

May 31, 2013

Associate Director
Office of Science Quality and Integrity
U.S. Geological Survey
108 National Center
Reston, VA 20192

Via E-Mail (InfoQual@usgs.gov) and First Class Mail

Re: Request for Correction of Information Submitted Under U.S. Geological Survey
Information Quality Guidelines

Publication: USGS 2011 "Fact Sheet" re: Coal Tar Sealants
<http://pubs.usgs.gov/fs/2011/3010/pdf/fs2011-3010.pdf>

Dear Sir or Madam:

On behalf of the Pavement Coatings Technology Council (PCTC), which represents numerous companies throughout the country that are part of the sealcoat industry, I write to submit a request for correction of information disseminated by the U.S. Geological Survey (USGS). This request is made pursuant to the USGS Information Quality Guidelines and the U.S. Department of the Interior and the Office of Management and Budget (67 F.R. 8452) in accordance with Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-554).

INFORMATION REQUIRING CORRECTION – OVERVIEW

As part of an apparent effort to influence and elicit emotional responses from consumers, legislators and the press regarding the environmental impact of refined tar-based pavement sealer (RTS)¹, the USGS and several of its scientists have repeatedly published and disseminated photographs of brown bullhead catfish with horrible looking skin and mouth tumors. A prime example of this strategy can be found within the above mentioned USGS 2011 "Fact Sheet." The following picture and caption are taken directly from it.

¹ The USGS uses the term "coal tar sealants" to refer to RTS.

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Tumors in brown bullhead catfish from the Anacostia River, Washington, D.C., are believed to be related to elevated PAH concentrations (Pickney and others, 2009). Photograph by A.E. Pickney.

The obvious inferences to be drawn from this picture and caption are: (1) PAHs in sediment cause the type of skin tumor seen in this photo²; and (2) RTS can be blamed specifically for such tumors because it contains PAHs. As it turns out, neither proposition is accurate, nor is the caption that was drafted by the USGS. To the contrary, U.S. Fish & Wildlife Service (USFWS) researchers, such as A.E. Pickney (referenced by the USGS in the caption above), have failed to observe a consistent relationship between PAH sediment contamination

² Pickney defines “skin tumors” as epidermal papillomas and squamous cell carcinoma. The photo used by the USGS in its Fact Sheet is an example of squamous cell carcinoma. See, Pickney, F., Harshbarger, J., et. al., *Tumor Prevalence and Biomarkers of Genotoxicity in Brown Bullhead (Ameiurus Nebulosus) in Chesapeake Bay Tributaries*, *Science of the Total Environment*, 410-411, (2011), p. 250 (Fig. 2 and notes to Table 2).

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and the type of skin tumor portrayed in the photo above.³ Thus, recent research to discover the cause of these catfish skin tumors has focused instead on other factors, such as viruses.⁴

Perhaps most disturbing, there are biologists within the USGS who know about and have participated in Pickney's quest to find the actual cause of the catfish skin tumors.⁵ Other USGS scientists, while observing the prevalence of certain types of catfish tumors without addressing the issue of causation directly, have noted that "there are probably multiple causal factors for such external tumors."⁶ Despite these facts, a third group of USGS scientists, which includes Dr. Barbara Mahler and her husband, Dr. Peter Van Metre, have chosen to use catfish skin tumor pictures as "evidence" of what PAHs and RTS supposedly can do. Thus, the picture set forth above remains a part of the USGS Fact Sheet even now. These positions are irreconcilable. The USGS should have resolved this discrepancy years ago by prohibiting the use of the catfish photos in this manner. Unfortunately, the photos continue to pop up at hearings to ban RTS and in PowerPoint presentations given by Drs. Van Metre and Mahler.⁷ Such actions clearly reflect a breach of the USGS Guidelines for science quality and integrity.

USGS GUIDELINES

The USGS Guidelines require that USGS data collection and research activities be "carried out in a consistent, objective, and replicable manner" aimed at ensuring the objectivity, utility, and integrity of information disseminated to the public. *See* USGS Guidelines, Section III; Office of Management and Budget ("OMB") Guidelines, 67 F.R. 8452 (February 22, 2002) (incorporated by reference in the USGS Guidelines). To be "objective," information published by the USGS must be presented in an "accurate, clear, complete, and unbiased manner." *Id.* at 8459. "Objectivity" also requires that original and supporting data be generated, and analytic results developed, using sound statistical and research methods. *Id.*

The USGS Manual also refers to "impartiality and non-advocacy" as terms that build upon the concepts of "objectivity" raised by the OMB. Specifically, § 502.4(5)(B)(3) of the USGS Manual emphasizes the importance of presenting facts and interpretations impartially for others to use for their own purposes:

³*Id.* at 257; *see also* Pickney, F., *Tumors in Brown Bullhead Catfish in the Anacostia and Potomac Rivers, Survey Results 2009-2011*, U.S. Fish & Wildlife Service, April 2013.

⁴ *Id.*

⁵ *See* fn 3, *supra*. The USGS scientists who have been working with Pickney are Natalie Karouna-Renier and Kathryn Jenko.

⁶ Baumann, C, LeBlanc, D., et.al., *Prevalence of Tumors in Brown Bullhead from Three Lakes in Southeastern Massachusetts, 2002*, USGS and DOI Scientific Investigations Report 2008-5198, pp. 1,19.

⁷ Examples of these presentations, abridged, are attached hereto as Exhibits A, B, C & D.

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[USGS] information products present science based, peer reviewed facts and interpretations impartially. Information products do not advocate or appear to advocate a particular public policy.... The conclusions are based on the best available data interpreted with sound scientific reasoning that avoids speculation.

It goes without saying that the USGS' failure to acknowledge or cite peer reviewed articles in the Fact Sheet that challenge the accuracy of certain catfish tumor photographs posted by the USGS is a form of advocacy that clearly lacks objectivity.

Another way to determine if any bias or advocacy exists within the USGS on the issue of RTS is for the USGS to produce all related data, correspondence and emails concerning its RTS research and any internal agendas that it or certain of its scientists may have regarding this product. A FOIA request asking for such materials was sent off two years ago and, incredibly, still remains "open" today.⁸ As will be demonstrated in greater detail below, the USGS has sought to minimize evidence of advocacy within its ranks by withholding, at least up to now, certain correspondence and email between the USGS staff and other individuals outside the agency who have made it their goal to ban coal tar sealants across the country. These efforts by the USGS to withhold certain documents are not only at odds with the above mentioned USGS Guidelines, but also contrary to the need for transparency that is emphasized throughout the Guidelines and Manual.

EXAMPLES OF SPECIFIC GUIDELINE BREACHES

Various USGS scientists, including Drs. Van Metre and Mahler, claim that contamination of urban lakes and streams by polycyclic aromatic hydrocarbons (hereinafter PAHs) is widespread in the U.S. This assertion is not particularly surprising since there is a consensus in the scientific community that PAHs have many potential sources, including vehicle emissions, tire particles, motor oil, crude oil, power plant emissions and industrial releases. Indeed, almost any type of combustion with organic matter will produce PAHs as a by-product, including natural sources such as forest fires and volcanoes down to something as basic as grilling on the backyard barbecue. Thus, one would expect PAHs to be ubiquitous in our environment and, in fact, they are.

Brown bullhead catfish are known to be bottom feeders. Therefore, it has been hypothesized that exposure of the fish to contaminants in sediments may play a role in two types of tumors that have been observed: liver and skin tumors. According to Pickney and others, "current investigation provides further evidence that the etiology and/or underlying physiology

⁸ Concerns regarding the failure of the USGS to respond in a timely manner to the above mentioned FOIA request have been set forth in a March 15, 2013 letter to the USGS FOIA liaison, attached hereto as Exhibit E.

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of skin and liver induction in brown bullhead are different.”⁹ While some earlier scientific literature suggests that there may be a correlation between extremely high levels of PAHs in sediment and liver tumors, no such correlation has been demonstrated in the environment for skin tumors.¹⁰ It is for this reason that scientists have turned their attention to other possible causes of these types of tumors, such as viruses or an unidentified interaction of biological and environmental factors.

When it comes to RTS website postings and presentations, the USGS has disseminated photographs that graphically depict skin catfish tumors. Such an approach is understandable if the intent is to create a visceral reaction as part of an overall plan to scare the public into banning RTS. From a scientific perspective, such an approach is indefensible since best evidence to date shows no significant relationship between sediment contamination of any kind and catfish skin tumors. Furthermore, taking it one step further, absolutely no evidence has been cited by the USGS which demonstrates that RTS, as opposed to PAHs in general, has in fact caused any type of fish tumors – liver, skin or otherwise.

As indicated above, scientists at the USGS, other than Drs. Van Metre and Mahler, have worked alongside researchers at the USFWS in trying to determine what exactly is causing the skin tumors associated with certain catfish. As recently as April of 2013, the USFWS provided the following update:

Because we still don't know what causes skin tumors to occur in certain Bay tributaries, we are working with U.S. Geological Survey biologists to try to discover whether a virus may be involved in the tumor process.¹¹

Thus, these USGS scientists have concluded, along with their USFWS colleagues, that “future investigations of bullhead skin tumor etiology should utilize newly developed techniques in molecular biology that facilitate the discovery of previously unidentified viruses.”¹² It follows, of course, that none of these scientists claims to have proven that a RTS ban will somehow prevent from occurring the types of catfish tumors depicted in the USGS Fact Sheet photo. Yet, Drs. Van Metre and Mahler continue to use such photos to create this precise impression, mistaken as it may be, time and time again. This is not proper science. It is, instead, indicative of an agenda to ban RTS regardless of the facts.

⁹ Pickney, F., Harshbarger, J., et. al., *Tumor Prevalence and Biomarkers of Genotoxicity in Brown Bullhead (Ameiurus Nebulosus) in Chesapeake Bay Tributaries*, Science of the Total Environment, 410-411, (2011), p 256

¹⁰ Pickney, F., *Tumors in Brown Bullhead Catfish in the Anacostia and Potomac Rivers, Survey Results 2009-2011*, U.S. Fish & Wildlife Service, April 2013

¹¹ *Id.*

¹² See fn. 9, *supra*.

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BIAS AND LACK OF TRANSPARENCY

A FOIA request related to coal tar sealant research was sent off to the USGS on April 15, 2011. As mentioned above, the request remains "open" more than two years later as the USGS reportedly struggles to decide which of the emails and correspondence marked for exclusion by Drs. Van Metre and Mahler actually need to be produced. These delays are disconcerting since one of the primary reasons for sending off the FOIA request was to assess fully the extent to which advocacy and bias may have slipped into and impacted the USGS research process.

It should be noted that a virtually identical FOIA request was sent to the Minnesota Pollution Control Agency ("MPCA"). This was done because it became apparent several years ago that Drs. Mahler and Van Metre had developed a relationship with a staff member of the MPCA who also shared their interest in banning coal tar sealants. By cross referencing some of emails that were exchanged between the MPCA staff member and the USGS scientists, it would be relatively simple to determine if Drs. Van Metre and Mahler, or their supervisors, were withholding certain emails and documents from the ongoing USGS FOIA response. A USGS FOIA liaison confirmed in April of 2013 that many such materials were, in fact, being withheld at that time. It remains to be seen if the documents and emails will be voluntarily produced by the USGS in the future.

The MPCA emails seem to confirm that a small group of government researchers began to communicate with one another on the issue of coal tar sealants several years ago and quickly began to share behind closed doors a mutual disdain toward anyone who questioned their beliefs. Such conduct, in and of itself, should be a warning flag. Ultimately, one of the group members became such an extreme advocate that he started an anti-coal tar sealant blog. Other members of the group, which included Drs. Van Metre and Mahler, eventually agreed they should no longer send emails to the blogger at his government job website, but would continue to communicate with him through his private email account. Some of the MPCA emails that provide insights to these relationships can be found attached to correspondence that was sent to the USGS FOIA liaison on March 15, 2013.¹³

The extent to which this group dynamic has permeated and affected the research of Drs. Mahler and Van Metre is not presently known because, as mentioned above, the USGS has produced virtually no emails, correspondence or internal communications from the files of these two scientists. Once a small group of researchers has become personally and professionally vested in offering a new proposition to the scientific community and the public, the need for transparency becomes paramount since it is human nature to see what one wants to see and overlook the rest. Certainly, this precise argument has been directed toward researchers who are

¹³ A copy of the March 15, 2013 correspondence is attached hereto as Exhibit E. This correspondence also has attached as an exhibit a copy of the FOIA request that still remains "open" after two years.

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funded by industry. Science has recognized this human foible for over a century, which is why government scientists must not only produce all underlying data and methodologies that lead to their conclusions, but they should also produce those emails and correspondence that provide insights as to any biases they may possess, as difficult as that process may be personally. Unfortunately, this type of transparency seems to be in short supply when it comes to USGS research regarding coal tar sealants.

REQUESTED CORRECTIVE ACTION

Since the fish tumor photograph on the USGS Fact Sheet is inaccurate and misleading, it clearly does not meet USGS or OMB guidelines for information quality and thus must be removed. Likewise, any similar photographs used by USGS scientists as part of presentations to ban or evaluate RTS should also be eliminated from such materials for the same reasons. This includes any presentation to be given in the future by USGS scientists or any USGS presentation currently available to the public on the internet, such as Dr. Mahler's PowerPoint given at the 2010 meeting of the National Water Quality Monitoring Council, posted at: http://acwi.gov/monitoring/conference/2010/C6/C6_Mahler.pdf. Any failure to take such action will adversely affect those members of the PCTC who distribute or apply coal tar sealants since consumers and legislators who are being asked to consider the merits of proposed sealant bans are being misled by these photos.

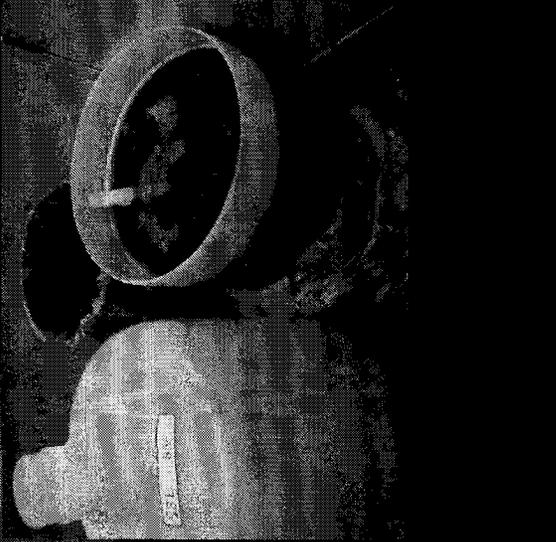
Furthermore, the time has long since passed for the USGS to demonstrate that certain scientists within this agency do not have a hidden agenda in favor of banning RTS. The only way to evaluate whether such an agenda exists is to review related USGS emails and internal correspondence on this topic. Such documents were properly requested as part of a FOIA request over two years ago, but the USGS continues in its delays to produce the same. Not only outside parties, but investigators within the USGS itself must come to understand how photos of catfish skin tumors – tumors that clearly have not been shown to be caused by PAH or RTS exposures - could nevertheless have ended up on USGS websites and publications with the intent of creating the opposite impression, as mistaken as it may be.

Sincerely,



Leonard S Kurfirst

LSK:cs
Enclosures



Relation Between PAHs and Coal-Tar-Based Pavement Sealant in Urban Environments

Barbara J. Mahler and Peter C. Van Metre U.S. Geological Survey
AGU, 16 December, 2010

**Carcinogenic, teratogenic,
mutagenic, and toxic
Produced by combustion of
organic matter
Ubiquitous in the urban
environment:**

Used motor oil

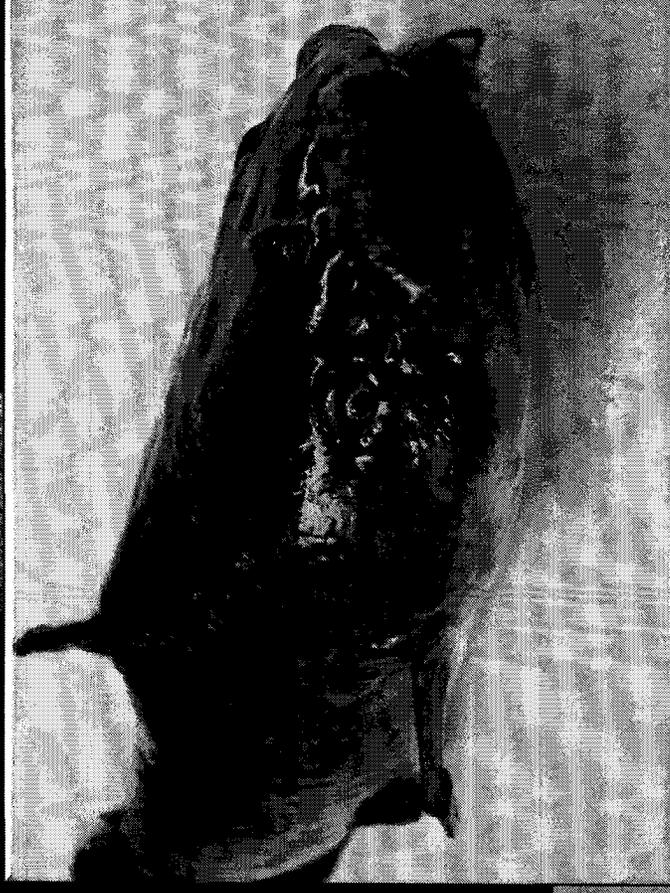
Exhaust

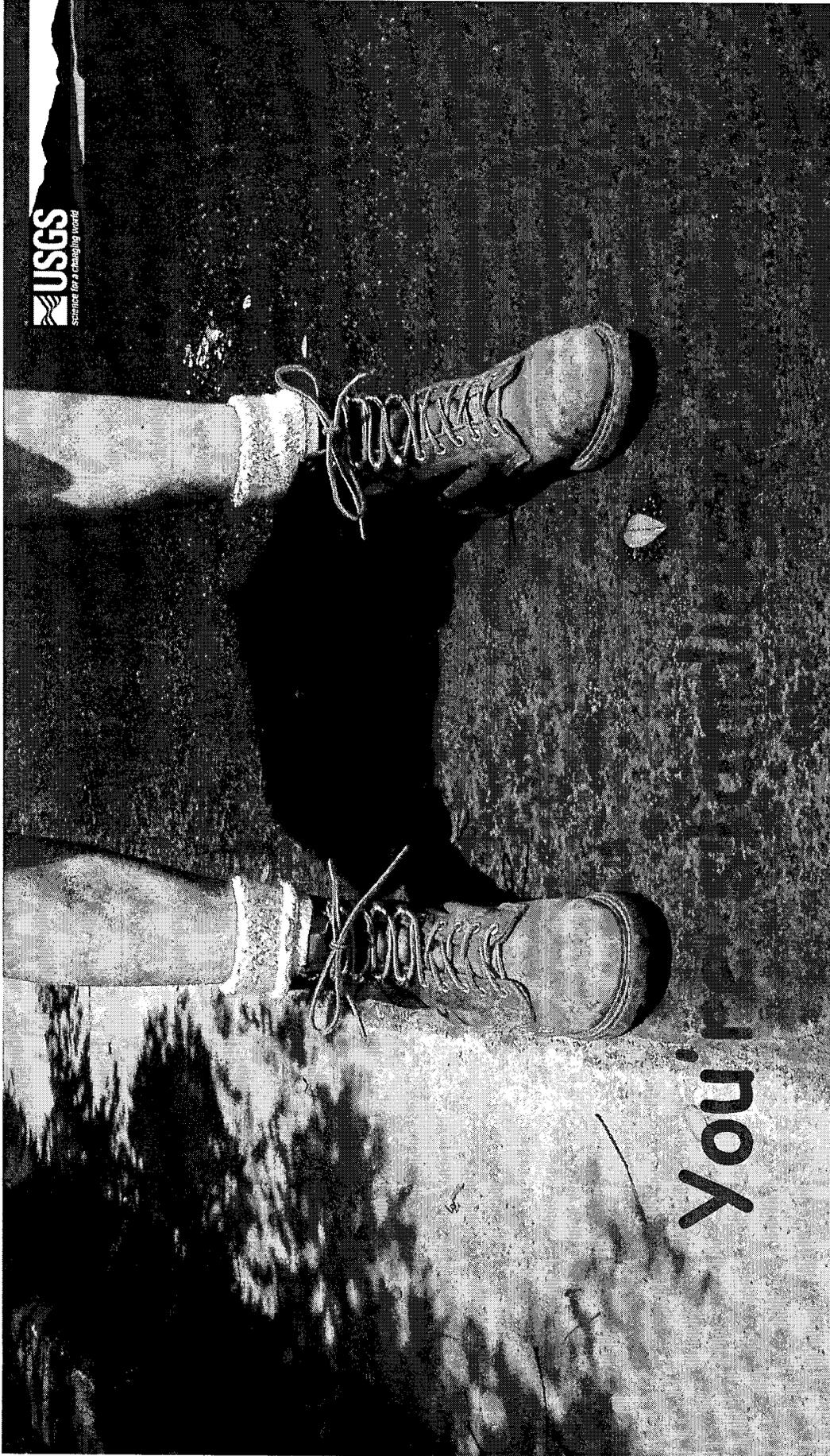
Industrial emissions

Asphalt

Tires

**Coal-tar-based pavement
sealant**





You

Coal-Tar-Based Pavement Sealcoat, PAHs, and the Environment: An Introduction

Barbara Mahler U.S. Geological Survey

- PAHs have adverse health effects for biota and humans

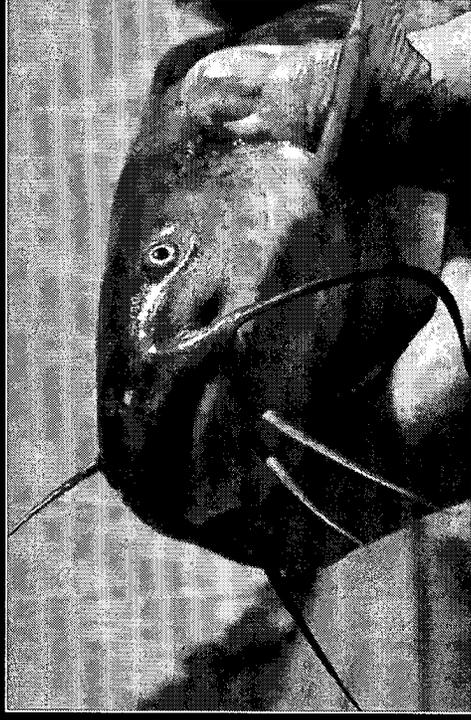


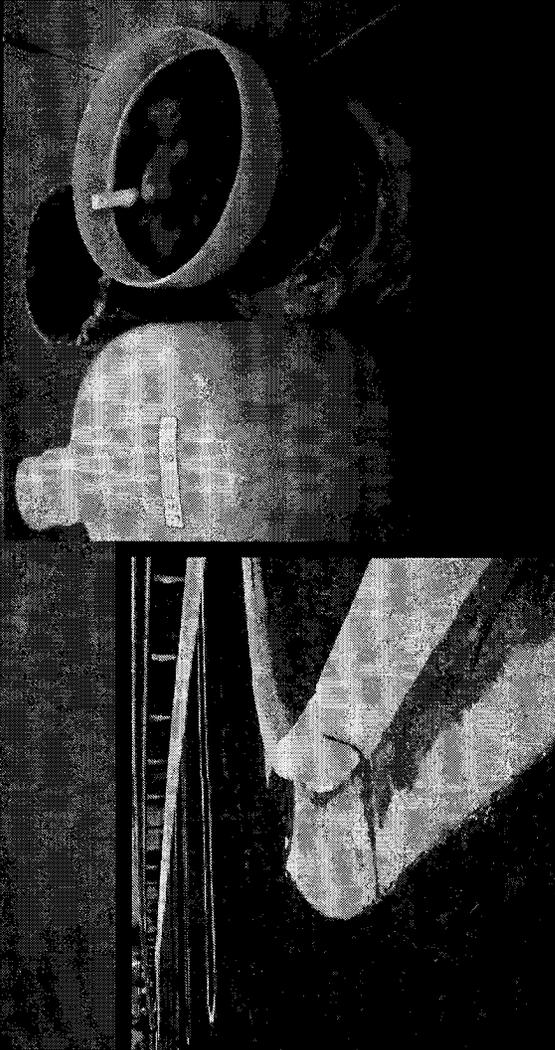
Photo courtesy of Jim Negus

Healthy bullhead, Tennessee



Photo courtesy of Fred Pinckney

A brown bullhead, Anacostia River, Maryland



Pavement Sealcoat, PAHs, and the Environment: An Introduction

Barbara J. Mahler and Peter C. Van Metre U.S. Geological Survey
SETAC, 9 November 2010

What Are PAHs?

Carcinogenic, teratogenic,
mutagenic, and toxic
Produced by combustion of
organic matter

Ubiquitous in the urban
environment:

Used motor oil

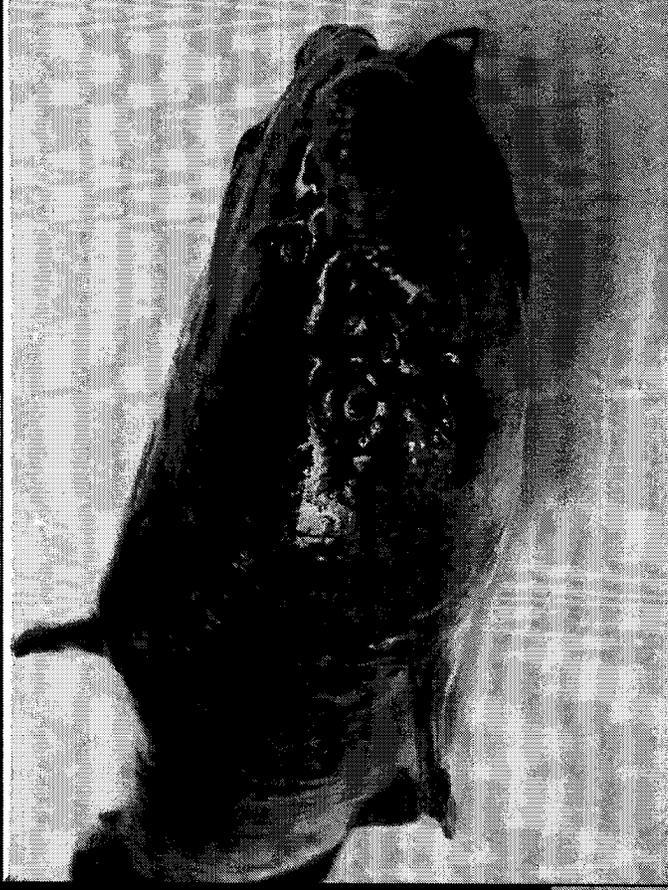
Exhaust

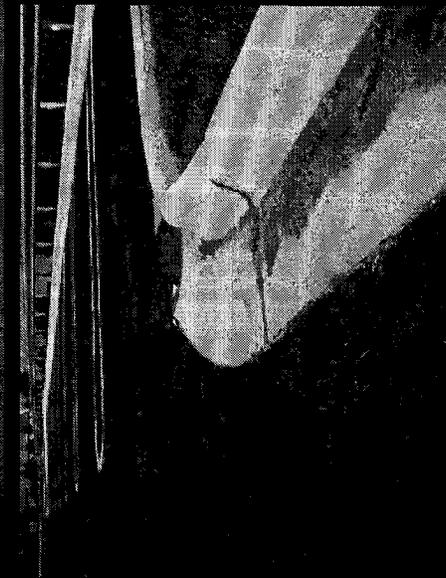
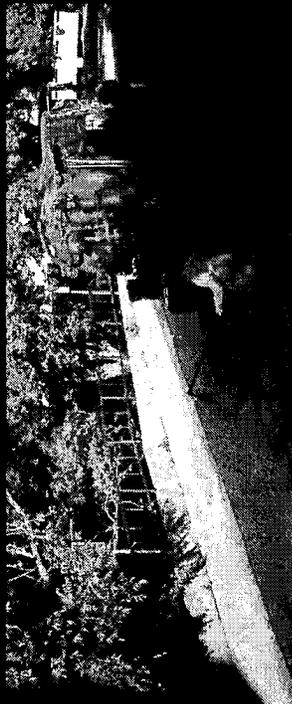
Industrial emissions

Asphalt

Tires

Coal-tar-based pavement
sealant



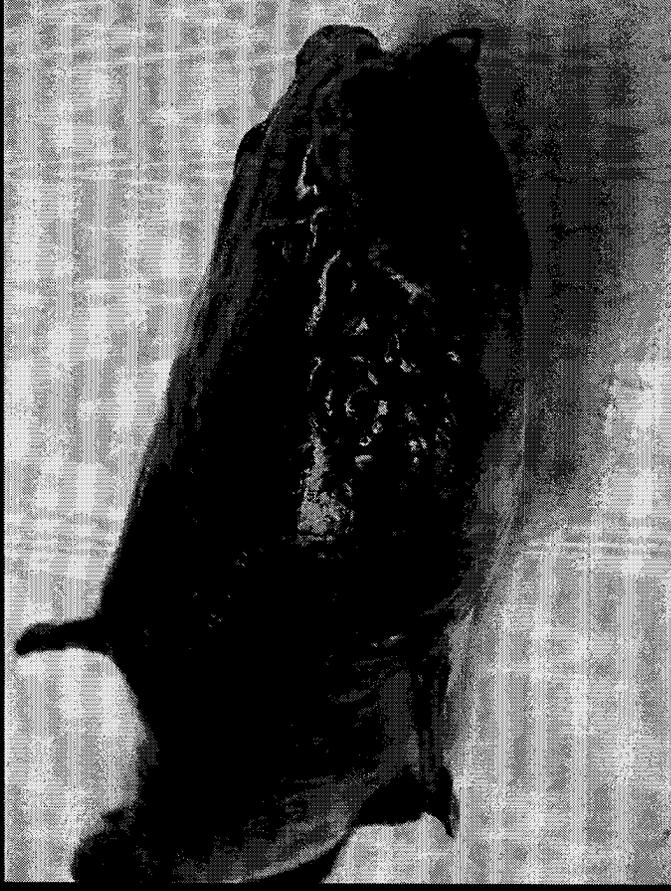


PAHs Underfoot: Pavement Sealcoat, PAHs, and Water Quality

Barbara Mahler U.S. Geological Survey
Edwards Aquifer Authority, San Antonio, September 28, 2010

Why worry about PAHs?

- Carcinogenic, mutagenic, teratogenic, and toxic to many types of biota
- Seven PAHs are listed by the EPA as probable human carcinogens
- Toxicity to many aquatic invertebrates (food chain base)
- Increasing in urban water bodies across the U.S.





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lkurfirst@edwardswildman.com

March 15, 2013

Judy Cearley
Regional Information Coordinator
Office of Enterprise Information
U.S. Geological Survey
345 Middlefield Road, MS:955
Menlo Park, CA 94025

Re: USGS-2011-00093

Dear Judy:

Based upon your earlier emails and correspondence, it would appear that the USGS, after two years, is in the process of completing its initial response to my FOIA request. As I understand your position, there may be a couple of more boxes coming that contain QA/QC lab reports. I think you would agree that I have waited patiently after being advised that the delays were due in large part to several of the USGS scientists having research duties that repeatedly pulled them away from my FOIA request. I have tried to be accommodating.

Having reviewed the documents produced thus far, I am concerned that certain aspects of my FOIA request have been overlooked by several of these same USGS scientists, and for reasons that are not clear. Indeed, over the past two years, I have never been advised that my FOIA request was somehow inappropriate or requested documents that I was not entitled to review. Naturally, I had assumed that the USGS scientists would be willing to share their underlying data and thought processes regarding the alleged impact of coal tar sealants upon the environment, especially since transparency is the foundation of sound scientific reasoning.

I have attached for your review another copy of my FOIA request so that I may more clearly outline below the areas in which deficiencies in the USGS response seem to exist. Please note that a virtually identical FOIA request was sent to the Minnesota Pollution Control Agency ("MPCA"). This was done because it became apparent several years ago that two of the USGS scientists who have been involved with coal tar sealant research, Dr. Barbara Mahler and Dr. Peter Van Metre, had developed a close relationship with Dr. Judy Crane of the MPCA, who also shared their interest in coal tar sealants. By cross referencing some of Dr. Crane's emails that were exchanged between herself and the USGS scientists, it would be relatively simple to determine if Drs. Van Metre and Mahler had withheld or deleted certain emails and documents from the anticipated USGS FOIA response.





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This small group of government sponsored sealant researchers includes several other individuals who have frequently interacted with the USGS and the MPCA. One such person is Tom Ennis, Environmental Resource Manager for the City of Austin. Another is Dr. Alison Watts, Research Assistant Professor at the University of New Hampshire. Emails from Dr. Crane confirm that the members of this group have become inextricably connected to each other and to the proposition that coal tar sealants are the single greatest source of PAHs in sediment and house dust east of the Rockies. Given the numerous presentations that each has given on this topic, the number of articles written, their high media visibility - and in the case of Mr. Ennis, the anti-coal tar sealant blog that he has created - it cannot be reasonably disputed that the professional reputation of each person is largely dependent upon the above mentioned proposition being correct.

The purpose behind this letter is not to debate the validity or merits of the proposition offered by this group. That can be left for another day. The point to be made is that once a small group of researchers has become vested in offering a new proposition to the scientific community and the public, the need for transparency becomes paramount since it is human nature to see what one wants to see and overlook the rest. Certainly, this precise argument has been directed toward researchers who are funded by industry. Science has recognized this human foible for over a century, which is why scientists must not only produce all underlying data and methodologies that lead to their conclusions, but they should also welcome related challenges, as difficult as that may be personally. Unfortunately, that does not seem to be the case when it comes to USGS research regarding coal tar sealants.

In reviewing Dr. Crane's emails, the resentment the research group displayed behind closed doors toward anyone who questioned their conclusions is unmistakable, and should be a red warning flag. Consider, for example, Dr. Crane's pride in advising the group that she had temporarily stalled and dissuaded the PCTC from filing a FOIA request, only to be told by her superiors at the MPCA two weeks later that she needed to respond in a more substantive manner. (See Group Exhibit 1). Similarly, the group's disdain for any research that does not comport with their findings, particularly industry sponsored research, is evident throughout, as is their mutual admiration for each other's work. (See Group Exhibit 2). Ultimately, Mr. Ennis became such an extreme advocate for his anti-coal tar sealant stance that the group eventually agreed they should no longer send emails to him at his City of Austin job, but would continue to communicate with him through his private email account. (See Exhibit 3).

The extent to which this dynamic has permeated and affected the research of Drs. Mahler and Van Metre is not presently known because, unlike Dr. Crane and the MPCA, the USGS has produced virtually no emails, correspondence or internal communications from the files of these two scientists. The few emails that have been produced by the USGS appear to come from another staff member, Jennifer Wilson. This would appear to be the case even though paragraphs 1-7 of my attached FOIA request clearly call for any and all correspondence and emails related to



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coal tar sealant research being conducted by Drs. Mahler and Van Metre from 2003 to the present.

Despite the large quantities of emails that appear to be missing, I was able to locate one document that seems to contain Dr. Mahler's responses to questions raised by Dr. Rosalind Schoof with regard to a house dust study that was published by the USGS in 2010. Specifically, Dr. Schoof had asked for details regarding the manner in which the underlying data were obtained and tabulated and how variables were controlled or accounted for by the USGS. Instead of expressing a willingness to share her data and methodologies, Dr. Mahler repeatedly characterized Dr. Schoof's requests as being an "obfuscation" or "not relevant." (See Exhibit 4, italicized responses to paragraphs 2, 3, 6 & 7). The tone of these responses should be another warning flag. The fact that Dr. Mahler is married to Dr. Van Metre raises yet another question as to whether Dr. Van Metre would ever produce emails and data that Dr. Mahler thought should be withheld for some reason, or vice versa. The normal checks and balances that one might expect to see between two scientists have been eroded.

Given Dr. Mahler's perspective, I was not surprised when my initial review of the USGS records failed to disclose any field notes for the house dust study. Once again, my FOIA request clearly covered such documents (see paragraphs 8 & 9). As strange as it may seem, the blank field note forms that were to be used for this study were produced (see Exhibit 5), but not the completed forms with the observations of Drs. Mahler and Van Metre. If I am mistaken, please let me know. Similarly, Drs. Mahler and Van Metre apparently prepared cover letters for participants in the house dust study letting them know that specific data and findings for each home would be provided. (See template marked as Exhibit 6). This is precisely the type of data that has been requested by my FOIA request and by Dr. Schoof, but to the best of my knowledge, not produced.

The significance of the house dust study cannot be overstated. The house dust data provide the foundation for all of the subsequent risk assessments that were performed by the USGS in conjunction with Dr. Spencer Williams of Baylor. Dr. Schoof anticipated that Drs. Mahler and Van Metre would attempt to use the house dust study for this purpose, which is why she asked for all of the underlying sampling procedures, original data and field notes for each apartment and parking lot tested. This is what scientists do to check the merits of conclusions reached by others. As mentioned above, Dr. Mahler not only responded by calling such a request an "obfuscation," she also implied that the house dust study was not be used for risk assessment purposes. (See Exhibit 4, italicized response to paragraphs 3 & 8). It would appear that Dr. Mahler later changed her mind.

Other documents that should have been produced in response to my FOIA request, but appear to be missing, are as follows:

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- Complete dust study results for each apartment and parking lot sampled, giving minimum, maximum and median concentrations of all analytes that were tested, including pesticides, flame retardants, PCBs and phthalates (not just PAHs) (Para. 8 & 9 of FOIA Request)
- Notes regarding field sampling equipment calibrations and cleaning procedures (Para. 8 & 9 of FOIA Request)
- Chains of custody for the samples (it appears as though there are no chains of custody for any sample collected by the USGS) (Para. 8 & 9 of FOIA Request)
- Individual and compiled results of questions asked of households participating in the dust study and responses given (Para. 8 & 9 of FOIA Request)
- A means for identifying individual samples and correlating them to specific apartments or parking lots that were identified in the USGS house dust study. It is presently impossible to evaluate which dust samples were included, or just as importantly, excluded from the published summaries (Para. 8 & 9 of FOIA Request)
- Internal or external reviews of manuscripts that became published papers by the USGS regarding coal tar sealants (Para. 5 of FOIA Request)
- Documents that either proposed or authorized USGS work to be performed on coal tar sealants (Para. 12 of FOIA Request)
- Documentation regarding any joint funding between the USGS and the City of Austin on coal tar sealants (Para. 12 of FOIA Request)
- All communications and emails regarding coal tar sealants that may have been exchanged internally or externally between scientists, legislators or members of the media. (Para. 1, 4, 6, 7, 10 & 12 of FOIA Request).

As I mentioned above, if I am mistaken regarding any of the documents that appear to be missing, please let me know. I continue to appreciate your personal efforts to track down these documents and will be happy to answer any questions you may have. I look forward to your response.

Very truly yours,



Leonard S. Kurfirst

LSK:cs
Enclosures

Crane, Judy (MPCA)

From: Crane, Judy (MPCA)
Sent: Tuesday, January 11, 2011 1:47 PM
To: 'Peter C VanMetre'
Cc: Barbara J Mahler
Subject: RE: ES&T Feature Article

Great! I just had an email from someone we know threatening me with a data practices request; I think I've diffused her for awhile.

From: Peter C VanMetre [mailto:pcvanmet@usgs.gov]
Sent: Tuesday, January 11, 2011 1:45 PM
To: Crane, Judy (MPCA)
Cc: Barbara J Mahler
Subject: RE: ES&T Feature Article

Judy,
Good start on the letter! I'll incorporate your thoughts in my first cut...
Pete

Peter Van Metre
Research Hydrologist
USGS
1505 Ferguson Lane
Austin, TX 78754
512-927-3506

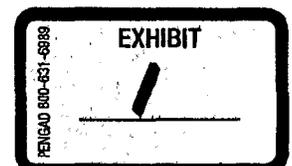
From: "Crane, Judy (MPCA)" <Judy.Crane@state.mn.us>
To: Peter C VanMetre <pcvanmet@usgs.gov>, Barbara J Mahler <bjmahler@usgs.gov>
Date: 01/11/2011 12:01 PM
Subject: RE: ES&T Feature Article

Good idea, Pete. In the email/letter, I would mention the widespread attention this issue has received from media outlets in response to USGS press releases and publications and the keen interest policy makers have about this issue. Having a comprehensive feature article will be very useful to frame our current understanding of the role coal-tar-based sealants play in contributing PAHs to urban environments, the potential human health and ecological consequences of this contamination, and the challenges policy makers face in addressing this issue.

Judy

From: Peter C VanMetre [mailto:pcvanmet@usgs.gov]
Sent: Tuesday, January 11, 2011 11:49 AM
To: Barbara J Mahler
Cc: Crane, Judy (MPCA)
Subject: Re: ES&T Feature Article

Yes, I think the time is ripe...





Crane, Judy (MPCA)

From: Crane, Judy (MPCA)
Sent: Monday, January 24, 2011 10:55 AM
To: Alison Watts (alison.watts@unh.edu); Barbara Mahler (bjmahler@usgs.gov); Peter Van Metre (pcvanmet@usgs.gov)
Subject: Kirk O'Reilly and Paul Boehm's comment to ES&T

See Anne LeHuray's email below regarding a comment submitted to ES&T. It seems most likely this would pertain to Alison's recent paper.

MPCA management instructed me to provide my PAH—stormwater SETAC presentations to LeHuray after she threatened us with a data practices request.

Judy

From: alehuray [<mailto:alehuray@pavementcouncil.org>]
Sent: Monday, January 24, 2011 10:31 AM
To: Crane, Judy (MPCA); 'Paul Boehm'; koreilly@exponent.com
Cc: Thompson, Dale (MPCA); Berger, Donald (MPCA)
Subject: RE: request a copy of SETAC 2010 North America conference presentation #434

Hi Judy -

Sorry not to have seen your email. I was out of the country on the 13th and days following.

Kirk and Paul do not need any permission from me to share their presentation. It's also up to them whether they wish to share their just-submitted comment to ES&T which you surely will be interested in.

Thanks for keeping me in the loop.

Anne

From: Crane, Judy (MPCA) [<mailto:Judy.Crane@state.mn.us>]
Sent: Monday, January 24, 2011 10:55 AM
To: Paul Boehm (pboehm@exponent.com); koreilly@exponent.com
Cc: alehuray
Subject: request a copy of SETAC 2010 North America conference presentation #434

Kirk and Paul--

I am requesting a copy of your SETAC 2010 North America conference presentation #434 that was done for the Pavement Coating Technology Council on "PAHs in urban sediments: Forensic approaches for assessing the relative contribution of atmospheric deposition and parking lot sealants" by K. O'Reilly, J. Pietari, and P. Boehm. I previously requested this file from Dr. Anne LeHuray on January 13, 2011, and she has not responded to my request. This presentation will only be used internally at the MPCA. Please contact me with any questions. Thanks much.

Regards,

Judy L. Crane, Ph.D.
Research Scientist III
Environmental Analysis & Outcomes Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

Crane, Judy (MPCA)

From: Barbara J Mahler [bjmahler@usgs.gov]
Sent: Wednesday, February 24, 2010 2:26 PM
To: Crane, Judy (MPCA)
Cc: Alison.Watts@unh.edu
Subject: RE: meeting w/ Anne LeHuray in Minnesota on March 12

Judy,

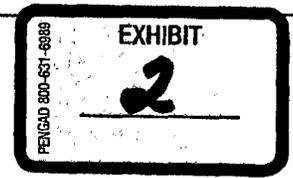
Just had a long talk with Dan Chiles, mayor pro-tem of Springfield. Apparently LeHuray and DeMott were in Springfield this afternoon (their third visit), and in his words, they "took apart" our research. He's sending me a transcript and they're going to post the video on their website. But from talking to him, it sounds like what they did was put up a smokescreen, bringing up a bunch of non-relevant points and mixing it in with a few outright lies.

I think it will be important for us to take a look at this and come up with a point-by-point refutation of what they're saying, as well as some powerful points of our own. It sounds like they're not pulling any punches.

Barbara

Barbara J. Mahler, Ph.D., P.G.
Research Hydrologist
U.S. Geological Survey
1505 Ferguson Ln., Austin, TX 78754
(512) 927-3566

From: "Crane, Judy (MPCA)" <Judy.Crane@state.mn.us>
To: "Mike Kromrey (mike@watershedcommittee.org)" <mike@watershedcommittee.org>, "Peter Van Metre (pcvanmet@usgs.gov)" <pcvanmet@usgs.gov>, "Barbara Mahler (bjmahler@usgs.gov)" <bjmahler@usgs.gov>, "Tom Ennis (Tom.Ennis@ci.austin.tx.us)" <Tom.Ennis@ci.austin.tx.us>
Cc: "Alison Watts (alison.watts@unh.edu)" <alison.watts@unh.edu>
Date: 02/24/2010 02:11 PM
Subject: RE: meeting w/ Anne LeHuray in Minnesota on March 12



Hi—

As a follow-up to the below email, Don Berger of our staff provided me with some additional info about our upcoming meeting with White Bear Lake city officials and Anne LeHurray & PCTC members. Don has been doing some work on the coal tar sealcoat issue from the policy side of things. He's trying to get the city to put together an agenda for this meeting.

Of particular note are the sentences I have highlighted below (for which publication of these results in the peer-reviewed literature will be necessary before we give it much attention).

Purpose:

I believe there are two purposes and I have asked the PCTC to put theirs in writing. I expect the PCTC's purpose to include convincing the City of White Bear Lake that they should not take action to ban coal tar sealcoat within their jurisdiction. I believe our purpose to be much different. I believe our purpose is to support the City in moving toward a coal tar sealer restriction in their jurisdiction, gather as much information from the industry and the legislative lobbyists as possible, and represent the health and welfare of the environment, our stakeholders, and the public well being as best we can. I want you to know that it is not my intention to debate scientific studies, research, or sampling results with the PCTC. My discussions with the City of White Bear Lake

Crane, Judy (MPCA)

From: Barbara J Mahler [bjmahler@usgs.gov]
Sent: Wednesday, February 24, 2010 3:12 PM
To: Crane, Judy (MPCA)
Subject: RE: meeting w/ Anne LeHuray in Minnesota on March 12

Sounds good, I'll be here, as will Pete.

Barbara J. Mahler, Ph.D., P.G.
Research Hydrologist
U.S. Geological Survey
1505 Ferguson Ln., Austin, TX 78754
(512) 927-3566

From: "Crane, Judy (MPCA)" <Judy.Crane@state.mn.us>
To: Barbara J Mahler <bjmahler@usgs.gov>
Date: 02/24/2010 02:40 PM
Subject: RE: meeting w/ Anne LeHuray in Minnesota on March 12

Yes, I'm not surprised, Barbara. We've seen this approach many times from responsible parties for contaminated sites. That was one of the reasons I wanted to contact all of you.

I'm hoping the MN Legislature will ban coal tar-based sealcoats this session. It's a bonding session so they usually don't address too many policy issues, but it could get slipped in...there is definitely interest by some Legislators to make this happen.

Can you send me a copy of the transcript, too, and the web link when Dan Chiles provides it to you. I'm thinking we should probably have a MPCA manager at this meeting (the meeting is scheduled for a Friday so that may be tough). I at least want to provide some of the stormwater supervisors/managers with more information on LeHuray's tactics so we're better prepared to address them.

I'll give you a call later today to discuss this issue further.

Judy

From: Barbara J Mahler [mailto:bjmahler@usgs.gov]
Sent: Wednesday, February 24, 2010 2:26 PM
To: Crane, Judy (MPCA)
Cc: Alison.Watts@unh.edu
Subject: RE: meeting w/ Anne LeHuray in Minnesota on March 12

Judy,

Just had a long talk with Dan Chiles, mayor pro-tem of Springfield. Apparently LeHuray and DeMott were in Springfield this afternoon (their third visit), and in his words, they "took apart" our research. He's sending me a transcript and they're going to post the video on their website. But from talking to him, it sounds like what they did was put up a smokescreen,

Crane, Judy (MPCA)

From: Ennis, Tom [Tom.Ennis@ci.austin.tx.us]
Sent: Tuesday, March 02, 2010 10:38 AM
To: Peter C VanMetre; Barbara J Mahler; Crane, Judy (MPCA)
Cc: Scoggins, Mateo; Bashara, Tom
Subject: RE: nice line...
Attachments: PCTC Response to CIC Questions (2).pdf

Pete:

Did you see the PCTC answers to Council questions in Springfield? Dodgeball 2.0 in my opinion. I'll attach a copy. Also interesting is that the PCTC is up and going and that they claim the BAP concentration of their products is 0.002% (we are more like 0.1 to 0.5 percent BAP). Just 2 orders of magnitude off.

Here's a link: <http://www.pavementcouncil.org/faqs>

Tom

From: Peter C VanMetre [mailto:pcvanmet@usgs.gov]
Sent: Tuesday, March 02, 2010 9:51 AM
To: Barbara J Mahler; Ennis, Tom; Judy.Crane@state.mn.us
Subject: nice line...

OSU has a Superfund Research Program. <http://oregonstate.edu/superfund/>

The web site opens with this:

Polycyclic Aromatic Hydrocarbons: New Technologies and Emerging Health Risks

Welcome to the Superfund Research Program at Oregon State University.

Polycyclic Aromatic Hydrocarbons (PAHs) are re-emerging as an environmental pollutant of concern. PAHs, found at Superfund sites and urban settings, are formed in the burning of carbon-based energy sources, e.g., diesel, gasoline, coal, petroleum and in cooking or tobacco smoke.

That first sentence is pretty close to our proposed session title for next years SETAC Judy.
Pete

Peter Van Metre
Research Hydrologist
USGS
1505 Ferguson Lane
Austin, TX 78754
512-927-3506

Crane, Judy (MPCA)

From: Crane, Judy (MPCA)
Sent: Thursday, December 02, 2010 11:04 AM
To: 'Peter C VanMetre'
Subject: RE: UNH paper on PAHs in stormwater runoff

Ok—thanks for the heads-up.

From: Peter C VanMetre [<mailto:pcvanmet@usgs.gov>]
Sent: Thursday, December 02, 2010 10:54 AM
To: Watts, Alison; Crane, Judy (MPCA)
Subject: Re: UNH paper on PAHs in stormwater runoff

Alison,

I gave your paper and your name to a reporter who interviewed me this morning -- hope that's OK! And I've given your name out too Judy.

Cheers,
Pete

Peter Van Metre
Research Hydrologist
USGS
1505 Ferguson Lane
Austin, TX 78754
512-927-3506

From: "Watts, Alison" <Alison.Watts@unh.edu>
To: "Peter C VanMetre" <pcvanmet@usgs.gov>, "Crane, Judy (MPCA)" <Judy.Crane@state.mn.us>, "Bert van Hattum (bert.van.hattum@ivm.vu.nl)" <bert.van.hattum@ivm.vu.nl>, "Brian Mulhearn" (bmulhearn@ensafe.com)" <bmulhearn@ensafe.com>, "David Mauro (dmauro@metaenv.com)" <dmauro@metaenv.com>, "Dave Nakles (dnakles@andrew.cmu.edu)" <dnakles@andrew.cmu.edu>, "Greg Durell (durell@battelle.org)" <durell@battelle.org>, Elisa Buckley <ebuckley@langan.com>, "Fred Pinkney (Fred_Pinkney@fws.gov)" <Fred_Pinkney@fws.gov>, "Greg Sower (GSower@environcorp.com)" <GSower@environcorp.com>, "Karey Harris (harris.karey@epa.gov)" <harris.karey@epa.gov>, "Jocelyne Hellou (Hellouj@mar.dfo-mpo.gc.ca)" <Hellouj@mar.dfo-mpo.gc.ca>, "Chip McCarty (hmccarty@csc.com)" <hmccarty@csc.com>, "Ileana Rhodes (ileana.rhodes@shell.com)" <ileana.rhodes@shell.com>, "Jerri Dawn Martin (jerri.martin@ky.gov)" <jerri.martin@ky.gov>, "John Higman (jhigman@sirwmd.com)" <jhigman@sirwmd.com>, "Joel Meyer (joel.meyer@duke.edu)" <joel.meyer@duke.edu>, "Charlene Liu (liush@cdm.com)" <liush@cdm.com>, "Dave Mount (mount.dave@epa.gov)" <mount.dave@epa.gov>, "Nick Azzolina (nick.azzolina@gmail.com)" <nick.azzolina@gmail.com>, "John French (pesa@gci.net)" <pesa@gci.net>, "Amy Rowe (rowe@njaes.rutgers.edu)" <rowe@njaes.rutgers.edu>, "Robert (Bob) De Santo (rsdesanto@ct.metrocast.net)" <rsdesanto@ct.metrocast.net>, "Susan Kane Driscoll (sdriscoll@exponent.com)" <sdriscoll@exponent.com>, "Paul Seidel (seidel.paul@deq.state.or.us)" <seidel.paul@deq.state.or.us>, "Hennes, Steven (MPCA)" <Steven.Hennes@state.mn.us>, Steve Geiger <steve.geiger@aec.com>, "Randy St. Germain (stgermain@dakotatechnologies.com)" <stgermain@dakotatechnologies.com>, "Thomas Webster (webster@bu.edu)" <webster@bu.edu>, "Will Gala (WGala@chevron.com)" <WGala@chevron.com>, Christopher G Ingersoll <cingersoll@usgs.gov>
Date: 12/02/2010 10:45 AM
Subject: UNH paper on PAHs in stormwater runoff

And on the subject of papers... We have just published a paper in ES&T on our sealant/runoff work:

Crane, Judy (MPCA)

From: Peter C VanMetre [pcvanmet@usgs.gov]
Sent: Thursday, December 09, 2010 12:59 PM
To: Crane, Judy (MPCA)
Cc: Barbara J Mahler
Subject: Re: FW: [npsinfo] Pavement Sealer Study-Product Ban Fails to Lower or Change Sources of PAHs in Watershed

We've seen much of what's in this paper in various presentations by Bob DeMott. The approaches used are not technically defensible.

Pete

Peter Van Metre
Research Hydrologist
USGS
1505 Ferguson Lane
Austin, TX 78754
512-927-3506

From: "Crane, Judy (MPCA)" <Judy.Crane@state.mn.us>
To: "Tom Ennis (Tom.Ennis@ci.austin.tx.us)" <Tom.Ennis@ci.austin.tx.us>, "Peter Van Metre (pcvanmet@usgs.gov)" <pcvanmet@usgs.gov>, "Barbara Mahler (bjmahler@usgs.gov)" <bjmahler@usgs.gov>
Date: 12/09/2010 12:50 PM
Subject: FW: [npsinfo] Pavement Sealer Study-Product Ban Fails to Lower or Change Sources of PAHs in Watershed

I'm sure you've already seen the below article....

Judy

From: Gelbmann, Anne (MPCA)
Sent: Thursday, December 09, 2010 10:45 AM
To: Berger, Donald (MPCA)
Cc: Crane, Judy (MPCA); Thompson, Dale (MPCA)
Subject: FW: [npsinfo] Pavement Sealer Study-Product Ban Fails to Lower or Change Sources of PAHs in Watershed

Don/Judy/Dale-are you on this list serve? Lots of e-mails today about the PAH ban.

Crane, Judy (MPCA)

From: Ennis, Tom [Tom.Ennis@ci.austin.tx.us]
Sent: Friday, April 15, 2011 2:19 PM
To: Crane, Judy (MPCA)
Subject: RE: Other coal tar sealant bans/ordinances in the U.S.

Judy:

It is best that you communicate with me about coal tar stuff via my personal email, enniseng@gmail.com.

I don't do that for the City of Austin anymore.

Thanks...

Tom

From: Crane, Judy (MPCA) [mailto:judy.crane@state.mn.us]
Sent: Friday, April 15, 2011 2:16 PM
To: Ennis, Tom
Subject: RE: Other coal tar sealant bans/ordinances in the U.S.

Hi Tom—

Please add Golden Valley, MN and New Hope, MN to your list, too.

I hadn't seen your blog. Pete mentioned you were taking more of an advocacy role on this issue. I'll check it out further.

Judy

From: Ennis, Tom [mailto:Tom.Ennis@ci.austin.tx.us]
Sent: Friday, April 15, 2011 2:06 PM
To: Crane, Judy (MPCA); Sarah Pasquesi
Cc: Cassandra McKinney; Bob Newport
Subject: RE: Other coal tar sealant bans/ordinances in the U.S.

Judy:

Yes here is my [list](#). I have not added the State of Washington. I thought I would wait for the governor to sign it first (which is due in less than 20 days).

There are some surprises (Winfield, KS and the Commonwealth of Massachusetts (for wetland permits only)).

Let me know if there are some changes.

Tom

From: Crane, Judy (MPCA) [mailto:judy.crane@state.mn.us]
Sent: Friday, April 15, 2011 1:49 PM
To: Sarah Pasquesi
Cc: Cassandra McKinney; Bob Newport; Ennis, Tom
Subject: Other coal tar sealant bans/ordinances in the U.S.



Dust Study Questions

1. Describe the approach used to collect samples at each property, including specifying the order in which samples were collected. The sampling period in the Mahler et al. 2010 study is described as between April and July 2008. The weather in Austin, Texas varied considerably during that period. From the beginning of 2008 through mid-April, there was little rain in Austin which would be expected to result in considerable dust build up. From late April through July there were periods of relatively frequent rain. For this reason as well as others, it's important to understand which samples were collected at which times. Which was sampled first, outdoors or indoors? Was the order the same at every property? Do you have a sampling SOP (standard operating procedure) that you could share with us?

Indoor samples were collected from Mar 28 to May 23. Outdoor samples were collected from Mar 28 to July 23. In all cases the indoor sample was collected prior to the outdoor sample. Seasonal build-up of dust is not relevant to PAH concentrations.

2. Describe the approach used to collect the indoor dust samples. The paper says that dust was collected from the entryways and adjacent living room floors, and that the areas sampled ranged from 1.6 to 13 m². Why wasn't a standard area vacuumed? What was the relative area of the entry vs. living area that was vacuumed? Was there any difference between the concentrations of PAHs at the entryway as opposed to the living room?

[USEPA guidance for sampling lead in indoor dust specifies that discrete samples should be collected from a bedroom, most frequently used living space and the most frequently used entrance. It is further recommended that these samples be used to calculate an average concentration based on time-weighted activity patterns for residents.]

A sufficient area was vacuumed to obtain a sufficient amount of dust for analysis. Indoor dust was analyzed as a single composite. This is obfuscating the fact that indoor dust had elevated concentrations of PAHs if the parking lot had a sealcoated parking lot.

3. Were PAH loads calculated? The mass of dust collected indoors was stated to vary from 0.36 to 55 g (median of 4.8 g). Did you evaluate the influence of dust load on PAH concentrations?

[Both PAH concentration and PAH load from each living area are needed to assess exposures because exposure will be a function of transfer of PAH to hands, which will be a function of both concentration and load. Dust load is expected to be highest at the entryway and in carpets; however, PAH concentrations are expected to be highest at the entryway and lowest in carpets. Since most time will be spent in the living areas rather than at the entryway, composite samples that combine both areas do not represent average exposure concentrations. The composite concentrations will overestimate the average exposure concentration both due to higher concentration and due to higher loading.]



Yes, they were. PAH loads from apartments with CT lots were 16 times higher than those from apartments with NCT lots (based on median values). Loads for CT apartments ranged from 9 to 480 ug/m² with a mean value of 160 ug/m².

This publication was not a health risk analysis. The paper demonstrated that PAH concentrations are 25 times in residences with sealcoated parking lots. We did compute PAH loads, but it's not relevant to this discussion.

4. Describe the process of removing samples from the HVS3 and preparing it for collection of the next sample. Describe if/how the HVS3 was cleaned, and the frequency with which the cleaning was performed. Was this done between every sample?
[On average, parking lot dust concentrations are 37 times higher than indoor dust concentrations. Consequently, if parking lots were sampled first, and if the HSV3 was not decontaminated according to recommended procedures, residual parking lot dust could account for the elevated indoor dust concentrations. Even if the indoor dust was sampled first, failure to decontaminate between properties could result in high values due to residual contamination from the prior property.]

The HVS3 was cleaned between collection of every sample.

5. Did you evaluate the possible influence of apartment or carpet age on dust PAH concentrations?

Yes. There is no relation.

6. Will you share with us the individual data for the independent variables listed in Table 1 of the paper? How can the alleged impact of these variables be checked if the data for each apartment are not produced? Were data collected for any other parameters not listed in Table 1? When will the USGS produce this data?

Obfuscation.

7. The degree of sealcoat wear is listed in Table 1 as an independent variable potentially related to the levels of PAH detected in SHD and parking lots dust samples. However, there is no information presented as to how this wear was evaluated, nor is there any information in the supporting material that summarizes the range of wear levels for the parking lots examined in the study. If parking lot surface type is believed to be a significant factor in explaining indoor and parking lot dust PAH levels, why wasn't the degree of sealcoat wear estimated? Were such estimates made in earlier USGS "parking lot" articles? If so, why were those USGS techniques for estimating wear abandoned this time around? Is the USGS saying that the "untreated asphalt" parking lots in their study had never been treated with any type of sealant? Did the USGS assume that a parking lot which had no obvious "sealant chips" for the "coffee/tea" screening test was a parking lot that had never been sealed in the past? If so, did the USGS conduct any research to demonstrate that such an assumption was valid?

Obfuscation. The enormous difference between NCT lots and CT lots indicates that wear was not an issue, and unsealcoated lots were not misidentified.

8. Describe the relevance of the German dust PAH guideline of 10 µg/g. [U.S. EPA (2003) derived a dust PAH guideline of 145 µg/m² for total PAH for the World Trade Center residential studies. This value is based on an incremental risk of 1 x 10⁻⁴ for ingestion of and dermal contact with dust for 30 years (daily dust intake of 13 mg/d for children and 6 mg/d for adults). The target risk is justified due to limits of analytical methods for PAH in dust and to background concentrations of other COPCs such as dioxins. We can estimate an approximately equivalent T-PAH concentration based on literature reports of typical dust loads in homes. For example, Adgate (1995) report a geometric mean dust load of 38 mg/ft² for 216 homes, which is 0.409 g/m². At this loading, the U.S. EPA guideline of 145 µg/m² is equivalent to a concentration of 355 µg/g. This compares to a range of coal tar sealcoat indoor dust T-PAH concentrations of 20 to 335 µg/g in the Mahler et al. study. Consequently, the reported indoor dust concentrations do not exceed the health-based benchmarks used in the World Trade Center Indoor Environmental Assessment.]

So, they are accusing us of doing a health-risk analysis when we did not do so, and then they go ahead and do a health-risk analysis on nonexistent data.

The WTC daily dust ingestion value of 13 mg/d for toddlers is very small relative to that presented in other EPA documents: 127 mg/d from one study (Calabrese), 55 mg/d from EPA's own summary of estimates, and that's for the median child. Upper percentile (top 10%) estimate is 432 mg/d. EPA Child-Specific Exposure Factors Handbook. "EPA (1997) recommends central estimates of total soil ingestion rates of 100 mg/d for children and 50 mg/d for adults. It is logical that lower ingestion rates would apply to dust only, however, it is uncertain how much less. This uncertainty appears to have more potential for leading to under than over estimates of risk." So they admit that they are probably underestimating the risk.

Further, the total exposure is based on the assumption that the residue level will dissipate according to first-order kinetics, i.e., that in the case of the WTC the contaminant was delivered only once and from then on it continually decreased as a result of dissipation from cleaning, chemical breakdown, etc. This is clearly not the case with CT sealcoat dust, which is constantly replenished. (Appendix D5, Section 3.3, World Trade Center Indoor Environmental Assessment.)

"Dose rates were estimated based on a number of assumptions—for example, the fraction of dust residues that can be transferred to the skin, daily skin loads, mouthing behaviors for different age groups, and dissipation of surface loading over time."

First of all the content of these papers is not germane as they have not been published. The two included are still in review; to the best of my knowledge, the Demott paper was rejected by ES&T and is now in review at Environmental Forensics; they have been

citing it as "in review" for 18 months now. The one that is listed as "in press" is not included in the .pdf, and is in a trade journal, not a peer-reviewed scientific journal.

Because of this, let's stick to just one stopper for each paper.

Demott – Analytical error

O'Reilly – misleading use of data

There are substantial problems with the two papers submitted.

The Demott paper has so much analytical error that the data cannot be reasonably evaluated. They only collected two sets of duplicates for 44 samples, and the relative percent difference was 42% and 87%. Now, the amount of decrease in PAHs that we might expect to see of the course of 2 years (assuming a half-life of 15 years) is about 9%. How can we possibly see a decrease of 9% if the experimental error is 40% or greater? And in fact, these weren't even field duplicates, they were splits. They collected a bunch of sediment, mixed it in a bowl, divided it in half, and analyzed each half. There are a lot of other very serious issues, such as the fact that collection of streambed sediment is a very poor choice of approach for determining trends, but this one overwhelms them.

The O'Reilly paper has four major flaws. First, they don't specify which data they used for their "forensic" plots, but the data for "coal tar sealed lot" shown on their "forensic" plots don't include any of the data from any of our publications. If you plot our parking lot data on there, it very nicely overlies the stormwater pond data. Second, these are pretty weak "forensic" methods. In fact, they only used three methods, as methods 1 and 2 and methods 4 and 5 are really the same thing. They're fine for screening, but cannot be considered advanced forensic tools. The science has moved on, and the GMB model approach we've taken is much more sophisticated and preferable to any of these approaches. Third, they exclude any consideration of PAH concentrations. How can atmospheric deposition be the principal source of PAHs to stormwater ponds in the Minneapolis area if there is a thousand-fold difference in the PAH concentrations of those ponds? And finally, none of the sources that they consider, with the exception of dust from lots with coal-tar-based sealcoat (and apparently they don't even use that) are actually sources – atmospheric particles, urban soils, and rooftop particles are all themselves receivers of PAHs from different sources, and themselves may (and likely do) include PAHs from coal-tar-based sealcoat.

And note, the atmospheric particle standards used by O'Reilly are either from Simcik, 1999, which were for atmospheric particles in the Chicago area (2 of the 3 points); the other is the NIST atmospheric dust standard, for which O'Reilly does not provide a reference – which NIST standard is this? If it's 8785 (Air particulate matter on filter media), it consists of the fine fraction of the "urban dust" standard SRM 1649a. Urban dust is simply "an atmospheric particulate material collected in an urban area." We have no idea what urban area.



Agreement Number: _____

AGREEMENT FOR COLLECTION OF SOLIDS ON PRIVATE PROPERTY

THIS AGREEMENT is entered into this _____ day of _____, 20____, by and between _____, hereinafter called "Licensor", and the United States of America, by and through the U.S. Geological Survey (USGS), U.S. Department of the Interior, hereinafter called "Licensee".

WITNESSETH:

1. Licensor, for and in consideration of the faithful performance by Licensee of all covenants and conditions herein contained, hereby consents and agrees to the collection of solids indoors and outdoors of the property of the Licensor for the use of the Licensee in scientific investigations.

Solids may include any unconsolidated materials such as soils, sediments, matter suspended in water or wastewater, sweepings, dusts, scrapings, or other particulate matter, both indoors and outdoors, of the property of the licensor. The solids shall be collected using a customized vacuum cleaner or other collection equipment deemed appropriate by the Licensee.

2. The said property, either leased or owned, of Licensor is located at the following street address:

3. Collection of solids shall be at a mutually agreeable time after the effective date of this agreement. The solids collection equipment shall be maintained in a good, safe, and workable manner such that it shall cause no harm to the property or Licensor.

4. The solids collection equipment and all tools for the maintenance and use thereof placed in or upon the said property shall remain the property of the Licensee and shall be removed by the Licensee at the conclusion of the solids collection.

5. The Licensee agree to cooperate, to the extent of the law, in the submittal of all claims for alleged loss, injuries, or damages to persons or property arising from the acts of Licensee's employees, acting within the scope of their employment, in the collection of solids from indoors and outdoors of the property, and use and maintenance of solids collection equipment and tools pursuant to the Federal Tort Claims Act (28 U.S.C., 2671 et seq.)

IN WITNESS WHEREOF, the parties have caused this agreement to be executed the day and year first above written.

LICENSOR: _____
Printed name: _____

LICENSEE: United States of America
Department of the Interior Geological Survey
By: _____
Printed name: _____
Title: Hydrologist



Completed by: _____

Sample ID: _____

SAMPLE SITE QUESTIONNAIRE

I. Background info (fill out before going inside)

Date:	Address:	Apartment or house? (circle one)
Describe setup/location of house/apt. unit with respect to parking lot, type of parking lot sealcoat and condition (new, worn, etc.).		
Describe and photograph access to front door, e.g., approximate distance from parking area to front door, steps, pathway.		
Describe nearby businesses – any BBQ or charbroiling (e.g. El Regio) restaurants?		
Describe surrounding neighborhood (e.g., residential, some industrial businesses, commercial, roads, traffic).		

II. Questions for resident

Number of residents:		#Adults/#Children	/
Approx. square footage of house/apt.:		#Bedrooms/#Bathrooms:	/
Are any residents employed in a job that involves contact with petroleum products, e.g., construction worker, maintenance, gas station?			
Does anyone in the household smoke?		How many smokers?	
Describe smoking habits (smoke inside/outside mostly, smoke how much/day, etc):			
Do residents wear shoes in house, or are shoes taken off immediately indoors? (circle one)			
Describe average daily trips to/from residence (e.g., leave for work in AM and come home in PM; in and out several times a day; kids in and out all day, etc.).			
1-4 per day	5-10 per day	too many to count	
How often do residents walk around complex (e.g., to collect mail, go to pool, visit office, do laundry, walk pet):			
More than once a day	once a day	3-6 times a week	1-3 times a week <1 once a week

II. Questions for resident (continued)

Sample ID: _____

Heating and cooling system (circle all that apply):			
Heat:	Electric	Gas	None
	Central	Floor unit	Wall unit
A/C:	Central	Window unit	None
Are A/C air filters changed regularly (i.e. every 3 months)?		Any specialized filtration system (e.g., if a house)?	
How much are windows kept open?	Never Rarely (< 1/mo) Sometimes (monthly) Often (weekly) Whenever possible (2x+ week)		
Gas or electric stove? (circle one)	Mostly cook at home or dine/take-out or about equal? (circle one)		
Is there a BBQ grill?	Charcoal Propane Smoker	If yes, how much is it used? (circle one)	Never Rarely (1-2 x yr) Sometimes (4-6 x yr) Often (1-4x month) Whenever possible (2x+ week)
Yes	No		
Where is it located relative to living area?			
Is there a fireplace?		If yes, how much is it used? (circle one)	Never Rarely (1-2 x yr) Sometimes (4-6 x yr) Often (1-4x month) Whenever possible (2x+ week)
Is there a washer/dryer in the residence?		Does resident burn candles/incense regularly?	
Any pets?		How many?	
Type of animal(s)?		Indoor and/or outdoor?	
Does pet walk on parking lots/driveway?			
When the last time living area was vacuumed or swept?			
Is there a regularly scheduled cleaning service?			

III. Indoor description:

Rug type(s) (circle):	Plush	Level loop	Flat
Multi-level	Shag	Other flooring:	
Type and condition of upholstered items (couch, curtains, carpet). Are they newer, older, or especially worn?			
Describe windows in main living area (many/few, floor to ceiling, etc):			
Describe electronics (TV, computers, stereo etc.) in main living area:			



United States Department of the Interior

U.S. GEOLOGICAL SURVEY WATER RESOURCES DISCIPLINE

Texas Water Science Center
8027 Exchange Dr.
Austin, Texas 78754-4733

Date

Dear *Name of participant*:

Thank you for allowing the U.S. Geological Survey (USGS) to sample dust from your residence on *date of sample collection*. The dust was collected to assess house dust in Texas as part of a USGS reconnaissance study. The USGS is not a regulatory agency, and dust samples were not collected for compliance monitoring. Rather, the purpose of the study was to provide preliminary information about occurrence of a variety of different organic compounds in house dust. Your cooperation and that of other participants was invaluable to this study and we sincerely appreciate your help.

We analyzed your house dust for 96 organic compounds of environmental interest, including 26 pesticides, 18 polychlorinated biphenyls (PCBs), 13 flame retardants and 28 polycyclic hydrocarbons (PAHs). A description of the compounds that were analyzed, their uses, and web sites where you can find more information is included in this packet. The analyses were performed at the USGS National Water Quality Laboratory in Denver, Colorado. A copy of the chemical analysis report for your dust sample is enclosed. For each compound we detected, the chemical analysis report lists the concentration we measured. In all cases, the concentrations are reported as micrograms (μg) of compound per kilogram (kg) of solid (dust). One $\mu\text{g}/\text{kg}$ is equivalent to one in 1,000,000,000 (part per billion, or ppb). If the concentration is indicated with a "less than" symbol (<), it means that the compound was not detected at the minimum laboratory reporting level indicated.

Currently no regulatory or health guidelines exist for these compounds in house dust. In fact, for some of these compounds this study represents the first time that they have been analyzed in house dust. However, if you have any health-related questions regarding these compounds, please contact the State Health Department's Environmental Toxicology Group at 800-588-1248 or the Austin/Travis County Health and Human Services at 512-972-5486. Local and state health departments will receive a summary of results from this study, but your name and address will not be provided to them.

If you have any other questions, please contact me at 512-927-3566 or bjmahler@usgs.gov. We will provide you with copies of any reports or other publications that result from this study. Again, thank you for your interest, assistance, and cooperation.

Sincerely,

Barbara Mahler
Research Hydrologist

Attachments (2): Chemical analysis report, compound information sheet



Leonard S. Kurfirst
312-201-2707
kurfirst@wildman.com

April 15, 2011

USGS FOIA Officer
Mail Stop 807
National Center
Reston, VA 20192

Re: Coal Tar Sealants

Dear FOIA Officer:

Pursuant to the Freedom of Information Act, 5 U.S.C. §552, I hereby request copies of any documents which constitute, refer to or relate to the following:

1. All communications, including correspondence, emails, notes, reports and memoranda regarding coal tar sealant and asphalt research conducted by USGS or any employee, agent or contractor of USGS between January 1, 2003 and the present.
2. All correspondence, emails, notes, reports and memoranda regarding Society of Environmental Toxicology and Chemistry ("SETAC"), meetings, conferences, sessions and presentations related to coal tar sealants attended, sponsored or coordinated by USGS or any employee, agent or contractor of USGS during 2008, 2009, 2010 and 2011.
3. All USGS communications, including correspondence, emails, notes, reports and memoranda that in any way reference the Pavement Coating and Technology Council ("PCTC") dated between January 1, 2003 and the present.
4. All communications, including correspondence, e-mails, notes, reports and memoranda related to coal tar sealants authored by, received by or copied to Peter Van Metre, Barbara Mahler, Jennifer T. Wilson, T.L. Burbank, M. Scoggins and/or P.A. Hamilton dated between January 1, 2003 and the present.
5. All documents constituting, referring or relating to studies or publications related to coal tar sealants conducted by, authored by, co-authored

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by or edited by Peter Van Metre, Barbara Mahler, Jennifer T. Wilson, T.L. Burbank, M. Scoggins and/or P.A. Hamilton including but not limited to notes, drafts, correspondence, e-mails, galley prints, edits, raw data, field notes, QA/QC documentation and chain of custody reports.

6. All communications, including correspondence, emails, notes, reports and memoranda between, among or including Peter Van Metre of the USGS, Judy Crane of the Minnesota Pollution Control Agency and/or Alison Watts of the University of New Hampshire regarding coal tar sealants and/or asphalt coatings.

7. All communications, including correspondence, emails, notes, reports and memoranda between, among and/or including any employee, agent or contractor of USGS and any employee, agent or contractor of a law firm, corporation, publication or other third party regarding coal tar and/or asphalt sealants and their alleged impact on the environment or human health. Please note that this request is not seeking law firm documents generated as part of an attorney/client relationship.

8. All lab data, field notes, chain of custody and QA/QC reports in the possession, custody or control of USGS related to any research, study or evaluation of coal tar or asphalt sealants or the alleged effect of coal tar or asphalt sealants on human health, aquatic organisms or the environment dated between January 1, 2003 and the present.

9. All lab data, field notes, chain of custody and QA/QC reports in the possession, custody or control of USGS generated as a result of any research, study or evaluation of soil, dust, water and/or sediment purportedly impacted by coal tar or asphalt sealants.

10. All USGS communications, including correspondence, e-mails, notes, reports or memoranda between or among any USGS employees, agents or contractors regarding trade associations that promote asphalt sealants, dated between January 1, 2003 and the present.

11. Copies of all photographs taken as part of or in connection with any research, study or evaluation regarding the alleged environmental impact of coal tar or asphalt sealants.

12. All communications, including correspondence, emails, notes, reports, memoranda and budgets regarding expenditures made and approved by USGS for coal tar and asphalt sealant research, studies or evaluations dated between January 1, 2003 and the present.

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If USGS objects to all or any part of these requests, please alert me as soon as possible so that we may discuss those objections and attempt to resolve them. While any objections are pending, please produce copies of any documents to which USGS does not object. I will pay reasonable copying charges up to \$250. I would kindly ask for an estimate before incurring any copying charges above \$250.

Please call me at (312) 201-2707 to discuss your timeframe for compliance with this request, the format for production (*i.e.*, paper files, electronic files or both) and the cost to copy the documents.

Very truly yours,

WILDMAN, HARROLD, ALLEN & DIXON LLP

Leonard S. Kurfirst