Message

From: Barnicoat, Dana [Barnicoat.Dana@epa.gov]
Sent: 12/17/2019 11:23:31 PM
To: Partridge, Charles [Partridge.Charles@epa.gov]; Wall, Dan [wall.dan@epa.gov]
Subject: FW: ATSDR communication -- meconium study

FYI

From: Mutter, Andrew <mutter.andrew@epa.gov>
Sent: Tuesday, December 17, 2019 4:14 PM
To: Barnicoat, Dana <Barnicoat.Dana@epa.gov>; Wardell, Christopher <Wardell.Christopher@epa.gov>
Subject: RE: ATSDR communication -- meconium study

Pls pass to Charlie P. and Dan Wall

Best regards,

Andrew

Andrew Mutter

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From: Barnicoat, Dana <Barnicoat.Dana@epa.gov>
Sent: Tuesday, December 17, 2019 3:31 PM
To: Wardell, Christopher <Wardell.Christopher@epa.gov>
Cc: Mutter, Andrew <mutter.andrew@epa.gov>
Subject: FW: ATSDR communication -- meconium study

FYI – Please read below.

From: Hutchins, David <DHutchins@mtech.edu>
Sent: Tuesday, December 17, 2019 8:21 AM

Ex. 6 PP Public Involvement Advisory Group

Cc: Nazminia, Cameron <cameron.nazminia@bp.com>; Barnicoat, Dana <Barnicoat.Dana@epa.gov>
Subject: Re: ATSDR communication -- meconium study

All,
My question remains, how did the ATSDR arrive at the conclusions: "There appear to be no elevated levels of manganese, copper and zinc in the Butte environment that would result in an elevated concentration in the meconium of newborns." and "The levels...in Butte soil and air are within range of typical urban areas ". From everything I know about this place, I think these statements are hard to back up. Do they have evidence that I am unaware of?

The air study is relevant, even if it does not have the potential to entirely explain the difference. What the meconium pilot study suggested was possible exposure. Why would we discount any possible pathways before they are investigated? Despite the ATSDR statement, this valley does have elevated metals in the environment, and chronic low-level exposure from of multitude of sources seems plausible to me.

David

From: Rosalind A. Schoof <rschoof@ramboll.com>
Sent: Monday, December 16, 2019 3:33 PM

Ex. 6 PP Public Involvement Advisory Group

Subject: RE: ATSDR communication -- meconium study

All,
In terms of what can be expected from the air monitoring data, I assume there will be measurable levels of manganese, copper and zinc in the air.
The key question is **"Could levels of manganese, copper and zinc in the air in Butte be high enough to account for a 1,000-fold difference in absorbed doses in pregnant women?" The answer to that question is a resounding "no" just on a theoretical basis.** As required nutrients, the intake of these three metals from diet and prenatal vitamins is already quite high. (And for zinc, many of us also get large doses by taking zinc to fend off colds.) That means a thousand-fold increase will be a huge amount.

There are limits to how much of a particulate load people can inhale and Butte's air has not had high enough particulate loads to inhibit breathing. To have a thousand-fold increase in these metals would require inhaling enough dust to damage the lungs.

Dr. Hailer mentioned that large inhaled particles will mostly be passed up from the lungs, then swallowed into the gut. That is correct, but I cannot conceive of any way that a thousand-fold higher exposure can occur this way. The oral absorption of these metals, which are essential nutrients, is controlled by the body. For example, zinc absorption is saturable, meaning absorption plateaus at a certain dose when the body has enough for nutritional needs and does not further increase.

So if particles containing these metals are inhaled and then passed to the gut, there is no way a thousand-fold higher dose could be absorbed. Any claims that air in Butte might be responsible for a thousand-fold increase in exposure are scientifically insupportable and irresponsible (regardless of what the air concentration data might be).

Roz

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From: Sullivan, Karen <ksullivan@bsb.mt.gov>
Sent: Monday, December 16, 2019 1:47 PM

Ex. 6 PP Public Involvement Advisory Group

Subject: RE: ATSDR communication -- meconium study

David: I am hearing that some results from the air monitoring study should be available right after the first of the year; I would anticipate a well-rounded release of those data, including to the task group that you are facilitating – if I hear that that timeline is changed in any way, I'll let the Health Study Work Group know – Karen Sullivan

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From: Hutchins, David <DHutchins@mtech.edu>
Sent: Friday, December 13, 2019 1:39 PM

Ex. 6 PP Public Involvement Advisory Group

Subject: Re: ATSDR communication -- meconium study

This message did not originate from a Butte-Silver Bow email account and therefore cannot be validated. Please ensure you respond accordingly and proceed with caution.

Hi Karen,
Thank you for sharing. I am wondering how they arrived at the conclusions in item number 3, since there are not references to support them. Would you be able to share the preliminary results from the current air monitoring study being conducted by BSBHD and Bison Engineering? If the speciation of those larger fraction of particulate matter do not reveal manganese, copper, and zinc, those finding would sure support their assertion.
Thank you,
David

From: Sullivan, Karen <ksullivan@bsb.mt.gov>
Sent: Friday, December 13, 2019 12:39 PM

Ex. 6 PP Public Involvement Advisory Group

Subject: ATSDR communication -- meconium study

Hello: Along with the state's lead epidemiologist, Laura Williamson, I received this communication this morning from ATSDR. I have been asked to distribute this widely, and am doing so – thank you – Karen Sullivan

Karen Sullivan, M.A., Health Officer
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