Message

From: McCord, James [mccord.james@epa.gov]
Sent: 10/27/2020 7:22:43 PM
To: Gray, Earl [Gray.Earl@epa.gov]; Conley, Justin [Conley.Justin@epa.gov]
CC: Strynar, Mark [Strynar.Mark@epa.gov]; Bangma, Jacqueline [Bangma.Jacqueline@epa.gov]; Miller, Kelsey [Miller.Kelsey@epa.gov]
Subject: RE: GenX paper online

John Washington has a post-doc looking at that in soil. We have the predicted metabolism pathway from CTS, but we've only seen the dechlorinated species in water, and I'm not convinced it's a metabolic product rather than an industrial degradant.

--
James McCord

From: Gray, Earl <Gray.Earl@epa.gov>
Sent: Tuesday, October 27, 2020 3:20 PM
To: Conley, Justin <Conley.Justin@epa.gov>
Cc: McCord, James <mccord.james@epa.gov>; Strynar, Mark <Strynar.Mark@epa.gov>; Bangma, Jacqueline <Bangma.Jacqueline@epa.gov>; Miller, Kelsey <Miller.Kelsey@epa.gov>
Subject: Re: GenX paper online

These may be metabolized

Sent from my iPhone

On Oct 27, 2020, at 3:17 PM, Conley, Justin <Conley.Justin@epa.gov> wrote:

Definitely

I believe I've also seen some recent papers about Cl-PFESAs as well so does seem like the chlorinated ethers are a big emerging topic.

It would be really interesting to see what happens with these Cl-PFECA structures. I think EFSA stated they are now considering the ether oxygen in the counting of chain length in terms of estimating bioaccumulation/tox – so these structures, by that metric would be really long chain. The really long straight chain compounds don't really accumulate, so would be cool to see what these do.

Would also be really helpful if Gloria knows anything about human detection

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From: Gray, Earl <Gray.Earl@epa.gov>
Sent: Tuesday, October 27, 2020 3:09 PM
To: McCord, James <mccord.james@epa.gov>
Cc: Conley, Justin <Conley.Justin@epa.gov>; Strynar, Mark <Strynar.Mark@epa.gov>; Bangma, Jacqueline <Bangma.Jacqueline@epa.gov>; Miller, Kelsey <Miller.Kelsey@epa.gov>
Subject: Re: GenX paper online

Would be good to give it a try

Sent from my iPhone

On Oct 27, 2020, at 3:07 PM, McCord, James <mccord.james@epa.gov> wrote:

There may be some value in having a phonecall with Gloria Post and seeing what she knows about the tox measurements that have already been done. She has mentioned some studies that we don't have access to.

Ralph Mead also suggested that they found them in the Cape Fear, even though we didn't see them in our Chemours work. So definitely going to be a new hot topic.

--
James McCord

From: Conley, Justin <Conley.Justin@epa.gov>
Sent: Tuesday, October 27, 2020 1:59 PM
To: McCord, James <mccord.james@epa.gov>; Strynar, Mark <Strynar.Mark@epa.gov>
Cc: Bangma, Jacqueline <Bangma.Jacqueline@epa.gov>; Miller, Kelsey <Miller.Kelsey@epa.gov>; Gray, Earl <Gray.Earl@epa.gov>
Subject: RE: GenX paper online

I'm adding Earl in as well to think about this.

A short rodent study with serum and liver collection to look at levels of the various components of the mix is certainly interesting and something we could do. Are all of the components of the mixture known? How many compounds are there total? It might be a little challenging to work out the dosing and get IACUC approval, but seems like an important thing to study so should be possible.

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From: McCord, James <mccord.james@epa.gov>
Sent: Tuesday, October 27, 2020 1:37 PM
To: Strynar, Mark <Strynar.Mark@epa.gov>; Conley, Justin <Conley.Justin@epa.gov>
Cc: Bangma, Jacqueline <Bangma.Jacqueline@epa.gov>; Miller, Kelsey <Miller.Kelsey@epa.gov>
Subject: RE: GenX paper online

Justin,

We haven't done any quantitation yet, just estimates. I analyzed some NTA drinking water samples from half a dozen wells in the affect area and got predicted concentrations in the range of 3-300 ng/L for the most abundant congener of the mix.

EPIsuite predictions for bioconcentration/bioaccumulation are on par with PFNA. I think John's post-doc has done some vegetation uptake measurements and found that it moves from soil into plants more on par with short-chain PFPeA.

No ideas what that means for actual serum/liver accumulation in animals though.

--
James McCord

From: Strynar, Mark <Strynar.Mark@epa.gov>
Sent: Tuesday, October 27, 2020 1:26 PM
To: Conley, Justin <Conley.Justin@epa.gov>
Cc: McCord, James <mccord.james@epa.gov>; Bangma, Jacqueline <Bangma.Jacqueline@epa.gov>; Miller, Kelsey <Miller.Kelsey@epa.gov>
Subject: RE: GenX paper online

Justin,

I am adding James, Kelsey and Jackie to this string.

We know it is in surface water in NJ but don't know about drinking water. We suspect it has likely gotten into some DW based on what ae know. There is no biomonitoring data but we anticipate blood levels that are measurable if we could get serum based on it MW and other PFAS like it.

The only source I have right now is an industrial mix standard produced from the vendor (Solvay Specialty Polymers) from a contact in Italy, as the American Solvay people would not give it to the NJDEP without CBI strings attached.

I was thinking of a dosed rodent liver/serum accumulation study to see what we should look for in the serum in human biomonitoring studies. Thoughts?

Mark

From: Conley, Justin <Conley.Justin@epa.gov>
Sent: Tuesday, October 27, 2020 12:39 PM
To: Strynar, Mark <Strynar.Mark@epa.gov>
Subject: RE: GenX paper online

Definitely. Any known human concentrations or drinking water levels for those to prioritize? How expensive are they? We usually need 10-20 grams or more to do a few different animal studies.

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From: Strynar, Mark <Strynar.Mark@epa.gov>
Sent: Tuesday, October 27, 2020 12:29 PM
To: Conley, Justin <Conley.Justin@epa.gov>; Gray, Earl <Gray.Earl@epa.gov>; Lambright, Christy <Lambright.Christy@epa.gov>; Evans, Nicola <Evans.Nicola@epa.gov>; MedlockKakaley, Elizabeth <MedlockKakaley.Elizabeth@epa.gov>; Hill, Donna <Hill.Donna@epa.gov>; McCord, James <mccord.james@epa.gov>
Subject: RE: GenX paper online

Excellent news and congrats.

What is next? We have some of the new Cl-PFECAs we detected in NJ in our Science paper and James water paper. Want to do some new compounds?

Mark

From: Conley, Justin <Conley.Justin@epa.gov>
Sent: Tuesday, October 27, 2020 7:53 AM
To: Gray, Earl <Gray.Earl@epa.gov>; Lambright, Christy <Lambright.Christy@epa.gov>; Evans, Nicola <Evans.Nicola@epa.gov>; MedlockKakaley, Elizabeth <MedlockKakaley.Elizabeth@epa.gov>; Hill, Donna <Hill.Donna@epa.gov>; McCord, James <mccord.james@epa.gov>; Strynar, Mark <Strynar.Mark@epa.gov>
Subject: GenX paper online

Good morning co-authors,

I hope everyone is doing well.

Our GenX developmental tox paper is now online at Environment International.

Here's the link: https://www.sciencedirect.com/science/article/pii/S0160412020321590

A pdf copy of the paper is attached as well.

Thanks for all of your work on this effort!

Cheers,

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