home. The risk that remains and individual cases of elevated blood lead levels among children are due almost entirely to lead exposure from other sources, not drinking water.

The purported DC DOH study was a central feature of the original EHP paper. The original version of the manuscript prominently mentioned it in the abstract, body and conclusions of the paper. The take-away message was that "in every case" a DC DOH investigation revealed lead sources other than (or sometimes in addition to) water in the homes, and these sources were *always* either the sole or the major cause of hazardous lead exposure. Example excerpts from the original EHP paper follow:

> From 3 February 2004 to 31 July 2004, a total of 6,809 persons were screened for blood lead level. Children from 6 months to 6 years of age constituted 2321 of those tested; 64 had blood lead levels above 10 mg/dL and 2 had levels exceeding 45 mg/dL. In every case an investigation of their homes identified sources of lead exposure, almost always peeling lead paint.
>
> In every case in which the blood lead level exceeded 10 μg/dL, an investigation of the homes identified at least one source of lead exposure, other than drinking water. The source in all but one case was peeling lead paint and dust exceeding standards of the US Department of Housing and Urban Development. In no case of elevated blood lead was drinking water the sole or major source of exceptional lead intake.

The weight placed on the environmental assessment data from the homes of the "65 children" is further emphasized in a response Dr. Guidotti sent to the EHP editors, regarding criticism leveled by reviewer #1 against his interpretations in the original manuscript:

> Given the lack of ambiguity in the findings, we ask on what basis Reviewer 1 disputes our interpretation that there is no evidence for a public health effect on the population? Reviewer 1 dismisses data that all children found to have an elevated blood lead level had other sources of exposure sufficient to explain their elevation. Reviewer 1 also denies the

Thus, the "lack of ambiguity" in the DC DOH "study" of the "65 children" with the environmental assessments, was not only a key point in the original paper, but it was also used by Dr. Guidotti as part of his defense against reviewer #1's criticism.

A source who approached me about "criminal" behavior on the part of DC DOH, DC WASA and Dr. Guidotti in relation to the EHP paper, specifically mentioned that I should examine the so-called "study" of "65 environmental assessments." DC DOH refused to produce requested documents in response to my FOIA, and after months of delay, DC DOH revealed to me that there were actually well over 100 environmental assessments that had been funded by DC WASA in response to Washington DC's lead-in-water problem. DC DOH also admitted that they could not locate some of them, and they further attested that ***there never had been a study of 65 cases as Dr. Guidotti and Mr. Johnson had claimed***. I was forwarded over 100 of the environmental assessments for my review.

In reading the assessments I found uncontroverted evidence that statements in the EHP paper were false. In several cases, the DC WASA contractors had written draft reports, stating that lead in drinking water samples from children's homes had tested at undetectable levels, weeks before the samples were even analyzed by the laboratory. Furthermore, in direct contradiction to Dr. Guidotti and Mr. Johnson's statements under oath, 21 assessments reported no obvious lead hazard in paint, dust, or soil, and 5 listed water as the primary hazard. One assessment stated that no sources of lead, other than water, were identified in the child's home, and another reported that the only identifiable lead hazard in the child's environment was the drinking water at the child's school.

The guardians of the two children with water as the sole identified lead hazard verified the accuracy of the statements in the reports of DC WASA's own contractors, and further confirmed that no lead paint or sources other than lead in water had been identified. The results of my investigation were eventually reported in late 2006 on WAMU radio and *Salon*. The links to those reports are:

- **9/21/06**: http://wamu.org/news/06/09/lead_questions.php
- **11/27/06**: http://www.salon.com/news/feature/2006/11/27/lead/

In September 2006, when Dr. Guidotti was first queried about the environmental assessments by a radio reporter, he claimed that he was "astonished" by my discoveries (see WAMU link above). He later told several people, including science writer Rebecca Renner, that he had never actually seen the reports and pointed to his co-authors:

```
>
>>>> Rebecca Renner <rrenner@nasw.org> 10/18/06 1:49 PM >>>
> Dear Dr. Guidotti,
>
> Thank you once again for your prompt reply. You mention to me that you
> haven't reviewed the environmental assessments. How can you be first
> author on the attached paper without having looked at the assessments?
> I am raising this question because others are raising it to me.
>


On Wednesday, October 18, 2006, at 07:28  PM, Tee Guidotti wrote:

> Then let them raise it to me.
>
> You will note that I am not the only author and my coauthors were
> involved in the environmental assessments.
>
```

In conjunction with my research into the environmental assessments, I went out of my way to make sure that the authors of the EHP paper understood the stakes that were involved in this issue – not only for the sake of the science, but also for their own reputations. For example, when informed by WAMU that Dr. Guidotti claimed to have never actually seen the assessments, I encouraged them to share with him their copy of my FOIA for at least the two assessments that reported water as the only lead source. In late 2006, I also called Dr. Guidotti's co-author Lisa Ragain. I made it clear to her that I was very concerned about Dr. Guidotti's persistence in trying to publish a peer reviewed paper in spite of his knowledge that the results of the

environmental assessments were different from what he had been portraying to the public (I was aware of the EHP paper at the time, because it was produced to me through the FOIAs of DC DOH).

At the time, Ms. Ragain confided to me that both she and Dr. Guidotti knew that the DC DOH was so "completely screwed up" that in her opinion the US Government Accountability Office needed to do a complete criminal investigation of the agency "from top to bottom." In November of 2006, I followed up on this conversation with a few e-mails, in which I reinforced to Ms. Ragain "the complete absurdity of the DC DOH results" in relation to the environmental assessments and conclusions in the EHP paper.

Date: Thu, 02 Nov 2006 15:51:07 -0500 To: ragain@speakeasy.net
From: Marc Edwards edwardsm@vt.edu Subject: Another FOIA memo

It differs from the earlier memo by assuming much lower water intake for infants (e.g., no reconstituted formula). It also considers 3 scenario's of exposure based on the DC data for homes with lead pipe……This, and the prior studies on blood lead versus lead in water, point to the complete absurdity of the DC DOH results.

After my exchanges with Ms. Ragain, which allowed me to point out clearly the undisputed discrepancies between the facts related to the environmental assessments and Mr. Johnson and Dr. Guidotti's prior public statements about these assessments (i.e., sworn written testimony to US Congress, public presentations, written comments to the DC Office of the Inspector General, and a submitted paper to EHP), I felt assured that Dr. Guidotti would not present the purported "environmental assessment" study again. But this was not to be.

From the limited e-mails that I possess, Dr. Guidotti's state of mind regarding the assessments appears to have evolved over time. On September 19, 2006 Dr. Guidotti admitted to EHP that he had "seen the two environmental assessments" that WAMU had sent him and noted that "the DC DOH has to settle the issue definitively before we proceed to publication (see page 46)."

Throughout the environmental assessment controversy, Dr. Guidotti maintained close contact with DC WASA public relations personnel, who kept tabs on the developments. On the morning of the September 21, 2006 WAMU broadcast, in the midst of an e-mail exchange between DC WASA staff and Dr. Guidotti, someone suggested that DC WASA's response to the delivery of potentially unsettling information about the possible harm from lead in water include ***"referencing the peer reviewed article"*** (see page 46). It is impossible for me to tell, exactly, who wrote this statement. But at that time, Dr. Guidotti's EHP paper was the only peer reviewed article describing Washington DC's lead-in-water problem and its public health implications. The statement again makes clear that the authors, and DC WASA, viewed the EHP paper as a public relations tool. WAMU noted on the air that they reviewed the environmental assessments ***independently*** and discovered water problems in 7 instances. Dr. Guidotti refused to speak on tape.

EHP EHP response Wed, Sep 20, 2006 11:

Subject: EHP Manuscript #8722
Date: Tuesday, September 19, 2006 4:55 PM
From: Tee Guidotti <eohtlg@gwumc.edu>
To: <burkhart@niehs.nih.gov>, <CNKCE]@niehs.nih.gov>
Conversation: EHP Manuscript #8722

We have run into a totally unexpected complication with our manuscript:

NPR reporter Lisa Nurnburg has obtained (through FOIA) two DC cases in which contractor (not DOH) wrote in the report that water was the most likely source of exposure in cases of children with elevated blood lead. Story will be filed later today so will probably air tomorrow. This will cause further controversy.

The DC Dept. of Health is currently investigating the apparent discrepancies. At issue is both the completeness and correct interpretation of the contractors' reports of home environment evaluations of two cases of elevated blood lead. These reports were prepared by contractor hired by DOH to do the assessment and transmitted to DOH on completion. At this time, we do not know whether there was additional information in both cases that was not sent in response to the FOIA request. Until there is an explanation, DOH is standing by their information that all such cases had other sources of exposure to lead documented. The Director and staff of DOH is investigating and until they are finished we cannot proceed.

We have seen the two environmental evaluations ourselves and have our own thoughts about their interpretation. We will take suitable action, reaffirm validity of original information and/or make necessary correction in the manuscript once the full story is in. However, the DC DOH has to settle the issue definitively before we proceed to publication.

This all happened today. We thought that you would want to know as soon as possible.

TLG

Michele Quander-Collins

09/21/2006 10:19 AM

To: "Tee Guidotti" <eohtlg@gw
cc: Jerry Johnson/GM/DC/WA
Hemphill/GM/DC/WASA@WASA
Subject: Re: Media inquiry...WAMU-FM (possibly spam: 6.2768) (possiblyspa

Good morning, Dr. Guidotti....

As an FYI... I'm told that WAMU-FM is reporting the Blood Level Testing story on this morning's broadcast. The premis I'm told, is that the Department of Health wasn't truthful in its reporting of the blood level tests results and that WASA officials continue to downplay the significance of the test results. I'm also told that their report featured interviews from mothers of those tested -- one of whom says her son's test results were very high....etc. WAMU has indicated the full report/story will be the topic of discussion tomorrow (Friday) at 1:00 pm on the station's MetroWatch program.

Michele

We should have a response on the significane of the findings as reported to WASA - perhaps referencing the peer reviewed article as well as the attached.

Originator of the above e-mail is uncertain, since WASA deleted the person's name.

The exposure of the problems with the DC WASA-funded risk assessments caused Dr. Guidotti grave concern. He commented to EHP co-author Marina Moses, DrPH, MS that ***"unless this is resolved, there will always be a cloud and confusion over what happened to DC residents."*** He further stated that unless this issue was resolved "***we will not be able to publish our BLL paper***." And that, "***An explanation of how the discrepancies MIGHT have occurred is not enough. It leaves open the possibility that the original contractors' reports were correct and that water was the source in those cases. DOH needs to present a direct, simple and accurate explanation of the discrepancies DID occur, no speculation. At this point it is essential for DOH to fix this***." Further, he argued that if we cannot resolve the problem that "***the lawyers will use this in future legal actions***" and "***WASA will be vulnerable forever***" and "***nobody will believe DOH or WASA in the future."*** Given that the EHP paper had been described by DC WASA as a "Health Message," it is probably not coincidental that the words "***publish our BLL paper***" were written in the very same sentence that raised the legal and public relations predicament of DC WASA.

>>> Tee Guidotti 09/22/06 10:53 AM >>>
Marina - for reasons I don't pretend to understand, your email was not copied to the others and when I tried to respond by punching "Reply" it kept bouncing me out of the system. So, I have pasted your email below.

I think that EPA is making a mistake in underestimating this development. Taking the announdement off their website is the worst thing they could do in terms of appearances. They don't seem to realize that EPA's own credibility is on the line.

The issue is not really whether water was the source - that remains unlikely and the two cases did not, in my opinion, provide good evidence for this. The problem is that unless this is resolved, there will always be a cloud and confusion over what happened to DC residents. If we cannot resolve this issue, we will not be able to publish our BLL paper (which is essential to putting this matter to rest and describing what really happened), nobody will believe DOH or WASA in the future, the lawyers will use this in future legal actions, the scientific analysis will be clouded and will undermine EPA's own credibility, and WASA will be vulnerable forever.

An explanation of how the discrepancies MIGHT have occurred is not enough. It leaves open the possibility that the original contractors' reports were correct and that water was the source in those cases. DOH needs to present a direct, simple and accurate explanation of the discrepancies DID occur, no speculation. At this point it is essential for DOH to fix this.

TLG

Later that day, Dr. Guidotti wrote to one of his GWU co-authors calling for an expeditious "answer" by DC DOH that would explain away the discrepancies credibly and allow him to proceed with the EHP paper. Specifically, he wrote that ***"…DOH has to answer the fundamental issue of transparency and documentation of the basis for their judgment or everyone involved will have zero credibility."***

"Tee Guidotti"
<eohtlg@gwumc.edu>

09/22/2006 09:59 PM

To: <Michele.Quander
Goldsmith" <eohdfg@gwumc.edu>, "Marina Moses" <eohmsm@gwumc
cc:
Subject: Re: WAMU report and TEWG response

??

David - I am not giving the science credence. I am saying that DOH has to answer the fundamental issue of transparency and documentation of the basis for their judgment or everyone involved will have zero credibility.

BTW, I have been in touch with the editor. He wishes us luck on the outcome and is standing by to see how the issue is resolved.

TLG

A few days later he cited a potential resolution to the problem. That is, in late September 2006 WAMU announced that the Centers for Disease Control and Prevention (CDC) would step in to investigate the environmental assessments. Dr. Guidotti then e-mailed the EHP editors on September 25, 2006 that CDC would review all evidence regarding blood lead levels and sources of exposure in 2004, to ***"…restore credibility to the public health system in DC,"*** and ***"that it is premature to consider withdrawal of the manuscript."***

Subject: Re: EHP Manuscript #8722
Date: Monday, September 25, 2006 3:01 PM
From: Tee Guidotti <eohtlg@gwumc.edu>
To: <burkhart@niehs.nih.gov>
Cc: <CNRCE J@niehs.nih.gov>
Conversation: EHP Manuscript #8722

In the latest development, CDC has been asked to review all evidence regarding blood lead levels and sources of exposure in 2004. This is a reasonable move to clarify the situation and to restore credibility to the public health system in DC. I have no choice but to ask that you suspend plans for publication until this is sorted out, which may take weeks.

I have seen the disputed reports and am familiar with the context, if not the exact circumstances at DC DOH. Based on what I have seen, I believe that it is premature to consider withdrawal of the manuscript.

TLG

Having already discussed the data in the assessments with me, and fully aware that some assessments reported water as either the sole or a contributing source of lead, Dr. Guidotti's GWU co-author Ms. Ragain urged careful preparation of a defense, in case a sufficient explanation was not found for the discrepancies between the assessments and Dr. Guidotti's/DC WASA's statements about them. Again, the public relations aspect of the work between the

GWU researchers and DC WASA is clear. Ms. Ragain states, ***"We need to make sure our own ducks are in a row. WASA is teetering on a thin line right now, just a small tip could make for another fiasco at some level."*** The e-mail closed with a recommendation to "try and get ALL the documents that Dr. Edwards got from DOH with his FOIA request."

>>> Lisa Ragain <ragain@speakeasy.net> 10/24/2006 12:40:26 AM >>>
Tee -

Just finished scrolling down - you can see the original message from

Jerry that helped touch off this maelstrom. We need to make sure our

own ducks are in a row. WASA is teetering on a thin line right now, just a small tip could make for another fiasco at some level. I strongly suggest that you try and get ALL of the documents Dr.

Edwards got from DOH with his FOIA request.

L

In reference to Ms. Ragain's idea that the GWU authors should obtain -- and actually read -- the assessments they had so frequently cited (in the EHP paper, sworn written testimony to US Congress, presentations, and to DC OIG), Dr. Guidotti mentioned that it would ***"not be so easy to get them all but Edwards is doing it for us."*** In anticipation of the CDC's action, Dr. Guidotti also offered his assessment of the likelihood of different outcomes of the CDC investigation.

"Tee Guidotti"
<eohtlg@gwumc.edu>

10/24/2006 11:42 AM

To: <raga
cc: <John
<eohmsm@gwumc.edu>
Subject: Re: Fwd: The LEAD Coalition and New Opportunities

Not so easy to get them all but Edwards is doing it for us.

One of three things could happen:

1. CDC will say it could have been the water: this won't happen. If it did happen, they had better be able to back it up and they know it. DC DOH will have no credibility. The argument will be over how DC DOH could possibly have been so wrong.

2. CDC will say that they don't think it was the water but the documentation is poor. DC DOH will then have to defend why the records for the contractors and the additional information on which they relied was not in the same place or conveyed in response to the FOIA.

3. CDC will say that it cannot possibly have been the water. They will present the missing documentation and DC DOH will be exonerated.

I am betting on #2.

TLG

He did not consider a fourth possibility, which is that the CDC would find the assessments so ambiguous and contradictory to prior public statements on the subject that they would decide not to intervene. CDC eventually stated to *Salon*:

> ***"It's not CDC's job to investigate apparent discrepancies between public statements about these assessments and the results themselves, the spokesperson says."***

In late November of 2006, even if they did not have it before, DC WASA and Dr. Guidotti were given unambiguous information from DC DOH that the DC DOH "study" of "65 environmental assessments" never existed. Dr. Stokes – the only person at DC DOH who oversaw these assessments – had only analyzed the first 49 of the 121 assessments, through May 17, 2004.

-----Original Message-----
From: Sansone, Marie (DOH) [mailto:marie.sansone@dc.gov]
Sent: Wednesday, November 29, 2006 9:11 AM
To: 'Johnnie_Hemphill@dcwasa.com'; Hubbard, Drew (EOM)
Cc: Onwuche, Nkechi (DOH)
Subject: RE: Pb on www.salon.com

Johnnie . . . According to Sandra Handon, all of the lead-based paint records are now placed in one central location. Christine Onwuche and I are going to start going thru them today and matching them up to any CLPPP information. Lynette Stokes left me a voice message to the effect that she never did any further analysis after the May 17, 2004 summary of results from reviewing the initial 49 reports. I have to have some dental work this morning; let's try to touch bases this afternoon.

Sent from my GoodLink synchronized handheld (www.good.com)

>>> <Johnnie_Hemphill@dcwasa.com> 11/29/2006 7:22 PM >>>

Can you take a look at the attached, and please give me a call. Also, I
spoke with maire sansone this evening. She says that tokes did not complete the analysis of all the environmental assessments (only 49 of

121). Marie's review of 10 of the 49 indicates that the ones that suggested that water was the source of the problem were of demonstrably
poorer quality. She also said that the review of the DOHcase files (records other than the assessment files) will be reviewed beginning tomorrow.

Dr. Guidotti then revealed that he knew that DC WASA had actually funded at least 121 assessments, not 65, and admitted that he, himself, had been unable to make sense of an environmental assessment database he had obtained from DC WASA. This database only included 71 data points. He stated it was completely unclear which of the 192 data points in total (i.e., 71 in DC WASA's database and 121 in DC DOH's database) corresponded to the "65 children" whose cases had been supposedly analyzed by DC DOH.

From: Johnny Hemphill
Sent: Monday, December 04, 2006 9:01 AM
To: Rachel Lazarus
Subject: Fw: WASA Tests

Give me a call

----- Forwarded by Johnnie Hemphill/GM/DC/WASA on 12/04/2006 09:00 AM -----

"Tee Guidotti"
<eohtlg@gwumc.edu>

12/02/2006 03:40 PM

To: <Johnn
cc:
Subject: Re: Fw: WASA Tests

This is exactly the same problem we were facing (and we have our answer now). The databases are not clear on which of the subjects were the 65 cases and which (of the 71 on our sheet and the 121 in the CDOH list) were others.

Marie Sansome's impression confirms my own - that the contractors did not do their work well on those particular cases. In a charged situation like this, one should not speculate - there should be positive evidence for a cause, not conclusion by the process of elimination.

We have also had conversations with the person who did the work, who says that all necessary information was in fact left behind at DOH but not in the same file as the contractor work (just as we suspected).

I have a call in to John Davies-Cole to sort some of this out.

I don't think that the epidemiologists at CDC have any idea of the context of the database they are examining. I would be happy to speak to them about it.

Our top priority, however, is to get the 65 cases identified in our database so that we can run the stats one more time and finish conclusively with the subjects of the screening study.

TLG

In this same e-mail that essentially acknowledged that the "study" of the "65 children" never existed, Dr. Guidotti stated the top priority "***is to get the 65 cases identified in our database so that we can run the stats one more time and finish conclusively with the subjects of the screening study***." But he also claimed that "***just as we suspected***," all necessary information to resolve the problem with the assessments "***was in fact left behind at DOH but not in the same file as the contractor work***."

Dr. Guidotti could not abandon the quest to find data for this specific "study" of "65 children," possibly because he had often cited the study prominently in the EHP paper and elsewhere. "***For the purposes of the paper***," he wrote to two of his DC DOH co-authors in December 2006, "***we just want the data on the 65 because the question to be answered is whether there was a correlation in just these children***." He then made it clear that locating the data was both essential and urgent for the EHP publication because:

"We would not like to explain to the reviewers and critics why we are not describing the same 65 subjects we describe in the paper and that form the tail in the figures. That would undermine the credibility of the DOH data in its entirety."

From: Tee Guidotti [eohtlg@gwumc.edu]
Sent: Monday, December 04, 2006 5:45 PM
To: Garret (DOH) Lum
Cc: John Davies-Cole
Subject: Re: Original 65?

I am talking about the 65 subjects identified in the screening program, only, who had BLL 10 or greater. We have a database from WASA (which was asked to investigate the houses) that includes the 65 but also some others, presumably houses and children who were found to have elevated blood lead levels at other times. The database has coded premises number (we also have a key for which address it is), the BLL (sometimes multiple) and the first-draw tap water lead.

For the 71 subjects we identify as individuals, for the subset of 58 who have BLL >10 but not 10, for the 112 individual data points, and for the 67 unique addresses, the r is < 0.01 in each case. We know that the 65 children identified in the screening program are among them all and that there cannot be a sig correlation if there is not one for entire group that includes them - they are too big a subset.

For the purposes of the paper, however, we just want the data on the 65 because the question to be answered is whether there was a correlation in just these children.

We would not like to explain to reviewers and critics why we are not describing the same 65 subjects we describe in the paper and that form the tail in the figures. That would undermine the credibility of the DOH data in its entirety.

Garret - this is fairly urgent. This analysis is all that is standing in the way of getting this paper out. If you could possibly answer the question we would be eternally grateful.

TLG

Dr. Guidotti then approached his DC DOH co-author Dr. Davies-Cole, querying him about a "red plastic portfolio" that Dr. Stokes had supposedly left behind that had a "great deal" of documentation about the assessments, even though Dr. Stokes had made it clear to DC DOH's Marie Sansone, JD that she had stopped her review with 49 cases and had not examined the other assessments.

From: Tee Guidotti [eohtlg@gwumc.edu]
Sent: Monday, December 04, 2006 7:56 PM
To: John Davies-Cole
Subject: Documentation on the 65 cases with elevated BLL

You probably already know this, but I am told that Lynette Stokes left behind a red plastic portfolio in her desk and that it contains a great deal of documentation on specific houses and children. This information was available to her while she was actually making the risk assessments and were the basis for her decisions.

We are so close to wrapping this paper up!

TLG

After weeks of seeking data that could be attributed to the assessments of 65 children (a quest that is discussed further in Section 3.4), and repeatedly being told by DC DOH that no evidence that such a study existed, Dr. Guidotti ended this phase of his search by lamenting that the documents in the "***red plastic portfolio***" could have enabled him to reconstruct "***the identification of a proven environmental source in every situation***" (emphasis added). And that this "***hope seems to have disappeared with the little red folder Lynette kept in her desk***."

From: Tee Guidotti [eohtlg@gwumc.edu]
Sent: Friday, December 29, 2006 4:07 PM
To: Garret (DOH) Lum
Subject: RE: WLL v. BLL

OK - that's fine.

I think that it too much to expect to get all environmental data. (In fact, Marie Sansone has had difficulty getting all the info she needs.) The evaluations I have seen vary enormously in quality and two (the most controversial and also the weakest) seem to jump to unsubstantiated conclusions. For our purposes today, I don't think that we will be able to sort it out with respect to reconstructing the identification of a proven environmental source in every situation. That hope seems to have disappeared with the little red folder Lynette kept in her desk.

Although Dr. Guidotti abandoned his search, he did not disclose to EHP that the "study" of "the 65" never existed and the data could not be explained or reconciled. I speculate he calculated that no one would ever be able to discover these facts, because in response to a prior FOIA request I had made, DC DOH had acted to protect his communications.

3.3.1. Analysis of Specific Misstatements About the Environmental Assessments

The following is an analysis of the specific misstatements about the "65 children" and the environmental assessments that appeared in the published version of the EHP paper.

1) The paper states that the homes of all children and adults with elevated blood lead were investigated by DC DOH. This is a false statement for several reasons. First, there were many individuals with elevated blood lead levels who had no assessments at their homes. Second, the investigations were done by DC WASA contractors, and not DC DOH. Finally, DC DOH did not review all the assessments until at least late 2006.

> The homes of all children and adults with elevated blood lead levels were investigated by the DC DOH. The results of public health investigations in the home for the elevated levels for adults and children were reviewed.

2) Data on the percentage of the 65 children who lived in homes with and without lead service lines are fabricated (p. 698, Table 2). Unless it is known who the children were and where they lived (information that Dr. Guidotti searched for unsuccessfully), it is impossible to know the type of pipe material in front of each child's home. I have requested this information from DC DOH and they cannot find it.

Children < 6 years of age (percent of all children screened)	65 (84.4)
Children < 6 years of age living in homes with lead service lines	19 (29.2)
Children < 6 years of age living in homes without lead service lines	46 (70.8)

3) When Dr. Guidotti submitted the final version of the manuscript, he told EHP Editor Burkhart that "documentation to back up the original statement" (i.e., that in all 65 cases a lead source other than drinking water was identified) was "***no longer available***." This statement implied that such documentation had been available in the past, which Dr. Guidotti knew to be untrue

since DC DOH's Dr. Stokes (an EHP co-author) had stated she had reviewed "only 49 of the 121" reports.

------ Forwarded Message
From: Tee Guidotti <eohtlg@gwumc.edu>
Date: Tue, 09 Jan 2007 17:07:09 –0500
To: "Jim (NIH/NIEHS) Burkhart" <burkhart@niehs.nih.gov>

1. The statement that all 65 children identified as having elevated BLL during the screening program of 2004 were found to have another source of lead exposure has been modified. We now state that this was true in most cases, that in some cases no positive identification was made, and that the investigation is continuing. The reason for this change is that documentation required to back up the original statement is no longer available.

4) In the published paper, Dr. Guidotti covered up the 2 environmental assessments that pointed directly to the water as the cause of the child's elevated blood lead as follows:

In every case in which the blood lead level exceeded 10 μg/dL in a subject in the target population, an investigation of the homes was conducted. Most identified at least one source of lead exposure other than drinking water, usually peeling lead paint and dust. Two cases remain in dispute because a source has not been positively identified, but there is no evidence that either is water related. This investigation is continuing.

The above wording is false and misleading. For one of the cases, Dr. Guidotti had reports in his possession showing that the child in question attended Wilkerson Elementary School, where lead-in-water samples as high as 7,300 ppb had been found. This level of lead in water is about 1.5 times higher than the threshold for classification as a hazardous waste, and 365 times higher than the EPA lead-in-school standard. Indeed, the **average** first-draw lead at Wilkerson Elementary School was 342 ppb, and the average second-draw lead was 538 ppb (both more than 20 times the EPA standard). The child's blood lead, in fact, had been tested precisely because of the high level of lead in water at the child's school. This was clear evidence of a possible "water related" source of lead exposure that should have been disclosed.

The second case in dispute also pointed directly to the water, as revealed by very high lead in the second-draw sample collected at the child's home. DC DOH has never denied that they told this child's mother that water was the only significant lead source in the home (see WAMU report cited earlier).

Dr. Guidotti's statement that the "investigation is continuing" is also false. In his e-mail above (page 54), Dr. Guidotti states that all hope of finding the environmental source disappeared with the loss of the red plastic portfolio. In 2007 I also spoke with the child's guardians and confirmed that there was no ongoing investigation of lead sources in the child's environment.

5) Dr. Guidotti and his DC DOH co-authors discuss the case of a child with excessively high BLLs that had been hospitalized for lead poisoning:

> els > 10 µg/dL, and all but 1 had a level < 45 µg/dL, a level that may be associated with clinically symptomatic lead poisoning, That 1 child had a level of 68 µg/dL and was hospitalized. A decision to treat by chelation was deferred because a repeat blood lead determination showed that the level was falling. A source of lead exposure unrelated to either lead paint or water has been identified in that case but has not been revealed in order to protect the confidentiality of the family.

I investigated this case in detail through FOIA requests for internal agency documents and interviews with the child's family and neighbors. As demonstrated in a separate document that I have sent electronically along with this letter, the above statements are false.

On March 24, 2004, EHP co-author Dr. Stokes presided over a public press conference on this child's case (see streaming video in the attached PowerPoint file). The day before the press conference, DC DOH issued a press release titled, "Child Admitted to DC Hospital with Elevated Blood Lead Level: Environmental Assessment Strongly Suggests Water is Not the Source." The announcement claimed that lead dust and paint had been identified as the most likely causes, and did not reveal that *no sample of this child's drinking water had been collected*. Moreover, the two risk assessments that had been conducted at the child's home prior to the press conference (on 10/15/02 and 7/23/03) had resulted in only a single elevated lead dust sample on the kitchen floor. At the press conference, Dr. Stokes asserted that the child lived in a home with a service line of undetermined or non-lead material. When DC DOH finally measured lead in the water weeks after the press conference, they found elevated levels, but never admitted it publicly. Through conversations with neighbors and DC WASA's own records, I later discovered that the service line at the child's home was indeed made of lead.

Therefore, the statement in the EHP paper, that a "source of lead exposure unrelated to either lead paint or water has been identified, […] but has not been revealed in order to protect the family" is untrue. In addition, in the press conference Dr. Stokes made her theory about the source explicit: "overwhelming amounts of lead dust." Clearly, this information was not being kept confidential to protect the family.

It is important to also note that this hospitalized child discussed in the EHP paper was the very child at the center of the *Regina Lewis v. the District of Columbia and DC WASA* $10 million lawsuit. Dr. Guidotti, on behalf of DC WASA and DC DOH, used the EHP paper as a peer reviewed platform to lie about the facts of this child's situation.

3.3.2. On the Possible Origins of "the 65"

It is worth speculating on the possible origins of Dr. Guidotti and DC WASA's fabricated claims about the DC DOH study of "the 65" environmental assessments. Ultimately, the burden of proof should fall on the authors, but I have uncovered information that may shed light on the question.

A 2005 "Scope of Work" document between DC WASA and GWU (see next page) noted that, "We [GWU] are an academic center of excellence in this field…." of communications support. The same document mentioned that GWU had developed a "strategic plan for the anniversary of the media coverage of the lead issue," and "…a document of strategies to work with the DC Lead Elimination Task Force" (i.e., a coalition of community, advocacy, governmental, and academic groups that formed in 2004 to improve lead poisoning prevention efforts in the District). Further, the document stated:

> ***"In our previous contract with WASA, we met a similar charge by providing WASA with a write-up on the DC Department of Health children's blood lead level results…"***

GWU's previous contract with DC WASA was in 2004, and their "write-up" about DC DOH children's blood lead level results may have been a document entitled "Dr.Calhoun'sExecutiveSummary10-13-2004.doc." I have a copy of this document which was mailed by Dr. Guidotti to Ms. Renner on April 12, 2006. This document features edits that are still clearly visible via MSWORD track changes. The edits are labeled, "Calhount,5-4-2005," which suggests that Dr. Calhoun revised the document in 2005. While the author of the document is not mentioned, it would seem odd for Dr. Calhoun himself to write a document entitled "Dr.Calhoun'sExecutiveSummary." It seems possible that this document originated at GWU and was produced for DC WASA.

This document is the only information I have, which is even remotely associated with the DC DOH (i.e., edited by Dr. Calhoun). It mentions "the 64" environmental assessments. Specifically, the following text appears:

> ***Sixty-four children under the age of 6 had elevated BBL (10mcg/dl or higher), of whom 2 had levels of 45 or greater (45 mcg/dl is the BBL at which medication is recommended by the Centers for Disease and Prevention (CDC). It has been well documented that those 2 children were hospitalized and treated at local hospitals and have been relocated from their homes, which were found to have high lead levels from paint, dust and soil, and lead abatement techniques. It is also significant that all the residents of the 64 children under age 6 with elevated BLL (i.e., 10 mcg/dl or higher, and the nursing mothers with elevated levels except for 1 residence) have shown lead dust, paint and/or soil levels that exceed Environmental Protection Agency (EPA) and HUD guidelines.***

2.3 Scope of Work Involving Communications Support.

The CRSPH team views risk communication as a specialization distinct from crisis communications, health education or corporate communications, although individual situations may involve these other aspects of communication. We are an academic center of excellence in this field, particularly with respect to conceptualizing and framing the message in ways that the public and concerned communities will find useful in making decisions and understanding the message. This view of the communications function goes beyond the two specific tasks listed below but the CRSPH team views this mission as integral to our role.

2.3.1 Communications support

CRSPH will continue to support communications functions by participating in the development and/or review of WASA testimony, advisories, brochures, etc., that are intended to provide information to customers, the general public, media or special audiences on water quality generally, potential negative health effects, at risk populations, etc.

In our previous contract with WASA, we met a similar charge by providing WASA with fact sheets on drinking water and health for immunocompromised patients and health care providers, a distribution plan and strategy for frequently-asked questions for those audiences, a strategic plan for the anniversary of the media coverage of the lead issue, a review of utilities' practices and policies on translating health-related materials into languages other than English, a review of how utilities present research data in newsletters and websites, and a document of strategies to work with the DC Lead Elimination Task Force.

2.3.2 Support for policy development.

The CRSPH team will continue to provide advice and counsel to senior WASA executives, in advance of or during policy level briefings, public statements, testimony, etc. – providing a source of authoritative information necessary to ensure accuracy and timeliness in communications.

In our previous contract with WASA, we met a similar charge by providing WASA with a write-up on the DC Department of Health children's blood level results, a recommendation for risk communication training for WASA management and staff, and several briefings for use in testimony.

The likelihood that "Dr. Calhoun's Executive Summary" was written as a strategic communication tool for public relations by DC WASA is further indicated by the following excerpts that are unlikely to have originated with Dr. Calhoun or even the DC DOH. Specifically, "Dr. Calhoun's Executive Summary" states (misspellings are in the original):

1) ***The DOH is supportive of the plan for the replacement of lead service lines as put forth by WASA, and the prioritization thereof, as recommended by DOH. DOH concurs with the service line replacement process underway to the target population and those with elevated BLL.***

2) ***Table 1 shows schools tested by the Water and Sewage Administration (WASA) along with the DCPS engineers, immediately closed the drinking unit and proceeded to remove all the sinks, faucets, and fountains which were identified as being the source of the increased water lead levels (WLL).***
3) ***It is significant to point out that the increased WLL were due not from lead service lines to the school, but from lead fountain and sadder in the units.***
4) ***The DOH recommends continued use of water filters, with appropriate changes of the filtering units as recommended by the manufactures.***
5) ***There is no documented evidence of any individual in the District of Columbia who has required medical intervention due to known exposure to lead in the water!***

The above may explain the origins of the "DC DOH study" of "the 65 (or 64)" environmental assessments, when the DC DOH itself has no record of such a study. The tendency of Dr. Guidotti to put words in the mouth of DC DOH, that were favorable to his DC WASA client, is also revealed in the only e-mail produced to me between DC DOH and Dr. Guidotti:

Calhoun, Thomas (DOH)

From: Tee Guidotti [eohtlg@gwumc.edu]
Sent: Monday, June 14, 2004 6:47 PM
To: tcalhoun@dchealth.com
Subject: Bit more language

It occurred to me that it might save you some time if I put into writing my comment in Mr Bobb's office.

"The Department of Health is now moving from active surveillance for elevated blood lead levels among all DC residents, which involves actively searching for cases, to selective active surveillance for children at high risk and monitoring results, often called passive surveillance, for city residents as a whole. The results of active surveillance, in which the Department of Health has screened thousands of DC residents for elevated blood lead levels, has turned up only cases in which the exposure is clearly related to an identifiable risk in the home, not in drinking water or other sources that are broadly distributed around DC. Therefore, the DoH will now return to its previous program of making blood lead levels available for children of low-income residents and will actively search for cases where there are reasons to suspect lead exposure in the home."

I hope this helps.

TLG

The next section will reveal even greater manipulation of DC DOH by DC WASA and Dr. Guidotti.

3.4. The DC WASA/DC DOH "Correlation Analysis"

On March 2, 2006, Dr. Guidotti e-mailed EHP apologizing "for all the problems with this manuscript." Even at that very early stage in the publication process, he acknowledged that it had been a "disorganized experience," "starting with the DC Dept. of Health (nice people, but like herding kittens)." Dr. Guidotti explained that DC DOH "did not initially understand that a database used for research had to be much cleaner," and that he had "spent hours double-checking the data, just to be sure that the backtracking at DOH did not compromise the data."

Subject: Re: EHP ms 8722
Date: Thursday, March 2, 2006 11:07 AM
From: Tee Guidotti <eohtlg@gwumc.edu>
To: NIEHS EHP Manuscripts <EHPManuscripts@niehs.nih.gov>
Conversation: EHP ms 8722

I have to apologize for all the problems with this manuscript.

Frankly, I have never had such a disorganized experience with a ms., starting with the DC Dept. of Health (nice people, but like herding kittens), which is accustomed to managing public health programs but did not initially understand that a database used for research had to be much cleaner. I have spent hours double-checking the data, just to be sure that the backtracking at DOH did not compromise the data.

The way in which Dr. Guidotti and DC WASA "herded" the DC DOH kittens is revealed in a correlation analysis that was added to the EHP paper immediately before its publication in 2007. As background, my 2005-2006 FOIA requests to EPA had prompted a US Senate staffer to inquire about the fabricated DC DOH study of the 65 environmental assessments. In response to this request, the Senate staffer received a "fact sheet" written by EPA/WASA/DOH/Washington Aqueduct, which prompted her to ask EPA how, exactly, DC DOH had determined that the high lead in DC water had not contributed to any elevated blood lead in DC children. Unable to answer the question, EPA then approached DC DOH for additional information. On the basis of EPA's previous experience with DC DOH, it is clear that EPA did not expect much of the DC health agency. At the end of EPA's exchange with DC DOH, EPA reported, "***As expected,*** DC DOH was not helpful in answering the question's…" [*sic*].

As expected, DCDOH was not helpful in answering the question's posed by Inhoff's staff.

We'll have to work with WASA and DOH's address data to gwt to the answer. Bottom line is that DOH's "environmental assessment" of homes of children with elevated lead levels did not include testing their water by DOH.

Veronica, was there a time frame to get the ansers back?

EPA Wireless E-Mail Services.

At that point, EPA turned to DC WASA for an explanation of how DC DOH had determined that no elevations in children's blood lead had occurred back in 2004, and how possible links to

water had been ruled out. The first query was on August 22, 2005, and a second was sent on September 29, 2005.

-----Original Message-----
From: Rogers.Rick@epamail.epa.gov [mailto:Rogers.Rick@epamail.epa.gov]
Sent: Monday, August 22, 2005 9:00 AM
To: rgans@dcwasa.com
Cc: John_Dunn@dcwasa.com; Saxe.Jennie@epamail.epa.gov; nkechi.onwuche@dc.gov
Subject: Fw: DC Tap water lead and Blood lead levels draft fact sheet

Roger,

EPA has been posed a question by Senator Inhoff's staff (Senate Environment and Public Works Committee) regarding children that had been found to have elevated blood lead levels last year. A fact sheet that we (EPA, WASA, DOH and the Aqueduct) put together made a statement that

Rick Rogers/R3/USEPA/US
09/29/2005 07:38 AM

To Roger_Gans@dcwasa.com
cc
Subject Re: Fw: DC Tap water lead and Blood lead levels draft fact sheet

Roger,

any word on the remaining address matching regarding the blood lead data and tap water samples?

Our GIS folks got the data they needed for those overall lead occurrence maps. Thanks, again, for making those arrangements.

Thanks,

Rick Rogers
EPA Region III

Roger_Gans@dcwasa.com

DC WASA never responded to EPA's requests. Pressured from persistent questioning by myself via FOIA and more questions from the Senate staffer, in May 2006, EPA acknowledged to DC WASA that, "Now that our e-mail string will have to be released through a FOIA request, we may get the question asked, again."

Rick Rogers/R3/USEPA/US
05/11/2006 07:17 AM

To Roger_Gans@dcwasa.com
cc
bcc
Subject Fw: DC Tap water lead and Blood lead levels draft fact sheet

Roger,

I was searching through Emails to answer FOIA requests for info on D.C. water supply and blood lead levels and I came across this exchange we had last August (see attached Emails). Do you recall what the final outcome of this search was? The original question was related to a question asked by staff from the Senate's Environment and Public Works Committee, which was of those tested in D.C. who had elevated blood lead levels (>10 micrograms/deciliter) that were claimed by DCDOH to not have lead service lines, was their tap water sampled to see if there were high first draw lead levels in those homes.

It looked like you had a contractor going through the data, matching up addresses to WASA's lead sampling data. I don't recall ever getting the final information on that search.

Did your contractor complete the address matching? I don't recall ever receiving the outcome of that search. The Senate Committee never followed up on this. But, now that our Email string will have to be released through a FOIA request, we may get the question asked, again.

I'd appreciate anything you can do to dig up the results of that review.

Thanks,

Rick Rogers
EPA Region III

Around that same time, DC WASA, with guidance from Dr. Guidotti, began preparing data to retroactively construct answers to the Senate staffer's questions.

Johnnie Hemphill
05/03/2006 11:40 AM

To: Roger Gans/ENGI
cc: "Tee Guidotti" <ec
<eohmsm@gwumc.edu>, John Dunn/GM/DC/WASA@WASA
Subject: Information on Priority replacements

Roger, I need you to contact Tee and Marina, asap. They may need your assistance in obtaiing information we have pertaiing to the lead line replacements we have completed at residences where a child with a high blood lead level was identified.

Thank you for your assistance.

DC WASA started with a DC DOH list of several hundred children (roughly 260) that had elevated blood lead in 2004. Devoid of WLL measurements, this list provided no information about possible links between elevated BLLs and contaminated water that the Senate staffer had requested. To try to generate such a dataset, DC WASA and Dr. Guidotti began matching home addresses from the DC DOH list with DC WASA's own measurements of WLLs from DC homes in 2003, 2004, and 2005. They found 71 matches. DC WASA's WLLs included only 2nd draw measurements that had come from DC WASA's own sampling program, which had turned out to be entirely unrelated to the environmental assessments of the purported "study of 65." Another challenge for Dr. Guidotti and DC WASA was making it appear as if this information came from DC DOH – the agency that purportedly did the studies and collected the information – and not DC WASA.

One month after the September 21, 2006 WAMU broadcast on the problems with the DC government's representation of the environmental assessments, and in reaction to follow up media inquiries about the same issue, DC DOH requested a meeting with "WASA reps" on October 16, 2006.

"Hubbard, Drew (EOM)" <Drew.Hubbard@dc.gov>
10/16/2006 03:09 PM

To: "'jhemphill@dcwasa.com'" <jhemphill@dcwasa.com>
cc:
Subject: Meeting request re: lead assessments

DOH would like to sit down with the appropriate folks from WASA to discuss
this issue further. They have gotten more inquires from reporters on the
topic. Can you advise a time in the next couple of days that WASA reps could meet?

Thanks,

The meeting between DC DOH and DC WASA, which included Dr. Guidotti, occurred on the week of October 30, 2006. This also happened to be the time when the EHP publication had been placed on hold, and Dr. Guidotti was in urgent need of addressing the problems with "the 65" data for his paper.

From: Hubbard, Drew (EOM) [Drew.Hubbard@dc.gov]

Sent: Monday, November 06, 2006 11:31 AM

To: 'Sansone, Marie (DOH)'; 'Onwuche, Nkechi (DOH)'; 'Key, Tori (EOM)'; Aleizha Batson; Rachel Lazarus; 'eohtlg@gwumc.edu'; Johnnie Hemphill

Subject: WASA-DOH Meeting Re: Lead Response

All,

This serves as the follow up to last weeks meeting. This message will go out to all who attended. If there is a need to communicate with whole group collectively please respond to all. As an update, I received a voice message from Michelle Nellenbach this morning. Of interest, she mentioned that WASA is in the process of forwarding the rest of the assessments to her office. Also that she was reaching out to me in order to have a conversation with DOH. I have not responded yet.

Drew E. Hubbard
Federal Affairs Policy Analyst
Office of Policy & Legislative Affairs
1350 Pennsylvania Ave., Suite 511
Washington, DC 20004
Phone: (202) 727-8038
Fax: (202) 727-3765

On November 7, 2006, just days after the DC DOH/DC WASA meeting, Dr. Guidotti and his collaborators at GWU held another meeting with DC WASA to discuss, amongst other issues, "Resubmission of the case study" – a clear reference to the EHP paper.

"Marina Moses"
<eohmsm@gwumc.edu>

11/02/2006 12:32 PM

To: <johnnie.hemphill
cc: "David Goldsmith"
<eohtlg@gwumc.edu>
Subject: Tuesday, Nov.7

Hello,

We'd like to confirm our Tuesday, Nov. 7, meeting. The following is a draft list of items we'd like to discuss:

-Risk communication training (scheduled for Nov. 29). We've developed a couple of scenarios and would welcome your thoughts on the scenarios and agenda.
-Interactive website status
-Resubmission of Case Study.

Thanks,
Marina

The very next day, Mr. Hemphill sent DC DOH an e-mail making two requests:

a. That, because DC WASA did not have the environmental assessments requested by the US Senate staffer, the responsibility lay with DC DOH to forward those assessments to Capitol Hill, and

b. That, because DC WASA had "determined that it could not undertake any lead-health analyses independently some years ago," it was advisable for DC DOH to include with the assessments to the US Senate a "correlation analysis" showing the relationship between BLLs and WLLs.

Although Mr. Hemphill did not reveal this to DC DOH, this type of analysis would also work perfectly for the EHP paper. To his e-mail, Mr. Hemphill attached a spreadsheet that was part of some "information" DC WASA had promised to DC DOH at the DC DOH/DC WASA meeting. These data turned out to be DC WASA's 71 data points with unredacted home addresses, date of water samples, 2nd draw WLLs, gender of child, date of birth, date of blood test, method of blood test, and BLL (several data points had multiple BLLs or WLLs per child).

Mr. Hemphill then suggested that the "correlation analysis" of this data could be sent in graph form to the US Senate staffer, to illustrate the relationship (or lack thereof) between BLLs and WLLs. Specifically, Mr. Hemphill wrote:

"It may be additive to the DOH response to Nellenbak's [the U.S. Senate staffer'] request if DOH or DOE [DC Department of the Environment] graph the correlation (or lack thereof) of blood lead and lead water samples. A graph may clearly demonstrate any correspondence between the two pieces of data. It would also be useful, as we discussed last week, to include a few paragraphs that provide context for the real question that is being asked – how does DOH explain its conclusions about the sources of lead exposure. Toward that end it may be useful to provide background on recognized sources of environmental exposure…"

Johnnie Hemphill

To: "Hubbard, Drew (EOM)" <Drew.Hubbard@dc.gov>, "Sansone, Marie (DOH)" <marie.sansone@dc.gov>

11/08/2006 02:53 PM

cc:

Subject: Re: WASA-DOH Meeting Re: Lead Response(Document link: Johnny Hemphill)

Hello -

As you know, WASA does not have access to the environmental assessments conducted under DOH's contract(s). Those assessments are owned by the District (DOH and/or DOE), so I would appreciate it if you would reply to Ms. Nellenback that DOH/DOE will respond to the request.

I did, however, promise to respond to her original request (made through EPA). I am forwarding the un-redacted information to you as I said I would in your meeting last week (this must be redacted to remove premise numbers, and addresses to protect WASA customer and patient privacy before it is distributed. I

I have only "eye-balled" the data, but there is no apparent correlation between blood lead levels and tap water samples. WASA determined that it could not undertake any lead-health analyses independently some time ago.
It may be additive to the DOH response to Nellenback's request if DOH or DOE graph the correlation (or lack thereof) of blood lead amnd lead water samples. A graph may clearly demonstrate any correspondence between the two pieces of data. It would also be useful, as we discussed last week, to include a few paragraphs that provide context for the real question that is being asked -- how does DOH explain its conclusions about the sources of lead exposure. Toward that end it may be useful to provide background on recognized sources of environmental exposure, how public health authorities conduct clinical assessments of patients and the likely source(s) of exposure, how lead is absorbed, etc...).

(See attached file: Updated High Lead Address_3 8.17.05.xls)

In immediate contradiction to his preceding statement that DC WASA could do no "lead-health analyses," Mr. Hemphill added that he had "'eye-balled' the data" and it revealed no apparent correlation between BLLs and WLLs. He did not point out to DC DOH, however, that fewer than 60% of the WLLs he had provided had been obtained between 2/3/04 and 7/31/04 (the time period of the non-existent "study of 65"). Mr. Hemphill's e-mail also did not mention the EHP paper, or acknowledge the importance to the EHP paper of a data analysis (ideally, one based on 65 data points, but in reality at this point *any* data analysis) coming from DC DOH.

Mr. Hemphill immediately forwarded a copy of his e-mail to Dr. Guidotti. This sequence of events strongly suggests that the data-manufacturing strategy had been developed at the GWU/DC WASA meeting the day before. Mr. Hemphill's introductory note to Dr. Guidotti stated that he had already followed up with DC DOH by phone and had invited them to contact Dr. Guidotti for "assistance" with the correlation analysis. Such collaboration was wished for by Dr. Guidotti and DC WASA far more than by DC DOH for two reasons. First, it would provide Dr. Guidotti one more opportunity to explore if DC DOH did, in fact, have any data that he could present to EHP as the "study of 65," and it would also allow him to oversee (and potentially influence) DC DOH's calculation of the "correlation analysis." Mr. Hemphill also made it clear that DC DOH could use the attached DC WASA data to explain to the US Senate staffer "how DOH arrived at their conclusions" back in 2004. Mr. Hemphill completed the follow-up call with DC DOH, and composed and sent his e-mail update to Dr. Guidotti within 9 minutes.

From: Johnny Hemphill
Sent: Wednesday, November 08, 2006 3:02 PM
To: 'Tee Guidotti'; 'Marina Moses'
Subject: Fw: WASA-DOH Meeting Re: Lead Response

Attachments: Updated High Lead Address_3 8.17.05.xls

Updated High Lead Address_3 8....

This is what I sent to DC re lead today. I followed-up with a call to encourage them to take the opportunity to submit the spread sheet (redacted) along with background info in order to provide a "quick" response to the Senate staff that includes an explanation of "how" DOH arrived at their conclusions, roll-up the MMWR, etc.....

I told them they could contact you for assistance

The next e-mail in the chain was completely redacted by DC WASA.

[redacted]

Two days later, on November 10, 2006, a worried Dr. Guidotti, who had not yet heard from DC DOH despite Mr. Hemphill's prompting and hints, sent an e-mail to Mr. Hemphill urging him to be "more explicit" with DC DOH about the importance of turning over the data analysis to DC WASA's GWU consultants: "I suggest that you be more explicit in asking them to ask ***us*** to run the correlation. This is a little indirect. It will be worthwhile!"

"Tee Guidotti"
<eohtlg@gwumc.edu>

11/10/2006 01:41 PM

To: <Johnnie_Hemphi
cc:
Subject: Fw: WASA-DOH Meeting Re: Lead Response

Johnnie - I suggest that you be more explicit in asking them to ask us to run the correlation. This is a little indirect. It will be worthwhile! TLG

Mr. Hemphill ran Dr. Guidotti's idea by another party at DC WASA, and reported back to Dr. Guidotti: "FYI, he thought it was a good idea, and made a commitment to discuss it with DOH." Dr. Guidotti's response was brief: "Excellent. You are way ahead of me."

>>> <Johnnie_Hemphill@dcwasa.com> 11/12/06 9:49 AM >>>
FYI, he thought it was a good idea, and made a commitment to discuss it with DOH

From: Tee Guidotti [eohtlg@gwumc.edu]
Sent: Sunday, November 12, 2006 10:16 AM
To: Johnny Hemphill
Subject: Re: Fw: WASA-DOH Meeting Re: Lead Response

Excellent. You are way ahead of me. TLG

By November 15, 2006, DC WASA had still not heard back from DC DOH. Evidently, Dr. Guidotti was resigned to look at the bright side of the situation, and wrote to DC WASA and his GWU collaborators that, "the spotlight is now on DOH, not WASA, and we have access to our own data now" (i.e., the dataset with the 71 DC DOH/DC WASA entries).

"Tee Guidotti"
<eohtlg@gwumc.edu>

11/15/2006 05:32 PM

To: <ragain@speakeasy.net>
cc: <eohdfg@gwumc.edu>
Subject: Re: More lead news

"Marina Moses" <
<Johnnie_Hemphi

How very interesting. Rebecca Renner emailed to ask for an interview on the epidemiology. I told her it would have to wait until next week, when I am back (and after I have had time to download the publications and read them very carefully). The NC data looks convincing, coming from CDC, but I need to look very closely at their exposure assessment methodology. However, the spotlight is now on DOH, not WASA, and we have access to our own data now.

But problems remained. The dataset of the 71 was clearly DC WASA's. And despite Dr. Guidotti's best efforts, neither that data nor the idea of "the correlation" could be construed to originate with the DC DOH co-authors. Hence for the purposes of the EHP paper and the response to the US Senate staffer this dataset was inadequate.

Two weeks later, the day after *Salon* published the article exposing the problems with DC DOH's environmental assessments, Mr. Hemphill tried again to get DC DOH to respond by sending an e-mail denoted "**Importance: High**" and titled "Pb on www.salon.com." Mr. Hemphill wrote, "Any progress on the information/clinical case evaluations that were discussed at the last meeting (i.e., information that Dr. Stokes may have collected/produced and upon which DOH's conclusions regarding the lack of evidence of an impact from tap water)? Was Dr. Guidotti able to provide any assistance? Has there been a response to Senate staff, yet?"

From: Johnny Hemphill
Sent: Tuesday, November 28, 2006 6:58 PM
To: 'Hubbard, Drew (EOM)'; 'Sansone, Marie (DOH)'
Subject: Fw: Pb on www.salon.com

Importance: High

Where are DOH and DOE in their effort to collect the assessments?

Any progess on the information/clinical case evaluations that were discussed at the last meeting (i.e. information that Doctor Stokes may have collected/produced and upon which DOH's conclusions regarding the lack of evidence of an impact from tap water)? Was Dr. Guidotti able to provide any assistance? Has there been a response to Senate staff, yet?

Please give me a call. Thanks!

About one week later, DC DOH employee Garrett Lum, MPH was enlisted to seek out Dr. Guidotti. Mr. Lum affirmed that Dr. Guidotti was "asking about running a simple correlation of the water and blood levels on the original 65," but noted that, "I'm uncertain of who are the original 65. I have perused our data and did not find anything with 65 associated to it. Could you clarify?"

>>> "Lum, Garret (DOH)" <garret.lum@dc.gov> 12/4/2006 2:38 PM >>>
Dr. Guidotti,

Dr. Davies-Cole mentioned to me that you were asking about running a simple correlation of the water and blood levels on the original 65. However, I'm uncertain of who are the original 65. I have perused our data and did not find anything with 65 associated to it. Could you clarify? I do recall that a correlation was performed, but it was on a size larger than 65.

Sincerely,

Garret R. Lum, MPH
Epidemiologist
District of Columbia Department of Health Bureau of Epidemiology and Health Risk Assessment Division of Disease Surveillance and Investigation
825 N. Capitol Street NE, 3rd Floor
Washington, DC 20002
202-442-5893 office
202-821-9707 mobile
202-442-4796 fax

It is worth reiterating that throughout his quest for a correlation analysis involving 65 data points, Dr. Guidotti was fully aware that there had never been any actual DC DOH evaluation of 65 environmental assessments of children with elevated blood lead. But continuing the search for "the 65" kept the pressure and the spotlight on DC DOH, while simultaneously furthering DC WASA's goal of finding data (at this point, *any* data) showing "no apparent correlation between BLLs and WLLs."

Dr. Guidotti responded (page 68) that he was "talking about the 65 subjects identified in the screening program," and that he had "a database from WASA (which was asked to investigate the houses) that includes the 65 but also some others." Note that in this 12/04/06 e-mail, Dr. Guidotti admitted that it was actually DC WASA who investigated the houses. He further stated that for the purposes of the paper, "we just want the data on the 65 because the question to be answered is whether there was a correlation in just these children." And he told Mr. Lum that "this is fairly urgent. This analysis is all that is standing in the way of getting this paper out. If you could possibly answer the question we would be eternally grateful."

From: Tee Guidotti [eohtlg@gwumc.edu]
Sent: Monday, December 04, 2006 5:45 PM
To: Garret (DOH) Lum
Cc: John Davies-Cole
Subject: Re: Original 65?

I am talking about the 65 subjects identified in the screening program, only, who had BLL 10 or greater. We have a database from WASA (which was asked to investigate the houses) that includes the 65 but also some others, presumably houses and children who were found to have elevated blood lead levels at other times. The database has coded premises number (we also have a key for which address it is), the BLL (sometimes multiple) and the first-draw tap water lead.

For the 71 subjects we identify as individuals, for the subset of 58 who have BLL >10 but not 10, for the 112 individual data points, and for the 67 unique addresses, the r is < 0.01 in each case. We know that the 65 children identified in the screening program are among them all and that there cannot be a sig correlation if there is not one for entire group that includes them - they are too big a subset.

For the purposes of the paper, however, we just want the data on the 65 because the question to be answered is whether there was a correlation in just these children.

We would not like to explain to reviewers and critics why we are not describing the same 65 subjects we describe in the paper and that form the tail in the figures. That would undermine the credibility of the DOH data in its entirety.

Garret - this is fairly urgent. This analysis is all that is standing in the way of getting this paper out. If you could possibly answer the question we would be eternally grateful.

TLG

Two hours later, Dr. Guidotti sent a second e-mail to Mr. Lum advising him on how to find "the 65." "***You may be able to identify the 65 because they would all have been screened before the end of the lead screening program on 31 July 2004***."

-----Original Message-----
From: Tee Guidotti [mailto:eohtlg@gwumc.edu]
Sent: Monday, December 04, 2006 7:54 PM
To: Garret (DOH) Lum
Cc: John Davies-Cole
Subject: Re: Original 65?

Some other thoughts.

You may be able to identify the 65 because they would all have all been screened before the end of the lead screening program, on 31 July 2004.

Also, I am told that there is a contractor who should know a lot about the current lead data base and may be able to separate out the cases by date or otherwise. He is Mr. Obi Offor (202) 535-2628. Hopefully, the quality control measures regarding the data can be checked using the LeadTraks database, I believe. I have not met or contacted him personally.

TLG

Mr. Lum responded, ***"are you asking for a line listing of the 65?"***

>>> "Lum, Garret (DOH)" <garret.lum@dc.gov> 12/5/2006 12:47 PM >>>
Are you asking for a line listing of the 65?

Dr. Guidotti responded the next day. If Mr. Lum could identify "the original 65," Dr. Guidotti and his colleagues could "do the correlation quickly here" at GWU. "If for some reason they do not match, we have another round of reconciliation to do. But at least we will have the original

65 pinned down…" Or, he offered, "you could look at the list we have and indicate to us which are the original 65…"

From: Tee Guidotti [mailto:eohtlg@gwumc.edu]
Sent: Tuesday, December 05, 2006 10:05 PM
To: Garret (DOH) Lum
Subject: RE: Original 65?

The objective is to identify the original 65 and then to correlate their BLL and the first-draw tap water lead at their address.

You could do that (we would need address or premises number and birthdate) and if you have the BLL in the database, too, that would help us cross check and validate. We would prefer this but we aware of the sensitivity of the information. The advantage is that as long as they lived at the time at one of the 67 addresses we have, we can match them with first-draw tap water lead and can do the correlation quickly here.

If for some reason they do not match, we have another round of reconciliation to do. But at least we will have the original 65 pinned down if we have the list.

Or you could look at the list we have and indicate to us which are the original 65. That would mean that you would have to do the cross checking and if we cannot match exactly 65 we would then have another round of reconciling to do.

Supplying us with the list is easier if it can be done.

TLG

The impasse was tentatively broken with Mr. Lum's "discovery" of "the 65" on December 6, 2006. Obviously never told by Dr. Guidotti or Dr. Stokes or Ms. Sansone that the study of "65 children" never existed, he thought he had found the "original 65." "The 65 DC residents who are less than 6 years of age and had a BLL >= 10 were identified," Mr. Lum wrote to Dr. Guidotti. But before he reaped Dr. Guidotti's eternal gratitude, he acknowledged that something was amiss. Specifically, "only 6 addresses matched (8 individuals)" for WLLs in the DC WASA database. If Dr. Guidotti's previous assertion was correct, and DC WASA's database of 71 included the "Original 65," there should have been 65 matches. Mr. Lum suggested that DC WASA could send a different database of WLL, and he would try to match that data to the list that he now believed were "the 65."

From: Lum, Garret (DOH)
Sent: Wednesday, December 06, 2006 12:57 PM
To: 'Tee Guidotti'
Cc: Davies-Cole, John (DOH)
Subject: RE: Original 65?

Dr. Guidotti,

The 65 DC residents who are less than 6 years of age and had a BLL >= 10 were identified in the database. We also had a database from WASA with homes that had there WLL tested. We manually matched addresses just to get a sense of it. We found that only 6 addresses matched (8 individuals). If you have a different database from WASA with WLL, you could send it to us and we will match them and then send you the data without identifiers to run the correlation.

Sincerely,

Garret R. Lum, MPH
Epidemiologist
District of Columbia Department of Health Bureau of Epidemiology and Health Risk Assessment Division of Disease Surveillance and Investigation
825 N. Capitol Street NE, 3rd Floor
Washington, DC 20002
202-442-5893 office
202-821-9707 mobile
202-442-4796 fax

Dr. Guidotti then faxed this information to Mr. Lum. In attempting to match the data this time, they came up short again. There were only "***18 or 19 on the list you faxed that match with our 65 list***." Clearly, Dr. Guidotti's prior assertion that DC WASA's database must have contained "the 65," did not match up with DC DOH's "list of 65." Dr. Guidotti's response conceded the point to Mr. Lum: "We expected there to be 65 matches within the total. That means the list was generated from some other source, not the screening program. Very important for us to know."

>>> "Lum, Garret (DOH)" <garret.lum@dc.gov> 12/7/2006 11:15 AM >>>
Dr. Guidotti,

I got your fax. Is the list in an excel spreadsheet? If so, would you email it to me. I can add a column to indicate which of the individuals on the list are part of the 65 that were < 6 years of age and had a BLL >=10 ug/dL.
There are about 18 or 19 on the list you faxed that matched with our
65
list.

Garret R. Lum, MPH
Epidemiologist
District of Columbia Department of Health Bureau of Epidemiology and Health Risk Assessment Division of Disease Surveillance and Investigation
825 N. Capitol Street NE, 3rd Floor
Washington, DC 20002
202-442-5893 office
202-821-9707 mobile
202-442-4796 fax

-----Original Message-----
From: Tee Guidotti [mailto:eohtlg@gwumc.edu]
Sent: Thursday, December 07, 2006 11:51 AM
To: Garret (DOH) Lum
Cc: Melissa Greer; Marina Moses
Subject: Re: Pb List

We don't have the electronic version of the original list but we have made an excel spreadsheet using the residence codes. Melissa Greer is our student research assistant.

If only 18 or 19 match, that is a surprise. We expected there to be 65 matches within the total. That means that the list was generated from some other source, not the screening program. Very important for us to know.

Thanks for your help!

TLG

Further confusing matters, Mr. Lum noted that the WLL draws by DC WASA were done separately from the blood lead screenings by DC DOH and that there were "multiple entries for some individuals on your list."

>>> "Lum, Garret (DOH)" <garret.lum@dc.gov> 12/8/2006 11:23 AM >>>
The water lead level draws by WASA were done separately from the blood lead level screenings performed by DOH.

I attached your list with an additional column indicating whether or not that individual was part of the 65 of interest. There was one individual that was in question because of a different birthdate. We also noticed multiple entries for some individuals on your list.

Feel free to contact me with any questions.

Proving that he did not have the foggiest idea as to what data he, DC DOH or DC WASA actually had, Dr. Guidotti said that "we think" the multiple entries are different BLL

determinations. He then stated the obvious, that "the database we have" is not "the 65," but "probably a mix of cases from late 2004 and 2005." Moreover, "WASA does not know how DC DOH compiled the list." Dr. Guidotti then added:

"It would all be much simpler if you have the BLL and first-draw water leads for all 65 subjects…and can compare a small database with just that information. If we have just that, we can run the one last regression and we will be done with it."

-----Original Message-----
From: Tee Guidotti [mailto:eohtlg@gwumc.edu]
Sent: Friday, December 08, 2006 11:54 AM
To: Garret (DOH) Lum
Cc: John (DOH) Davies-Cole
Subject: RE: Pb List

Yes, we think that the multiple entries are different BLL determinations.

There is not nearly as much overlap as we expected. Apparently, the database we have is a mix of cases, probably from late 2004 and 2005 that includes some repeat BLLs for some but not all of the 65. WASA does not know how DOH compiled the list.

It would all be much simpler if you have the BLL and first-draw water leads for all 65 subjects <6 and => 10 mcg/dl and can prepare a small database with just that information. If we have just that, we can run the one last regression and we will be done with it.

TLG

By mid-December 2006, the US Senate staffer began getting impatient at the lack of answers to her question about how DC DOH had determined that water had caused no cases of elevated blood lead back in 2004.

From: Hubbard, Drew (EOM) [Drew.Hubbard@dc.gov]
Sent: Tuesday, December 19, 2006 9:56 AM
To: 'Sansone, Marie (DOH)'; Johnnie Hemphill
Subject: Lead Info

Michelle from the Senate left me a message and she is getting a little impatient about setting a date to meet. She asked for a concrete date to meet during the first two weeks of the new year. I am not 100% sure but more than likely I will be transitioning out of this position. Either way tomorrow is my last day for the rest of the year so I would like to be able to get this coordinated today if possible.

Dr. Guidotti again e-mailed the DC DOH, asking yet again, "have we managed to isolate a database with the 65 children…?" He reiterated that "we can do the regression [analysis] here if we have the data." In addition, he created a fallback position, since it was becoming apparent that his efforts to "herd" DC DOH into finding data that he could construe as "the 65" might be unsuccessful. He again noted that if "the 65" could not be identified, "we are aware that there is a database of 121 children from all screening activities…from around 2003-2005…we can work with those data if we have to." He further noted that, in relation to the EHP paper, "we are so close to wrapping this up", and that there was new urgency since the "window of opportunity may close…because the journal is changing editors."

-----Original Message-----
From: Tee Guidotti [mailto:eohtlg@gwumc.edu]
Sent: Tuesday, December 19, 2006 5:20 PM
To: Garret (DOH) Lum
Cc: John Davies-Cole

Subject: 65 Children Identified in BLL Screening Project in 2004

Garret - have we managed to isolate a database with the 65 children <6yo with BLL >= 10 mcg/dL in the designated screening program that ended August 2004, that includes their blood lead levels and the first-draw lead in tap water at their homes?

If so, we can do the regression here if we have the (redacted) data. If you do the regression, please let us know the result and if possible use the highest blood leads and the highest water levels if there are multiple entries (in order to minimize the risk of missing an association).

If not, what are the prospects? We are aware that there is a database of 121 children from all blood lead screening activities (both the 2004 program and the result of routine surveillance) from around 2003-2005.
If we cannot isolate the data for the 65 (which would be much better), we can work with those data if we have to.

We are so close to wrapping this up. The window of opportunity may close after the beginning of the new year because the journal is changing editors.

TLG

Co-author Dr. Davies-Cole then e-mailed Dr. Guidotti acknowledging the obvious "problem we are having identifying the 65 children."

>>> "Davies-Cole, John (DOH)" <john.davies-cole@dc.gov> 12/20/2006 2:43 PM >>>
Hope you had a nice trip. I spoke with Christine Onwuche, the Manager of the DC Lead Program about the problem we are having with finding the 65 children. She said that someone from the Department of the Environment who used to handle the data would probably be able to assist us. She did contact him and later forwarded some data which I hope will include the 65. I forwarded it to Garret for review. Unfortunately, we were all very busy with the Norovirus outbreak at Catholic University last week, and were unable to work on it. He will be back in the office next week, Wednesday, and will start working on it.
Happy Holidays!

John

A few days after Christmas, Mr. Lum finally responded, "I requested data with WLL of all the children (< 6 y/o) whose BLL was greater than 10 mg/dL; however, I'm not sure I received the correct data from the [DC DOH's] lead program."

>>> "Lum, Garret (DOH)" <garret.lum@dc.gov> 12/28/2006 2:05 PM >>>
I requested data with WLL of all the children (<6 y/o) whose BLL was greater than 10 mg/dL; however, I'm not sure I received the correct data from the lead program. I received a list of children whose BLL measured above 10 mg/dL and will see if this matches with the water draw data. I'll let you know as soon as I know more.

Dr. Guidotti responded, "Excellent - If we can identify and do the regression on the original 65 subjects identified in the screening program up to August 2004, that is ideal. If we cannot, a regression on as many children (< 6 yo) from 2004 as we can get, without any other attempts at

selection, will be second best and allow us to finish up this work." Still recognizing the need for "the 65" to come from DC DOH, Dr. Guidotti said:

"I suppose that there is no way of confirming in individual cases that they were identified by the 2004 screening program. The data for those 65 children may have been mixed in with every other child who showed an elevated BLL during the time period. Please confirm that this is what happened! It would explain why we are having so much trouble finding the 65 subject children."

From: Tee Guidotti [eohtlg@gwumc.edu]
Sent: Thursday, December 28, 2006 3:09 PM
To: Garret (DOH) Lum
Cc: John (DOH) Davies-Cole
Subject: RE: 65 Children Identified in BLL Screening Project in 2004

Excellent - If we can identify and do the regression on the original 65 subjects identified in the screening program up to August 2004, that is ideal. If we cannot, a regression on as many children (< 6 yo) from 2004 in DC as we can get, without any other attempts at selection, will be second best and allow us to finish up this work.

I suppose that there is no way of confirming in individual cases that they were identified by the 2004 screening program. The data for those
65 children may have been mixed in with every other child who showed an elevated BLL during the time period. Please confirm that this is what happened! It would explain why we are having so much trouble finding the
65 subject children.

Here is how I suggest we proceed:

Plan A: Were there 65 in your data set and if so were they detected within the relevant time frame? If not, you might want to check children whose blood lead levels were 10 or above, and see if the inclusion of children whose BLL was right at 10 adds up to 65. If so, we can check the distribution of BLL against what we know for the 65 subjects to confirm that they are the same group.

If that does not add up to 65, there is a "Plan B." "Plan B" would be to obtain the paired BLL and first-draw water lead for as many children for which the data exist in 2004 - as many as can be found. Then, the regression can be done on the full-year (2004)convenience sample rather than the subset we have. That would be better because sample selection is less likely to be biased and at least would include the children from the screening program in the mix.

TLG

Dr. Guidotti followed up this e-mail with a hopeful message to co-author Dr. Davies-Cole:

"I see that Garret is working on trying to identify the original 65 subjects from the 2004 screening program. If he succeeds, that would be wonderful. Because the paper would be much stronger."

This bizarre statement came just a few minutes after Dr. Guidotti had asked Mr. Lum to affirm his belief that "***there is no way of confirming in individual cases that they were identified by the 2004 screening program."***

Apparently as an added inducement to Mr. Lum to find "the 65," Dr. Guidotti decided to offer him co-authorship on the EHP paper, "***Because Garret is putting so much additional time into this, and because Tim Cote has dropped out of authorship because he is concerned about conflict of interest with CDC…***"

From: Tee Guidotti [echtlg@gwumc.edu]
Sent: Thursday, December 28, 2006 3:15 PM
To: John Davies-Cole
Subject: BLL paper

John - I see that Garret is working on trying to identify the original 65 subjects from the 2004 screening program. If he succeeds, that would be wonderful because the paper will be much stronger.

If he cannot reconstruct the original group, then the only practical thing to do, in my opinion, is to create a database of BLL and water lead from all children < 6 yo who had a BLL greater than 10 during all of 2004 for whom the data are available. (We'll need the total number of children in that year, as well, to determine what % had both data points available.) At the very least, that would protect us from the criticism that the sample is biased and unrepresentative.

If Garret can do this, we will be very close to finishing.

Because Garret is putting so much additional time into this, and because Tim Cote has dropped out of authorship because he is concerned about conflict of interest with CDC, I would like to suggest that we insert Garret as a coauthor in Tim's place. Do you agree?

TLG

On December 28, 2006, Mr. Lum sent Dr. Guidotti what appears to be his best guess at the correlation for "the 65." But that correlation did not show what Dr. Guidotti needed. The results of the pasted-together dataset showed a negative correlation of -0.47 and -0.29 (see page 75). That is, the higher the lead in the children's water, the lower their blood lead. Such a result could not be published in EHP or given to the US Senate staffer. Mr. Lum further stated that he was still unsure "if the data exists that has BLL for every WLL tested or WLL for the 65 children with elevated BLL. We need to ask Dr. Davies-Cole if the lead program actually went to every address where children < 6 y/o with elevated BLL lived and collected WLL. However, he will not be back from vacation until next week."

At that point, Dr. Guidotti (page 75) finally conceded that, "we have enough evidence to conclude that we cannot recover enough information to do a proper correlation with the original group." He then told Mr. Lum that there was no option but to move to "Plan B": the 121-point dataset.

>>> "Lum, Garret (DOH)" <garret.lum@dc.gov> 12/28/2006 3:48 PM >>>
Dr. Guidotti,

The lead program sent me a list of children whose BLL was >10 mg/dL. I compared it to the WLL data that I have access to and only 7 of the addresses matched. I am also able to identify the 65 children with elevated BLL in the data I have access to and tried to match that with the WLL data as well. However, there was only 8 matches.

This first table shows the BLL data sent to me by the lead program that matched with WLL data (n=7).

BLL_wasa	WLL
22	36
30	39
11	77
17	31
11	96
10	30
10	60
correl=	-0.47112

The second table show the BLL collected during the special screening that matched with WLL data (n=8).

BLL_doh	WLL
11	23
25	23
10	23
22	36
11	96
12	77
10	30
17	31
correl=	-0.29596

It appears that the address where WLL data was collected may not have had the individuals' BLL tested. The results of the BLL data from the special screening was open to all individuals in the District of Columbia that had a concern. The special BLL screenings may not have necessarily included the individuals from the homes/addresses that had WLL tested. I'm unsure if the data exists that has BLL for every WLL tested or WLL for the 65 children with elevated BLL. We need to ask Dr. Davies-Cole if the lead program actually went to every address where children < 6 y/o with elevated BLL lived and collected WLL. However, he will not be back from vacation until next week.

Sincerely,

Garret R. Lum, MPH

-----Original Message-----
From: Tee Guidotti [mailto:eohtlg@gwumc.edu]
Sent: Thursday, December 28, 2006 4:28 PM
To: Garret (DOH) Lum
Cc: John (DOH) Davies-Cole
Subject: Re: WLL v. BLL

I will reread the results and think about them carefully tonight.
However, i think that we have enough evidence to conclude that we cannot recover enough information to do a proper correlation on the original group.

So, can we move to Plan B? As many children as we can find who have both BLL and water levels recorded in 2004?

I don't see any other option.

TLG

The next day, Mr. Lum sent Dr. Guidotti a DC DOH spreadsheet for about 121 children with BLL or WLL measurements. A few hours later Dr. Guidotti asked Mr. Lum some basic questions about what this data was, including "…any idea why there were two? Also, do we know if the children with BLL<10 had their blood lead drawn because of an elevation in WLL?" Mr. Lum responded:

"I don't know if the BLL<10 had their blood drawn because of elevated WLL. I provided the data so that you may run the correlation yourself to confirm it. All I know is, there was a database with WLL and a database with BLL that we matched based upon address."

From: Lum, Garret (DOH)
Sent: Friday, December 29, 2006 10:34 AM
To: 'Tee Guidotti'
Cc: Davies-Cole, John (DOH)
Subject: RE: WLL v. BLL

Attachments: all BLL with WLL.xls

all BLL with WLL.xls (175 KB)

Attached is what I have in terms of BLL or WLL for all < 6 y/o.

Garret R. Lum, MPH
Epidemiologist
District of Columbia Department of Health Bureau of Epidemiology and Health Risk Assessment Division of Disease Surveillance and Investigation
825 N. Capitol Street NE, 3rd Floor
Washington, DC 20002
202-442-5893 office
202-821-9707 mobile

-----Original Message-----
From: Tee Guidotti [mailto:echtlg@gwumc.edu]
Sent: Friday, December 29, 2006 1:18 PM
To: Garret (DOH) Lum
Subject: RE: WLL v. BLL

OK. Is Correl2 the r-squared (or the r?) for the second water lead level? If so, any idea why there were two? Also, do we know if the children with BLL <10 had their blood drawn because of an elevation in WLL?

>>> "Lum, Garret (DOH)" <garret.lum@dc.gov> 12/29/2006 3:25 PM >>>
Correl1 is the BLL with WLL1 and Correl2 is the BLL with WLL2. WLL1 is the first water draw from the tap and WLL2 is the second water draw, 10 minutes after WLL1. These are simple correlations using the pre-formatted statistical function in Excel. I don't know if the BLL <10 had their blood drawn because of elevated WLL. I provided the data so that you may run the correlation yourself to confirm it. All I know is, there was a database with WLL and a database with BLL that we matched based upon address. I think we still need to make it clear to the lead program as to the data request for all children with elevated BLL and their environmental lead test results which should include tap water, dust, soil, paint, and such.

By this time, Dr. Guidotti had spent weeks on the futile quest for "the 65" and the DC WASA correlation analysis. He responded to Mr. Lum, "OK- that's fine." He had a correlation from DC DOH with a low R^2 (-0.031416) and was finished. Dr. Guidotti did not address Mr. Lum's admission that he had no idea where the data had come from or meant. He lamented that if only "we could get that data for the specific 65 children identified in the special 2004 supplemental screening program, we would have had it nailed. However, I have a feeling that…it may not be possible to reconstruct the group."

From: Tee Guidotti [eohtlg@gwumc.edu]
Sent: Friday, December 29, 2006 4:07 PM
To: Garret (DOH) Lum
Subject: RE: WLL v. BLL

OK - that's fine.

I think that it too much to expect to get all environmental data. (In fact, Marie Sansone has had difficulty getting all the info she needs.) The evaluations I have seen vary enormously in quality and two (the most controversial and also the weakest) seem to jump to unsubstantiated conclusions. For our purposes today, I don't think that we will be able to sort it out with respect to reconstructing the identification of a proven environmental source in every situation. That hope seems to have disappeared with the little red folder Lynette kept in her desk.

3.4.1. <u>What Data Are In the "Correlation Analysis" and What Do They Show?</u>

In the final paper submitted to EHP the two new "correlation analyses" were added without ever being subjected to peer review. One of the correlations was attributed to DC WASA and the other, to DC DOH. In an attempt to better understand what these correlations might mean, I e-mailed Dr. Guidotti more than a year ago and asked him for the raw data. Dr. Guidotti responded, "We feel under no obligation to provide these data but WASA may feel otherwise." Dr. Guidotti did not respond to two later queries that I made of him about the same data.

Date: Tue, 04 Mar 2008 11:21:37 -0500
To: Rich Giani <Richard.Giani@dcwasa.com>
From: Marc Edwards <edwardsm@vt.edu>
Subject: Tee/WASA health effects data
Cc: Maureen Donnelly <Maureen.Donnelly@dcwasa.com>, Tee Guidotti <eohtlg@gwumc.edu>, Charles Kiely <Charles.Kiely@dcwasa.com>

Can I also get copies of the spreadsheet(s) in which these correlations are done in Tee's DC WASA health effects paper. Some colleagues and I are working on a paper related to lead in D.C., and we'd like to have the raw data. Just the paired values with dates of each measurement is fine.
Obviously, delete the names as you see fit to protect privacy.

Marc

At 10:27 AM 3/5/2008, Tee Guidotti wrote:

We feel under no obligation to provide these data but WASA may feel otherwise. (Remember that the BLL data were supplied by the DoH and they may or may not agree to providing it to third parties, although it is stripped of identifiers.

TLG

The raw data for the correlations were eventually provided to me from other sources. The "correlations" are not at all what they seem to be. Dr. Guidotti is fully aware that "***lead levels in the blood fall sharply within weeks after lead exposure is cut off***" (see his quote to the *Washington Post* on page 78). It is therefore pointless to try to correlate BLLs to WLLs after

even a few weeks of stopping exposure to the high lead in water, because any evidence of public health impacts (i.e., high blood lead) would disappear soon after the lead source was removed.

Water a Minor Source of Lead, WASA Is Told [CORRECTED 12 MAY 2004]
D'Vera Cohn Washington Post Staff Writer 7 May 2004
The Washington Post
Copyright 2004, The Washington Post Co. All Rights Reserved
The D.C. Water and Sewer Authority's new public health adviser said yesterday that lead in drinking water is a minor source of exposure for children and poses the greatest risk to those who already have high lead levels in their blood from other sources.
…….
Last month, WASA hired a six-member team, headed by Guidotti, on a six-month renewable contract to provide advice on protecting public health and improving communication with residents. Lead is a toxin that stunts growth and development, with fetuses and infants most at risk.
……..
Guidotti also said lead levels in the blood fall sharply within weeks after lead exposure is cut off.
Staff writer Avram Goldstein contributed to this report.

DC WASA Correlation. In his 12/8/06 e-mail to Mr. Lum about the DC WASA correlation, Dr. Guidotti stated that "we think that the multiple entries are different BLL determinations," and that "the database we have is a mix of cases, probably from late 2004 and 2005…WASA does not know how DOH compiled the list."

-----Original Message-----
From: Tee Guidotti [mailto:eohtlg@gwumc.edu]
Sent: Friday, December 08, 2006 11:54 AM
To: Garret (DOH) Lum
Cc: John (DOH) Davies-Cole
Subject: RE: Pb List

Yes, we think that the multiple entries are different BLL determinations.

There is not nearly as much overlap as we expected. Apparently, the database we have is a mix of cases, probably from late 2004 and 2005 that includes some repeat BLLs for some but not all of the 65. WASA does not know how DOH compiled the list.

It would all be much simpler if you have the BLL and first-draw water leads for all 65 subjects <6 and => 10 mcg/dl and can prepare a small database with just that information. If we have just that, we can run the one last regression and we will be done with it.

TLG

Indeed, the DC WASA "correlation" includes several lead-in-water measurements taken as late as June 2005. This is 6 months after the 2003-2004 time frame that is purportedly described in the EHP paper. The June 2005 sample was collected about 9 months after corrosion control was implemented and water lead levels (WLLs) had supposedly plummeted. The WLL collected in June 2005 of 1.7 ppb is then paired to a child's BLL of 10 ug/dL that was collected in January 2004 (about 17 months earlier). The average gap between collection of a child's BLL and the corresponding WLLs in the DC WASA correlation is on the order of 6 months. Given that Dr. Guidotti knew that even a gap of a few weeks is highly problematic, this potential confounding factor should have been prominently revealed.

DC DOH Correlation. The DC DOH made no representations to Dr. Guidotti about any aspect of the correlation they conducted between BLLs and WLLs. In his last e-mail on the subject, Mr. Lum made it perfectly clear that he had no understanding of what the data were, where they were from, or what they might mean. Indeed, in response to very simple questions about the

data from Dr. Guidotti, Mr. Lum stated "***All I know is, there was a database with WLL and a database with BLL that we matched based upon address.***" The e-mail transmitting the complete dataset and the DC DOH correlation to Dr. Guidotti attests to this fact, as the 3 pages of data are nothing more than a column of BLLs, two columns of WLLs and the resulting correlation results.

Page 1

BLL	WLL1	WLL2	Correl1	Correl2
			-0.031416	-0.116153
1	1.04	0.58		
6	1.99	2.8		
3	1.99	1.99		
3	1.99	1.98		
3	1.99	1.99		
3	1.99	1.99		
2	1.99	1.99		
2	1.99	1.99		
2	1.99	1.98		
1	1.99	1.99		
1	1.99	1.99		
4	2.9	3		
2	2.9	4.1		
2	3.7	4		
5	3.84	3.87		
3	3.84	3.87		
5	3.98	1.8		
1	4.02	0.57		
3	4.2	4.5		
1	5.5	25		
3	7.6	8.7		
7	8.66	5.88		
3	9.1	6.2		
8	9.61	14		
3	9.61	14		
1	11	6.6		
2	14	5.97		
1	14	9.1		
6	15	43		
2	16	14		
2	16	14		
3	19	64		
2	20	129		
2	20	129		
2	21	17		
2	22	21		
2	22	37		
1	22	37		
25	23	14		
11	23	14		
10	23	14		
9	23	14		
6	23	14		
6	23	14		
4	23	14		
3	23	66		
4	25	87		
2	29	15		
10	30	180		
9	30	85		
17	31	30		

Page 2

4	32	27
3	32	27
1	32	27
6	33	36
1	33	59
4	35	29
22	36	26
4	36	66
6	38	35
8	39	80
5	39	60
3	42	330
3	46	37
2	47.2	40.2
4	48	35
3	48	46
4	50	23
4	50	40
4	53	86
3	53	340
2	53	340
2	55	96
7	56	23
1	59	86
8	64	47
9	65	52.6
5	69	260
6	74	58
3	75	73
12	77	48
4	78	78
2	81	98
2	84	71
5	88	383
3	88	383
3	91	57
1	91	281
1	91	281
4	95.6	34.7
11	96	75
1	96	59
1	108	34
2	124	301
1	124	301
2	136	384
4	140	320
4	140	320
4	141	170
3	147	71
1	150	260
1	151	37
1	193	412

Page 3

3	210	550
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I do recognize one data point in the DC DOH correlation. The line with a BLL of 3 ug/dL that is paired to a first draw WLL of 210 ppb and a second draw water lead of 550 ppb belongs to the grandson of DC resident Charles Eason. Mr. Eason would not (and did not) classify his grandson as a "resident" of his home, because his grandson only visited him on weekends. Moreover, Mr. Eason had been using a lead filter for at least 3 months before his grandson's blood lead was measured by the DC DOH. Yet this child's low BLL appears in the DC DOH correlation analysis, as if the child resided in Mr. Eason's home with 210 ppb first draw and 550 ppb second draw lead.

In summary, given the temporal gaps between collection of the children's blood lead data and water lead data, and the fact that at least some residents in the correlation were not exposed to the high WLLs indicated or even resided at the addresses in question, the "correlations" presented in the EHP paper cannot serve any valid scientific purpose. Instead, the correlations are used to fulfill the goal articulated by Mr. Hemphill on November 18, 2006 (see page 64), which was to explain to the US Senate staffer "***how does DOH explain its conclusions about the sources of lead exposure,"*** and to imply further that ***"there is no apparent correlation between blood lead levels and tap water samples."*** It appears that DC WASA did manage to manipulate the data and analysis through its relationship with Dr. Guidotti, who guided DC DOH toward his pre-determined conclusions published in the EHP paper. In early 2007 DC WASA also sent a copy of the analysis to the US Senate Staffer.

3.5. <u>The Study of 210 (or 201) Residents with > 300 ppb Lead in Water</u>

In two different instances, the EHP paper presents results of a research study of homes with WLLs above 300 ppb lead as follows:

Page 697

> A subset of 177 houses with water lead levels of > 300 ppb was identified by the DCWASA through its sampling program, and the residents were invited to participate in the lead-screening program.

Page 699

> Of the 177 homes with > 300 ppb lead in drinking water, the residents or owners of 44 could not be contacted after multiple home visits and telephone calls; the residents of 14 had their lead levels tested privately; the residents of 10 homes refused to participate; and 210 residents of 119 houses participated in the screening program. None had a blood lead level > 10 μg/dL.

What these references to the study of the "> 300 ppb lead" fail to mention is that the data from which they were derived had already been published by the CDC *Morbidity and Mortality Weekly Report* (MMWR) (http://www.cdc.gov/mmwr/pdf/wk/mm53d330.pdf). There are, however, slight differences between the data in the MMWR and the data in the EHP paper. For example, the EHP paper refers to 210 residents who participated in the DC DOH blood lead screening program, instead of 201. It is also worth noting that no one has been able to find the data for "the 201" or "the 210" residents, after years of FOIA requests I have made of DC DOH and CDC.

The EHP paper, not only lacks explicit acknowledgement about previous publication of this research, but it is also lacking important caveats. For example, Guidotti et al. do not mention that only 17 of the 201 residents tested were in the 1-5 year age group.

From Original CDC MMWR http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5312a6.htm

TABLE. Blood lead levels (BLLs) of residents in homes with >300 parts per billion in drinking water, by age group — District of Columbia, March 2004

	BLL (μg/dL)	
Age group (yrs)	Median	Range
1–5 (n = 17)	3	1–6
6–15 (n = 13)	2	1–4
16–40 (n = 56)	3	1–14
41–60 (n = 69)	4	1–20
≥61 (n = 46)	6	2–22
Total (n =201)		

Moreover, in direct contradiction to the EHP paper, the CDC did find that at least 3 of the 201 residents tested with BLLs above 10 ug/dL (see the upper end of the BLL range above -- 14, 20 and 22 ug/dL for age groups 16-40, 41-60, and > 61, respectively).

Following the publication of the EHP paper, Dr. Guidotti and DC WASA further morphed the CDC's 300 ppb study and the EHP's "study of 65" into a new non-existent and very confusing study that they featured frequently in "public education" materials. For nearly 2 years, information such as the following was inserted into DC WASA's educational "fact sheets" and distributed widely in DC under Dr. Guidotti's supervision (available at http://www.dcwasa.com/site_archive/news/documents/LSR%20Program%20Facts%202-08-08.pdf) :

> In 2004, the CDC analyzed results from a District Department of Health examination of blood lead levels among children during the period of elevated lead levels in tap water at many homes. According to the CDC report, there were no children, from a sample group of 201, identified with blood lead levels above the CDC *level of concern* (>10 micrograms/deciliter) that were not explained by other sources, primarily the conditions of the household paint.

Most of those reading the above would conclude that the DC DOH measured blood lead in 201 children under 6 and found that some of these children had elevated BLLs. This is factually erroneous. In the CDC study, the DC DOH measured blood lead in 17 children under 6, out of a sample group of 201 residents, and found no cases of elevated BLLs among them. But DC WASA also never mentions that the DC DOH data indicate that 100% of these children were drinking bottled water or using lead filters. DC WASA also mixes in the fabricated conclusion from the DC WASA-funded environmental assessments (that all children with elevated BLLs had non-water sources of lead in their homes). In so doing, DC WASA and their public health advisor, Dr. Guidotti, attribute a finding to the CDC that was never obtained. At no point did CDC make any claims about specific sources of lead in the homes of children with elevated blood lead.

Finally, the EHP paper failed to acknowledge well-publicized problems in the CDC > 300 ppb study ("the 201" or "the 210" residents cited in the EHP paper). For example, in mid-2006, Ms. Renner wrote an article in *Environmental Science & Technology* citing important qualifying

statements by the CDC co-authors about the 300 ppb study (http://www.naider.com/upload/071506news.pdf):

> However, Tee Guidotti, health adviser to WASA and director of occupational medicine and toxicology at George Washington University, and officials at WASA and DOH have frequently noted in presentations that when CDC measured blood lead levels in the residents of ~98 homes with drinking-water lead >300 ppb, the study did not find elevated blood lead levels.
>
> But Mary Jean Brown, head of CDC's lead poisoning prevention branch and the principal author of the study, doesn't agree. She tells *ES&T* that up to a year separates collection of the water and the blood samples. "This study does not say that 300 ppb lead in drinking water is safe," says Brown.

Dr. Guidotti's knowledge about the months to a year sampling gap between the time the select DC residents were warned that their water had high lead, and the collection of blood lead do not appear in the EHP paper.

Recently, when asked about data for "the 300 ppb" study in the CDC study, the Chief of the CDC's Lead Poisoning Prevention Branch, Mary Jean Brown, ScD, RN, stated to the *Washington Post*:

"In retrospect, some people have misinterpreted the intent and scope of the health consultation, including characterizing it as a scientific study, which it clearly was not."

If the first author of the CDC MMWR study admits that her paper "clearly was not" a "scientific study," it is misleading to publish the same data in EHP as scientific research. The additional failure to acknowledge the sampling gap in the EHP paper, and also failing to disclose that several residents actually did have blood lead measurements over 10 ug/dL is also of concern.

3.6. DC DOH Forgery of Blood Lead Records in 2003-2004

In 2003 about half of the blood lead records for Washington DC children did not appear in reports to the CDC. In response to a written query on this issue from Ms. Renner, Ms. Brown (CDC) recently revealed that she did an investigation of the problem in 2004. She stated that "***During that exercise it was apparent that DC's numbers for 2003 were very different***

compared to 2004. They [DC DOH] admitted they had forged the quarterly reports, they claimed for only 2003."

The forgery and falsification of the blood lead data at DC DOH is not mentioned in the EHP paper, even though it clearly occurred in the very time frame under discussion. It remains possible, perhaps even likely, that the DC DOH co-authors themselves were directly involved in the forgery and fabrication that occurred in blood lead records during 2003. This issue needs further investigation, and it calls into question the veracity of other statements and data generated by these co-authors.

3.7. Dr. Guidotti's Expertise on the Influence of Industry in Research and "Good Science"

Ladou et al. recently published an article entitled "American College of Occupational and Environmental Medicine (ACOEM): A Professional Association in Service to Industry" (*Int. J. Occ. and Env. Health*, 13(4) 404-436 (2007)). In the article the authors criticize ACOEM and occupational medicine for protecting corporate interests. Dr. Guidotti, the past President of ACOEM, responded to this and other criticisms in a 2008 article that appeared in the journal *New Solutions* (Guidotti, 18(3) 285-298).

Dr. Guidotti spoke out against "those who would libel" or "discredit the field of occupational medicine and the American College of Occupational and Environmental Medicine (ACOEM)." He stated:

> ***"…occupational medicine is the practice of medicine out of the comfort zone of the health care system, with all its (illusory) safeguards..."*** But that, ***"…occupational medicine faced up to these challenges much earlier than the rest of medicine, dealt with them, and reaffirmed its social benefit." "…<G>etting there early came at a cost, reflected in what Draper calls 'the stigma of corporate employment.'"...***While ***"ACOEM is far from a perfect organization and its leaders are only human, […] it is not evil and its leaders have worked hard for the good as they saw it in the era in which they lived."*** He then extolled the virtues of those who ***"worked by creating--not destroying--effective institutions, by the methods of science…"***

Several authors responded. For example, Michael B. Lax, MD wrote that "Guidotti Fails to Convince" (*New Solutions*, 18(3) 325-328 (2008)). Lax supported Ladou et al.'s "main point …that corporate money corrupts the science and practice of occupational medicine…" Lax further stated that Dr. Guidotti has:

> ***"[B]lindness to the powerful impact of corporate power on professional thought and behavior"*** and that Guidotti had mounted a **"…vehement defense [that] fails to uncover a trace of negative corporate influence, and does not even acknowledge...the need to guard against it." He** further noted that **"…the dependency of the professionals in ACOEM on corporate funding makes such claims of independence fantastic."** Elsewhere Lax stated that ***"ACOEM members and officials become extremely offended at the idea that corporate ties influence their thought and action. […] The scientific method, they assert, protects them from being unduly influenced by 'special interests' with an agenda."***

Elsewhere, Dr. Guidotti wrote an editorial (*Archives of Environmental Health*, 59(12) 625-627 (2004)) in which he "***explore[d] what constitutes good science in general and in the sciences of environmental and occupational health***…" He stated that "***Environmental and Occupational Health has had a bad reputation among many scientists because it appears to them that there are no standards***." And that despite difficulties and obstacles, there is "***no excuse for compromise. To advance the science has to be held to high standards***…"

I stumbled upon the above quotations when researching Dr. Guidotti's extraordinary career as part of my research for this report. I am not a party to this debate. I have nothing against ACOEM or research by academics on behalf of corporations using the scientific method if potential conflicts are properly disclosed. I have done such work for corporations myself. But I cannot help but note the direct relevance of the Lax warnings in relation to the written record of Dr. Guidotti's activities on behalf of his DC WASA client. Far from upholding the scientific method, Dr. Guidotti and his EHP co-authors butchered it beyond recognition in their role of advocacy for DC WASA.

I also identified with Lax's comment that Dr. Guidotti used the archives of the ACOEM to make certain points in his article, but that unfortunately, "***Guidotti has taken on the role of guardian to the archive, willing to grant access only to "neutral, qualified" historians "to ensure rigor and to validate the results***." And that "***the fact that he and/or ACOEM appears intent on continuing to limit access to the archive to individuals cleared by them, certainly gives the appearance of an attempt to control any information and interpretation that becomes public***." Lax's experiences with Dr. Guidotti are completely consistent with my own futile efforts over the years to obtain the EHP authors' research data that was presented in EHP and elsewhere. As evidenced by details in this report, the authors' claims that they are under "no obligation" to produce the data can only be considered a deliberate effect to hide their numerous fabrications.

The CDC's recent revelation that they discovered forgery in the DC DOH lead program in 2003-2004 (the exact time frame covered in the EHP paper), is completely consistent with the research standards established by Guidotti et al. in their EHP paper. The erroneous timeline, the fabricated study of "the 65," the misinterpreted study of DC residents with > 300 ppb lead in water, the DC DOH "correlation analysis," and the case of the "hospitalized child" are not accurately portrayed. The net result is to make the "Public Health Response" by DC WASA and DC DOH into something that it was not.

4. WHAT ACTION SHOULD EHP TAKE?

This report documents numerous undisclosed conflicts of interest related to the Guidotti et al. paper in EHP. The most egregious are Dr. Guidotti's extensive financial entanglements with DC WASA, the lawsuit(s) against DC DOH and DC WASA, Dr. Guidotti's expert witness work in the lawsuit(s), and DC WASA's clear contract language requiring final say in any publication citing DC WASA by name.

The EHP's guidelines state that "..*if the omission of a conflict is serious enough to have caused the journal to reject the paper had it been communicated initially, the journal will formally retract the paper, noting the action in the journal and removing the paper from its website*."

I reiterate that the Guidotti et al. paper was unequivocally rejected by the EHP reviewers. It was only after Dr. Guidotti appealed to the EHP editor to reconsider, that EHP reversed its position and accepted Dr. Guidotti's paper without obtaining further input from the reviewers. This is important, because the standard that should be considered in determining whether this paper should be formally retracted is ***whether knowledge of these numerous undisclosed conflicts by EHP's editor would have prevented the reversal of the decision to reject the paper.*** I am highly doubtful that if the extent of the authors' conflicts of interests and control by DC WASA had been known and fully disclosed, the decision to reject the paper would have been reversed.

A separate but nonetheless very serious issue is the quality and accuracy of the so-called "research" presented by Dr. Guidotti and his co-authors. It is undeniable that Dr. Guidotti reinserted into the paper his main conclusion regarding "no identifiable health impact" after he promised to remove it. Moreover, the words he used for this conclusion are virtually identical to those used in a 2006 press release by his DC WASA client.

Even unambiguous facts, such as the date that chloramine was added to the water, are in error. While the motivation for such errors cannot be established, the net effect of all the errors is to portray DC WASA in a more favorable light.

In response to reviewer criticisms about the EHP paper, Dr. Guidotti once stated that, "Our paper is a description of exactly what happened in Washington DC during an episode of elevated lead in drinking water." In written comments that he sent to the press and others in February 2009, he further stated that:

1) "Our research team did nothing wrong."
2) "The data are valid and the conclusions were agreed upon by the Department of Health, EPA, and CDC."
3) "This [recent public criticism about the EHP paper] is all about a new study that came out that is being promoted by activitists and certain people with an interest in the issue, not aways disclosed."
4) "Actually, there is only one major error, which is that typo: 2002 should be 2000."

Aside from disagreeing with many of the above comments, I challenge Dr. Guidotti to substantiate his claim that "the data and the conclusions were agreed upon by the Department of Health, EPA, and CDC." It strikes me as highly unlikely, given their knowledge of forgery of blood lead records from 2003-2004 at the DC DOH, that the CDC ever agreed with the data and the conclusions.

In fact, the version of events presented in the EHP paper is scarcely recognizable when compared to the actual events. The idea that the Guidotti et al. version of the DC lead-in-water fiasco was written into the scientific record as some kind of "model" public health response, even if only temporarily, is a serious indictment of modern science as it relates to public health. Had I not volunteered my time to work on this issue as an outsider for the past 6 years, this fantastic fiction would have gone unchallenged. In my opinion, the collective actions of DC DOH, DC WASA, Dr. Guidotti and the CDC in relation to handling of the DC lead in water issue from 2001-2004, will become one of the most infamous case studies in the history of environmental health science.

Considering these points and other facts presented in this report, I ask that you consider retraction of the Guidotti et al. article in EHP.

Appendix B

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VIRGINIA POLYTECHNIC INSTITUTE
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Secretary Kathleen Sebelius
US Department of Health and Human Services
Hubert Humphrey Building
200 Independence Avenue, SW
Washington DC 20201

May 27, 2010

Re: False statement in the CDC MMWR May 21, 2010 / 59(19); 592

We draw your attention to a false statement in a Centers for Disease Control and Prevention (CDC) *Morbidity and Mortality Weekly Report* (MMWR) "Notice to Readers" regarding blood lead in DC children (http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5919a4.htm). The key assertion of this new report, is that in 2004, the CDC concluded that blood lead of DC children was over the 10 ug/dL CDC "level of concern" from lead contaminated water because:

> **"...the percentage of test results ≥10 μg/dL and the percentage of test results ≥5 μg/dL at addresses with lead service pipes were higher than at addresses without lead service pipes."**

In reality, in 2004, the CDC did not conclude (or even imply) that the blood lead of even a single child was ≥10 μg/dL due to lead-contaminated drinking water. The above sentence, extracted from the 2004 report for insertion into the 2010 report, was from a paragraph in the original report that asserted just the *opposite* – that the higher percentage of blood lead levels ≥10 μg/dL for children in homes with lead service pipes resulted from exposures to lead paint and dust hazards. The original text is reproduced below (http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5312a6.htm):

> **"Homes with lead service pipes are older, and persons living in these homes are more likely to be exposed to high-dose lead sources (e.g., paint and dust hazards). For this reason, in all years reported, the percentage of test results ≥ 10 ug/dL and the percentage of test results ≥ 5 ug/dL at addresses with lead service pipes were higher than at addresses without lead service pipes."**

The CDC's 2010 "Notice to Readers" is an attempt to defend the indefensible (the 2004 CDC MMWR), by extracting part of a sentence competely out of its original context and claiming it was the CDC's "original conclusion" of health harm from lead in drinking water. The fact that no such conclusion exists in the 2004 CDC MMWR, makes this an Orwellian attempt to re-write history. CDC should take responsibility for its historic betrayal of the public trust, and immediately retract both the 2004 and 2010 reports, because they are dangerous falsifications that can further jeopardize the public's health.

Sincerely,

Marc Edwards

Marc Edwards
Charles Lunsford Professor of Civil Engineering

CDC

MMWR™

Morbidity and Mortality Weekly Report

Weekly April 2, 2004 / Vol. 53 / No. 12

Editorial Note: The findings in this report indicate that although lead in tap water contributed to a small increase in BLLs in DC, no children were identified with BLLs ≥10 μg/dL, even in homes with the highest water lead levels. In addition, the longitudinal surveillance data indicate a continued decline in the percentage of BLLs ≥10 μg/dL. The findings in this report suggest that levels exceeding the EPA action level of 15 ppb can result in an increase in the percentage of BLLs ≥5 μg/dL. Homes with lead service pipes are older, and persons living in these homes are more likely to be exposed to high-dose lead sources (e.g., paint and dust hazards). For this reason, in all years reported, the percentage of test results ≥10 μg/dL and the percentage of test results ≥5 μg/dL at addresses with lead service pipes were higher than at addresses without lead service pipes.

Notice to Readers: Examining the Effect of Previously Missing Blood Lead Surveillance Data on Results Reported in *MMWR*

May 21, 2010 / 59(19);592 These results do not change CDC's original conclusions that "the percentage of test results ≥10 μg/dL and the percentage of test results ≥5 μg/dL at addresses with lead service pipes were higher than at addresses without lead service pipes."

In the 2004 *MMWR* report, the first sentence of the Editorial Note referred to a cross-sectional study of homes with very high lead levels in drinking water and stated that "no children were identified with blood lead ≥10 μg/dL, even in homes with the highest water lead levels." This sentence was misleading because it referred only to data from the cross-sectional study and did not reflect findings of concern from the separate longitudinal study that showed that children living in homes serviced by a lead water pipe were more than twice as likely as other DC children to have had a blood lead level ≥10 μg/dL.

IN SUPPORT

Parent advocates

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Father of twin boys who had elevated lead that was likely caused by lead in our water
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Marilia Duffles
Ward 4 resident, appalled observer of the hideous negligence, active in DC's struggle for safe drinking water since January 2009
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Liz Festa
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Katie Funk
Parent and former DC resident
At the time of the DC lead water crisis, I was a new mother living in a house with "unclassified" pipes. Our lead water levels tested 10-20 higher than the 15 ppb EPA threshold. My newborn tested at a blood lead level in excess of 15. Subsequently, the city replaced the service line (which was lead) and our internal house service line (which was lead). Within 2 years, our daughter's blood lead levels dropped to less than 2 ppb. Now, at age 6, her blood lead levels are not measurable. I worked with members of our Capitol Hill neighborhood to hold WASA, the DC Government and the Federal Government accountable for this public health fiasco. In May 2004, I testified before the House Government Oversight Committee on this issue.
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Satu Haase-Webb
Parent in Ward 6, with house that had high lead levels in water in 2004 (over 300 ppb), who then became actively involved in learning more about the issue and informed others about it (via community meetings, Council hearings, DC WASA meetings etc.), and finding the truth about the effects of the DC lead-in-water-crisis.
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Thomas Walker
Parent in Ward 4
I knew that lead-contaminated water alone can poison children in 2002-2003, when my daughter's pediatrician told me that specially hired risk assessors had linked the elevated blood lead of one of his young patients to contaminated water at the child's home. When the 2004 CDC report came out, claiming that not a single DC child had been poisoned from the water, I knew it was false.
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Mary C. Williams
Former ANC 6D03 Commissioner and representative for the Southwest Carrollsburg Place neighborhood in Ward 6
We were part of the original test group in 2003, a neighborhood where homes tested as high as 500 ppb.
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Appendix C. EPA final action on their falsified report, that was used to justify Washington D.C. partial pipe replacement program, wasted $100 million dollars and increased the incidence of childhood lead poisoning.

NOTICE: EPA does not have the data, a Quality Assurance Project Plan, or a Quality Management Plan associated with this 2006 report entitled, "Effects of External Currents and Dissimilar Metal Contact on Corrosion from Lead Service Lines." The report was prepared by Dr. Steve Reiber, Formerly of HDR Engineering, and Laura Dufresne of The Cadmus Group, Inc., and finalized in November 2006. Readers are cautioned that other research has not reached the same conclusion as the report and the Science Advisory Board (SAB) has discussed reasons for the discrepancy. When asked to comment on whether partial lead service line replacement (PLSLR) might cause elevated lead levels at the tap due to galvanic corrosion, the SAB concluded that:

> ***The number of studies to examine the ability of PLSLR to reduce lead exposure is small and those studies have major limitations (small number of samples, limited follow-up sampling, lack of information about the sampling data, limited comparability between studies, etc.). Overall the SAB finds that, based on the current scientific data, PLSLRs have not been shown to reliably reduce drinking water lead levels in the short term, ranging from days to months, and potentially even longer. Additionally, PLSLR is frequently associated with short-term elevated drinking water lead levels for some period of time after replacement, suggesting the potential for harm, rather than benefit during that time period. Available data suggest that the elevated tap water lead levels tend to then gradually stabilize over time following PLSLR at levels both above and below those observed prior to PLSLR.***

More information can be found in the Science Advisory Board report at: http://yosemite.epa.gov/sab%5Csabproduct.nsf/964CCDB94F4E6216852579190072606F/$File/EPA-SAB-11-015-unsigned.pdf

Final Report

Effects of External Currents and Dissimilar Metal Contact on Corrosion from Lead Service Lines

Prepared for:

George Rizzo, Work Assignment Manager
U.S. Environmental Protection Agency Region III
1650 Arch Street
Philadelphia, PA 19103-2029
Contract Number 68-C-02-069
Work Assignment Number 47

Prepared by

Dr. Steve Reiber
Formerly of HDR Engineering

and

Laura Dufresne
The Cadmus Group, Inc.

Finalized November 2006

Appendix D

Discussion: Effect of Changing Water Quality on Galvanic Coupling

MARC A. EDWARDS

A famous colloquium (Langmuir, 1953) explains how well-intentioned scientists have been tricked into false results by wishful thinking and other factors. That analysis may provide a partial explanation for substantive errors in the March 2012 peer-reviewed Journal article (Effect of Changing Water Quality on Galvanic Coupling) written by Boyd et al. The authors state they have gathered data demonstrating that elevated lead in water arising from galvanic corrosion between direct connections of lead and copper pipe will be "transient" and "short-lived." Moreover, they assert that bringing lead and copper into direct contact (as sometimes occurs in the field) poses a much smaller risk of galvanic corrosion and lead contamination of water than laboratory simulations in which the metallic pipes are slightly separated with a dielectric spacer and connected externally with a wire (likely to become a more common practice in the field). Their claims have immediate implications for water utility approaches to partial lead service line replacements, which have been linked to a higher incidence of childhood lead poisoning and expenditures exceeding $100 million at one utility (Brown et al, 2011; Frumkin, 2010; Leonnig, 2008). My analysis of this article has revealed serious problems with some of the data, analysis, text, and figures.

CLAIM CONTRADICTED BY ELECTROCHEMICAL THEORY AND PRACTICE

According to the authors, when lead and copper pipe are brought into direct contact, "accelerated metal release . . . may be minimal" because of galvanic corrosion. In contrast, if the lead pipe (anode) and copper pipe (cathode) are separated by 1–15 cm and electrical contact is maintained with an external wire, the potential of "the entire lead coupon shifts in an anodic direction," and "the galvanic coupling has likely accelerated lead release by up to tenfold." These statements are supported by two figures (Figures 9 and 10) in the March Journal article. This claim is contrary to the well-established "distance effect" as summarized by Bradford (2001):

> This 'distance effect' offers another way to combat galvanic corrosion: space anode and cathode far enough apart and galvanic corrosion will virtually cease even though the metals are still electrically connected by an external conductor . . . . To prevent galvanic corrosion, the plumbers often put insulated connectors between the two kinds of piping. Building codes, however, require the plumbing to be electrically continuous for grounding purposes so electricians fasten external metal straps across the insulated couplings . . . . The insulated spacer between the two pipes separates them enough so that the water's resistance prevents the exchange of much current.

At no point do Boyd et al acknowledge that their new theory is contradicted by decades of prior peer-reviewed research and practical experience, and a recent paper has verified that the claims in their March Journal AWWA article are incorrect (St. Clair et al, 2012).

KEY FIGURES ARE FLAWED

The results from the Journal AWWA article described in the preceding section were presented at two national AWWA conferences, a graduate engineering ethics seminar, and a US Environmental Protection Agency (USEPA) special Science Advisory Board (SAB) meeting (Reiber, 2011a–c; Boyd at al, 2010a). Indeed, the final USEPA SAB report cited the preliminary presentations of the March Journal article seven times (USEPA, 2011). In their presentations, the authors highlighted their new theories on "so-called galvanic corrosion" of direct connections between lead and copper and used two figures (the same as Figures 9 and 10 that were published in the

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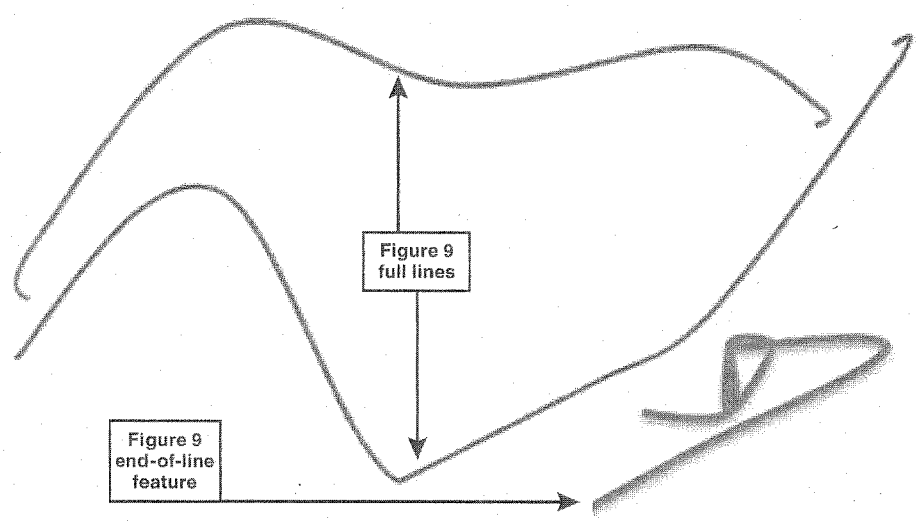
March article) to assert that results of other researchers were experimental artifacts that would not occur in practice. As peer-reviewed research of my graduate students was among the studies called into question by these claims (e.g., Triantafyllidou et al, 2011), our group invested more than two person-years of effort trying (without success) to reproduce the data presented in Figures 9 and 10. We eventually came to the conclusion that the results featured in these figures and associated text were not scientifically valid. When the authors did not immediately provide data supporting these figures in response to my requests, I obtained the original PowerPoint® slides used by the authors in their USEPA SAB presentation through a Freedom of Information Act (FOIA) request (USEPA, 2012). I observed that the lines in the graphs floated completely independent of the graphical axis. When magnified, the lines did not have the appearance of scientific data, but looked like lines drawn electronically with Microsoft Draw® or a similar program, as evidenced by curled ends and other aberrations (Figure 1). Journal editors confirmed that these same graphs were submitted as Figures 9 and 10 in the March Journal article. Agreeing to a proposal made by the authors that they would answer my questions and provide data if the chair of the Journal's Peer Review Editorial Board (PREB) served as intermediary, I again requested the original data behind these figures and a detailed description of the mathematical methods used by the authors to generate the lines.

ERRONEOUS DATA IN FIGURES 9 AND 10 ASCRIBED TO GRAPHIC ARTIST

In written responses that were "discussed and agreed upon by all the co-authors of [the Journal] paper," the authors explained that "[they] couldn't get the clear and colorful presentation [they] wanted using Excel® graphics routines and asked [an on-staff graphic artist] to prepare the slides from the Excel data." The graphic artist "was given the instructions to make the images colorful and large." According to the authors' written statements, the artist also:

- made quantitative errors of 156–200% in labeling every x-axis for lead surfaces in Figures 9 and 10;
- created 5 cm of new electrochemical data not collected in experiments and added them onto data for the lead line in Figure 10 of the March Journal article (Figure 2);
- developed erroneous single composite lines from multiple datasets in the Excel spreadsheet given to him or her. For example, the authors stated that the graphic artist somehow combined two sets of data to generate one erroneous composite line in Figure 10 of the Journal article [Figure 2], which had obvious errors exceeding 75 mV compared with the cited spreadsheet data, even after correcting for the flawed x-axis;
- created composite lines for Figure 9 in the Journal article by combining Excel data from four datasets (my analysis shows that the graphic artist composite line is erroneous by more than 50 mV from a simple point-by-point averaging of the four datasets [results not shown but

FIGURE 1 Vertical and horizontal expansion shows "data" from two complete lines appearing in Figure 9 of the Boyd et al March 2012 Journal article and an end-of-line feature from a third line



Source: USEPA, 2012

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available upon request; error similar to that illustrated in Figure 2]); and

- created another erroneous composite line in Figure 9 in the Journal article after he or she decided to exclude one of the Excel datasets as an "outlier."

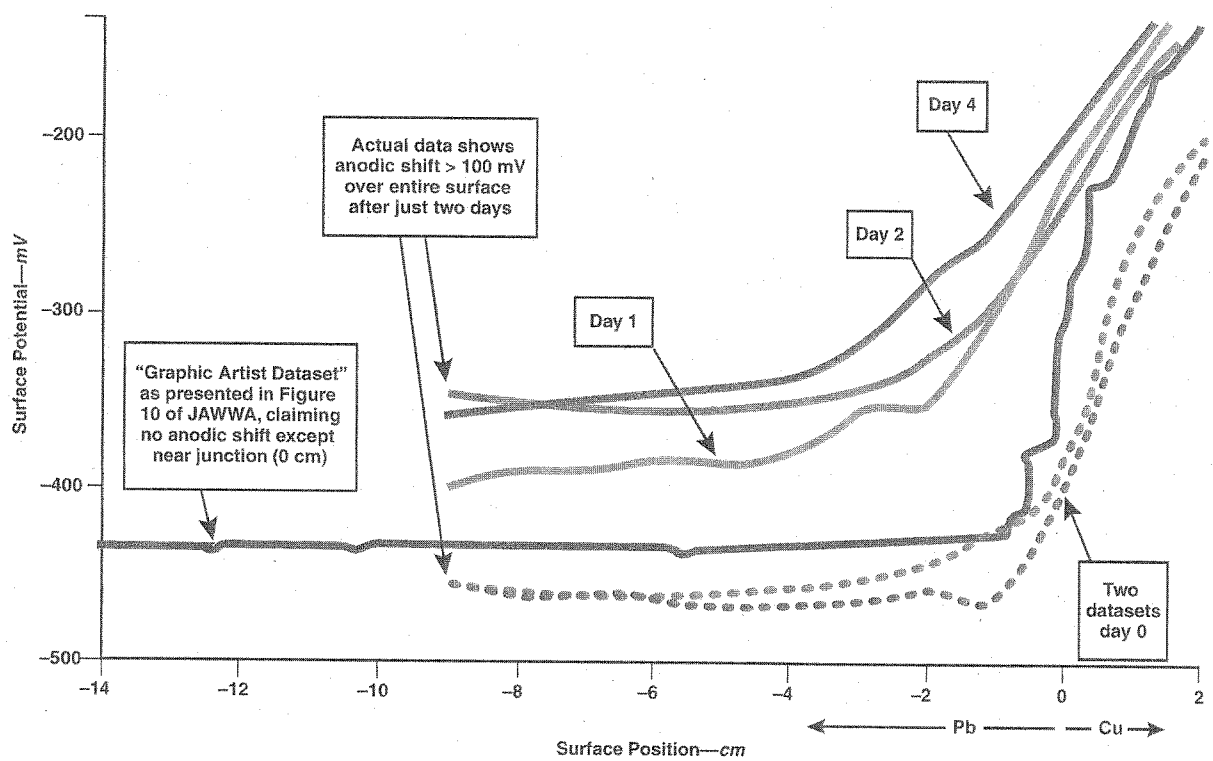
According to this version of events, none of the authors created Figures 9 or 10, which were used in the Journal article and in their numerous presentations. All errors and extra data added onto lines in the figures were attributed to actions of the unnamed graphic artist, and to the authors' "lack of oversight" of the unidentified individual's work. When asked to provide documents corroborating their claim by the PREB intermediary, the authors did not do so.

DATA FROM AUTHORS CONTRADICT THOSE IN THE JOURNAL ARTICLE

The data the authors provided to me in spreadsheets do not agree with those presented in the Journal article and actually support conclusions contrary to those stated in the article (Table 1). The magnitude and importance of the discrepancy are illustrated by the following two representative examples.

Example 1. The Journal article states that for a "typical" result, when lead and copper surfaces were separated by distance and connected by wire externally, the lead surface potential was shifted more than 100 mV, which "likely accelerated lead release by up to tenfold." Figure 9 and other text in the article describe the anodic shift as "approximately 150 mV" or "about 150 mV." The authors also assert in the article that this large shift was "stable for periods extending to weeks and likely months." Expectations for the spreadsheet data based on these assertions are summarized in Figure 3. But according to the actual spreadsheet data identified by the authors as the basis for Figure 9 of

FIGURE 2 Comparison of the line created in Figure 10 of the Boyd et al March 2012 Journal article with data provided in the spreadsheet



Aside from the nonexistent data at a position of 9–14 cm (i.e., –9 to –14 cm above), the composite line also features large errors (> 75 mV at points) compared with day 0 data that the authors stated was the source of the line. More important, the spreadsheet reveals that after day 0, the potential of the entire lead surface shifted anodically, contradicting the authors' discussion in the Journal article claiming that there was no shift on the midpoint of the lead surface if it was directly connected to copper. Data trends collected after day 0 were not presented or discussed in the Journal article.

Cu—copper, Pb—lead

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the Journal article, the lead anodic shift (using their approach of comparing jumpered and unjumpered data) started out at only 58 mV on day 0 and dropped to 6 mV in five days, at which point the experiment was terminated. Thus, the discussion in the Journal article is in error by a factor of greater than 16 times after just five days. According to the data files the authors provided to the PREB and me, the experiments were not run for even a single week.

Example 2. The authors state in the Journal article that when lead and copper were directly connected and "when the surface potential was measured at midpoint of the copper surface as well as midpoint of the lead surface, . . . the surface potential of each surface appear[ed] unconnected." The authors further state that ". . . the mapping of the surface potential across the entire bimetallic pipe coupon indicated that the galvanic effect was limited to the immediate vicinity (~ 5 mm) of the lead–copper interface." When all data from the experiment identified by the authors as the basis for Figure 10 are graphed, a markedly different result is apparent. By day 1 the entire 9-cm lead surface had risen anodically by more than 50 mV versus day 0, and by day 2 the entire 9-cm lead surface had shifted anodically by more than 100 mV versus day 0 (Figure 2). The anodic shift 10 mm from the junction was more than 200 mV after just four days. Such short-term acceleration to galvanic corrosion has been noted and is explained elsewhere (Hu et al, 2012; Francis, 2010; Nguyen et al, 2010).

Overall, the spreadsheet data provided by the authors suggest much greater galvanic acceleration for the

TABLE 1 Illustrative comparisons of Journal article text with galvanic narrative and spreadsheet data

Journal AWWA text	Galvanic Narrative	Actual Spreadsheet Data
"In the absence of external electric connection, the coupons exhibited a difference of OCP of approximately 400 mV; in contrast, when the coupons were connected externally, that difference was only 120 mV, most of which was attributed to an anodic shift (polarization) of about 150 mV on the lead surface."	"Whereas un-jumpered, the coupons gave a potential difference of approximately 400 mV; jumpered, the difference is now only 120 mV, most of which is due to an anodic shift (polarization) of about 150 mV on the lead surface."	The minimum difference when connected externally was always > 280 mV on day 0. As noted below, the anodic shift was never close to 150 mV.
"In this indirect (externally wired) configuration, the shift of the OCPs can be stable for periods extending to weeks and likely months."	". . . in this configuration, it is stable for periods extending to weeks and likely months . . . ."	Trial 1 experiment terminated after four days after OCP shift dropped to an average of 5 mV.
"The galvanic shift induced by this mode of galvanic coupling can significantly affect lead surface corrosion because an anodic shift of the OCP of more than 100 mV is equivalent (based on relevant Tafel data) to a corrosion current increase approaching an order of magnitude. In other words, when copper and lead are coupled using the indirect mode, the galvanic coupling has likely accelerated lead release by up to tenfold."	"The effect of the galvanic shift (polarization) on the lead surface corrosion is huge, the anodic shift of more than 100 mV suggests (based on Tafel) a corrosion increase approaching an order of magnitude. . . . In other words, in this jumpered configuration, the galvanic coupling has likely accelerated Pb release by up to tenfold."	Average anodic shift on day 0 was only 58 mV, on day 1 it was 26 mV, and on day 5 it was 5 mV. For experiment 2, anodic shift was only 29 to –5 mV between zero and five days.
"Figure 10 shows that when the surface potential was measured at the midpoint of the copper surface as well as midpoint of the lead surface, the observations were strikingly different from those for the indirectly jumpered coupons (Figure 9). In this abutted (end-to-end) configuration, the potential of each surface appears unconnected except in the area directly adjacent to the physical juncture."	". . . if we measure the surface potential midpoint of the copper surface, as well as midpoint of the lead surface, the observations are strikingly different than the jumpered coupons measured previously. . . . In this configuration, the surface potential of each surface appears unconnected . . . . both surfaces (midpoint) retain the electrical potential when they were unconnected."	The midpoint potential difference for the lead surface between the two configurations was only 20–30 mV on day 0 of both trials. But this is expected for the direct connection, given that the actual midpoint of this lead surface was 29% farther and the lead surface was 29% larger.
"In fact, the mapping of the surface potential across the entire bimetallic pipe coupon indicated that the galvanic effect was limited to the immediate vicinity (~ 5 mm) of the lead–copper interface, whereas on the copper surface the effect was limited to a few centimetres of the interface."	"If we map the surface potential across the entire bi-metallic pipe coupon, we find there is a galvanic effect, but on the lead surface the effect is limited to the immediate vicinity . . . (> 5 mm) of the lead–copper interface; whereas, on the copper, the effect is limited to within a few centimeters of the interface."	Within four days, the potential of the entire lead surface (9 cm) has risen upwards by 100–200 mV (Figure 2). Experiment was terminated.

OCP—open circuit potential, Pb—lead

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direct connection than for the indirect connection and confirm prior research and theory. The discepancy is exacerbated by the fact that there was actually a 28% larger surface area in the case of the direct versus the indirect connection, as opposed to the results shown in Figures 9 and 10 and in the text of the Journal article, which falsely made it appear as if the surface areas tested were of equal size.

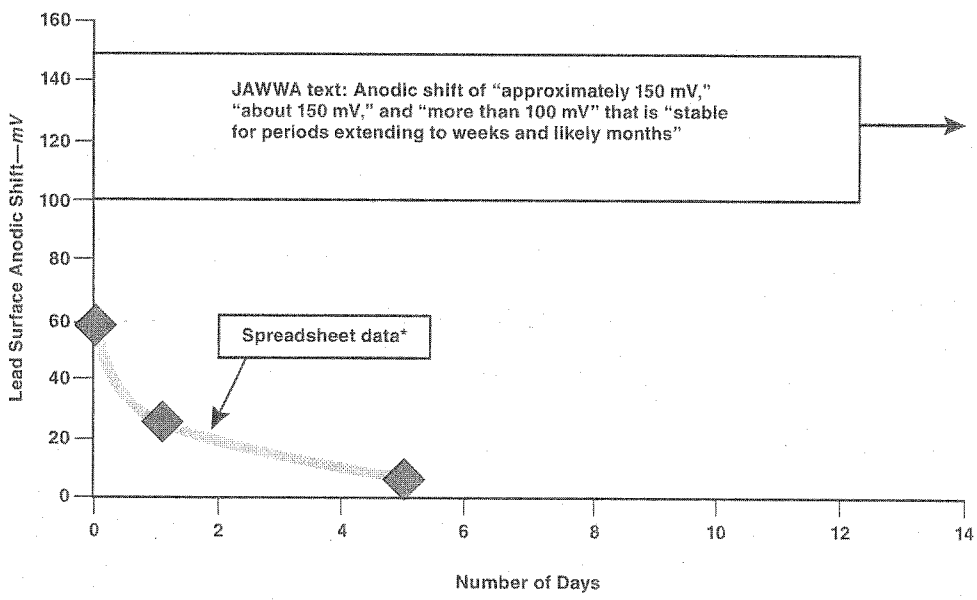
JAWWA TEXT WRITTEN BEFORE EXPERIMENTS WERE CONDUCTED

A chronology of the authors' e-mails (available on request) reveals that key erroneous statements in the March Journal article text were written before the experiments identified as the basis for figures in the article were conducted or analyzed. For example, the data identified by the authors as the basis for Figure 10 were not collected until Oct. 4, 2010 (according to dates on the data spreadsheet released by the authors and in supporting photos). Yet one week earlier, on Sept. 26, 2010, the first author offered to write a results and discussion section after reviewing self-described "preliminary data" of dubious value and viewing some pictures of the apparatus. He stated his write-up for the paper to be submitted to Journal AWWA could be "based on what I see in the photos and on our previous discussion." On Sept. 30, 2010, in an e-mail with the subject line "Galvanic Narrative," the second author wrote text that became the Journal AWWA article and openly acknowledged that a technician "will provide photos and data as we proceed, assuming [he or she] agrees with the narrative." The authors and technician did not meet to "discuss the data and decide how to present the results" from the experiment until Oct. 13, 2010, more than two weeks after the "Galvanic Narrative" and Journal AWWA article text were written. As is demonstrated in a point-by-point comparison (Table 1), the authors never substantially updated or altered their "Galvanic Narrative" text for the Journal article based on the actual experimental data. This disconcerting chronology explains the origin of inaccurate discussion in the March 2012 Journal AWWA article. In letters sent to the PREB and me, the authors wrote that the dataset identified as the basis for Figure 10 was dated Aug. 4, 2010. That statement is contradicted by dates in the e-mails, the data spreadsheet itself, and supporting photos.

LARGE ERRORS IN MEASURING TOTAL LEAD NOT DISCLOSED

Serious problems with the work presented in the March Journal article are not limited to the section discussing Figures 9 and 10. In the final report of the project on which Jour-

FIGURE 3 Comparison between the experimental results the authors identified as the source of Figure 9 of the March 2012 Boyd et al Journal article to expectations based on information presented in the article text



*Spreadsheet data were provided by the authors. Results of the actual spreadsheet data were obtained by determining a point-by-point difference between paired jumpered and unjumpered results and taking an overall average for each day. (One out of 192 data points was excluded because it was missing a minus sign.)

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nal article Figures 1–6 were based (Boyd et al, 2010b), the authors acknowledge that, "Our setup and operations were not designed to conduct mass balance calculations of all lead and copper, specifically including particulates that accumulated in dead zones . . . ." Recent research has consistently demonstrated that this deficiency is problematic relative to tracking accelerated lead release from galvanic corrosion because almost all the extra lead released to the water tends to be particulate (Cartier et al, 2012, 2011; Giammar et al, 2012, 2011; Triantafyllidou, 2011). Giammar and others have demonstrated that unless mass balances such as reservoir acidification are used to recover all of the settled particulate lead, the data can be misleading and can generate false conclusions, even during constant recirculation (Giammar et al, 2012, 2011). Galvanic accelerations to lead release as large as 300% would be completely missed without acidification (Giammar et al, 2011). A third-party review was commissioned by DC Water and the Water Research Foundation, in which the investigators were charged with examining the data that ultimately appeared in Figures 1–6 of the March Journal article (Giammar et al, 2012). The investigators concluded that the work described in the Journal article did not use methods that detected ". . . all of the lead released from the pipe, so these measurements represent lower bounds on the total lead released." The review also determined that the ". . . underestimation may be mild (a factor of two) or possibly quite significant (a factor of 10 or more)."

It is inappropriate for the authors of the March Journal article to omit knowledge of the large potential errors in their lead measurements. At the very end of the data collection phase described in the article, I contracted with their consulting firm to use the same rigs, pipe samples, waters, and personnel on a followup project. I directed my contacts at the firm to conduct the first quality assurance/quality control test to quantify the extent of the potential underestimation of lead release. After viewing the results that proved very large error rates—the magnitude of which varied from rig to rig and from experiment to experiment—my contact at the company wrote ". . . youch. We need to get the word out about these reservoirs" (Sandvig, 2008a). Rather than frankly disclosing the large possible errors and their implications, the authors simply state ". . . a small fraction of particulate lead might not have been accounted for because of its potential settling . . ." and further imply the errors would not affect their conclusions.

OTHER DATA SUGGESTING A LARGE ACCELERATION TO LEAD RELEASE WERE IGNORED

At the start of my work with the authors' rig, I asked for and received a written update on the rig's status (Sandvig, 2008b). It was stated that all pipe samples had been removed from the rig, stored wet elsewhere, and that the reservoir was full of water and otherwise unaltered from the last experiment described in the March Journal article. I then coordinated with personnel to collect the first (and only) measurement of total lead in the reservoir in accordance with the experiments described in the Journal AWWA article, using the acidification techniques later proven by others to detect accelerated particulate lead release caused by galvanic corrosion (Giammar et al, 2012, 2011). Blind samples were mailed to Virginia Polytechnic Institute and State University. When they were decoded by the consulting firm, the total lead detected in the two reservoirs with lead pipe was 2,639 and 3,243 µg/L. The total lead in the galvanically connected rigs was 9,182 and 9,189 µg/L, showing excellent reproducibility between duplicates. These results are cited in Boyd et al (2010b) and bring the authors' results into agreement with theory and the findings of other researchers. That is, they indicate a large contribution to total lead release (> 300%) from galvanic corrosion between directly connected lead and copper pipes.

CITATIONS IN ARTICLE SUPPORTING AUTHORS' CONCLUSIONS ARE BASED ON DATA THAT ARE ALSO UNAVAILABLE

A report written by the second author (Reiber and Dufresne, 2006) and funded by USEPA Region III is cited in the March Journal article as an example of prior research demonstrating that "lead release effects" due to galvanic coupling are "minimal for aged and passivated surfaces of lead service lines coupled with new copper surfaces." I submitted an FOIA request to USEPA Region III requesting this lead-in-water data six years ago. These data were never provided to me. Other graphs appearing in this 2006 USEPA report also appear unscientific, as per the prior discussion of Figures 9 and 10 of the March 2012 Journal article. I then requested via the FOIA any data, spreadsheets, or other information that could support the graphs in the 2006 USEPA report and also made another request for the 2006 "lead release effects" data cited in the March 2012 Journal article. On June 1, 2012, USEPA Region III informed me that no one has any data, spreadsheets, or other information to support the authors' statements in the March 2012 Journal article or to otherwise support graphs appearing in the 2006 USEPA report.

SUMMARY

Many statements and figures in the March 2012 Journal article are without scientific basis, are contrary to established theory and practice, and have been refuted by other investigators who report there are sometimes significant problems with elevated lead from galvanic effects in direct lead–copper connections during partial lead service line replacements. The latter results are based

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on situations using new lead pipe (Cartier et al, 2012; Hu et al, 2012; Clark et al, 2011; Triantafyllidou et al, 2011), aged/passivated lead pipe (Cartier et al, 2011; Giammar et al, 2011), examination of field samples (DeSantis et al, 2009), and in experiments using "real" brass connections between lead and copper pipe (Cartier et al, 2011; Clark et al, 2011; DeSantis et al, 2009). Galvanic effects are also sometimes very persistent and depend on a wide range of factors (Cartier et al, 2012; Giammar et al, 2012; Hu et al, 2012; Clark et al, 2011; Giammar et al, 2011; Triantafyllidou et al, 2011; Nguyen et al, 2010; DeSantis et al, 2009). As unfortunate as it would be, I believe that the serious and extensive errors documented in the March 2012 Journal article by Boyd et al justify its retraction from the peer-reviewed literature.

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