To: Travers, David[Travers.David@epa.gov]
From: Hedrick, Elizabeth
Sent: Thur 1/30/2014 12:46:09 AM
Subject: RE: wrinkle in WV

To answer your question, reported MCHM DLs I have seen are between 0.5 – 100 ppb. It depends on the lab and method right now.

The SOP used by responders in WV is based on **methylene chloride extraction and GC-MS detection and has a reported DL of 0.5 ppb**. **Dupont reported an MDL of roughly 0.1 ppm**. Region 3 reported trying **purge and trap GC-MS and could detect 3 ppm in reagent water**. (They are still working on their method issues though.) **Louisville Water Works used Solid Phase Micro Extraction (SPME) GC-MS and reported a 3 ppb DL.** Ex. 5 - Deliberative
Ex. 5 - Deliberative

Elizabeth

From: Travers, David
Sent: Wednesday, January 29, 2014 6:13 PM
To: Hedrick, Elizabeth
Subject: Fw: wrinkle in WV

E, see below. BTW, what is the non-detect level for the MCHM method(ology), i.e., x ppb?

From: Burneson, Eric
Sent: Wednesday, January 29, 2014 6:01:20 PM
To: Grevatt, Peter; Clark, Becki; Travers, David
Cc: Lopez-Carbo, Maria
Subject: FW: wrinkle in WV

I wanted to fill you in on some background information related to this so that you are aware.

Ex. 5 - Deliberative

We are also checking at Region 3's request if there is any possibility that formaldehyde forms as a DBP when methanol reacts with chlorine?

From: Stoner, Nancy
Sent: Wednesday, January 29, 2014 5:43 PM
To: Loop, Travis; Grevatt, Peter; Burneson, Eric; Lopez-Carbo, Maria
Cc: Kopocis, Ken; Senn, John
Subject: RE: wrinkle in WV

I showed this to Mike who says OCSPP has significant formaldehyde expertise. I don't know how much we know, but you might want to check with them on this issue.

From: Loop, Travis
Sent: Wednesday, January 29, 2014 4:29 PM
To: Grevatt, Peter; Burneson, Eric; Lopez-Carbo, Maria
Cc: Stoner, Nancy; Kopocis, Ken; Senn, John
Subject: wrinkle in WV

Wanted to give you a heads-up about this developing situation in West Virginia. See the two stories below.

West Virginia official "can guarantee" people are breathing in formaldehyde

CHARLESTON, W.Va. - A state official says he "can guarantee" some West

Virginians are breathing in a carcinogen while showering after the chemical spill.

Environmental Quality Board official Scott Simonton says the crude MCHM that spilled into the water supply ultimately can break down into formaldehyde. He says the breakdown can happen in the shower and that formaldehyde is most toxic when inhaled.

He calls respiratory cancer the biggest risk with breathing in the chemical. He made the remarks to a state legislative panel Wednesday.

Initial testing at Vandalia Grille in Charleston showed traces of the chemical. Other testing showed no traces of formaldehyde, but samples are still being processed.

Freedom Industries' Jan. 9 spill in Charleston spurred a water-use ban for 300,000 West Virginians for days, but officials have lifted it.

UPDATED: DEP officials unaware of connection between formaldehyde and spill

Marshall professor says 'what we know scares us, and we know there's a lot more we don't know'

by **Dave Boucher**

Daily Mail Capitol Bureau Chief

Advertiser

Updated (2:30 p.m.): The head of the state Department of Environmental Protection questioned a report that formaldehyde found in Charleston tap water is connected to the recent chemical spill.

"We are not aware of formaldehyde being an issue related to the tank spill," DEP Secretary Randy Huffman said Wednesday afternoon.

"Formaldehyde is in a lot of stuff, and so I'm not sure, we're unaware of any relationship...of the formaldehyde to the tanks at Freedom," he said.

"I absolutely don't want to downplay the significance for the potential of formaldehyde in any way."

Earlier Wednesday Dr. Scott Simonton, vice chairman of the West Virginia Environmental Quality Board and a Marshall University professor, told lawmakers he had test results showing formaldehyde in water from a restaurant in downtown Charleston.

At least 10,000 gallons of crude MCHM and PPH spilled from a faulty storage tank owned by Freedom Industries near the Elk River. Officials found the leak Jan. 9, but experts believe it would have taken at least 20 hours for that amount of chemical to leak from the tank.

The results for three different samples taken Jan. 13 at Vandalia Grille show 32 or 33 micrograms per liter of formaldehyde in the water. Simonton said results from many other samples taken from many other places are still being processed.

"It scares me a lot, because it's a known human carcinogen, so any exposure, no matter how slight, is going to increase cancer risks" Simonson said after the legislative meeting.

"Now, that increased risk can be terribly, terribly small. The problem is, we're seeing it in water, we don't know what the concentration is in air."

Huffman questioned the ability for Simonton to connect any formaldehyde at the restaurant to the spill.

"He turned on a spigot, and he measured formaldehyde from a spigot in a restaurant...from a distribution system. It needs to be traced back from there to a potential source," Huffman said.

He explained what he meant later in the interview.

"The way you do that is to start backwards from where you found the material. It may be unique to the restaurant, it may be unique to West Virginia American Water. If it is something that they're getting, that West Virginia American Water is getting in their intake, then certainly we will assist with that," Huffman said.

Once the crude MCHM comes in contact with anything--water, sunlight, skin--it can breakdown, Simonton told lawmakers. One of those products is methanol, and formaldehyde is a product of methanol, he said.

He acknowledged formaldehyde could come from anywhere, but it's very likely these results are directly related to the spill.

"If we go out to the extreme, it could have been put there by martians," Simonton said.

"But the most likely scenario is a breakdown of MCHM."

State and water company officials have only discussed testing for crude MCHM and PPH. Huffman experts need to have an idea of what to test for in order to test for it.

Any further examination regarding formaldehyde in the water falls under the purview of state health officials, he said.

"If they think there's a raw source of formaldehyde in the river or something, that's obviously something we would get engaged in," Huffman said.

"But the breakdown of the chemical when it gets into the water system and whatever it turns into, that would clearly be something that the health department regulates."

A spokeswoman for the state Department of Health and Human Resources did not immediately respond to a request for comment.

Travis Loop

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