Message

From: Strynar, Mark [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=5A9910D5B38E471497BD875FD329A20A-STRYNAR, MARK]
Sent: 12/13/2018 7:30:30 PM
To: Buckley, Timothy [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=197a3461d9824a17850f34cc2b0b37fe-Buckley, Timothy]; Culpepper, Linda [linda.culpepper@ncdenr.gov]
CC: Allenbach, Becky [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fd8d7185973c44268441863f02a769d1-Allenbach, Becky]; Sullivan, Kate [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1ae54d9bb036451b8df78d633b928662-Sullivan, Kate]
Subject: RE: [External] RE: Nafion® Byproduct analysis?

FYI,

I was preparing for these samples today. I will extract on Monday.

The analyte list will be:

1) the legacy PFAS MIX (n=10) (PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFNA, PFDA PFBS, PFHxS and PFOS)

2) the Chemours chemicals (n=12): HFPO-DA, NVHOS, Nafion BP1, BP2, BP4, Hydro-EVE, PEPA, PMPA, PFMOAA, PFO2HxA, PFO3OA, PFO4DA, PFO5DoDA.
3)

Assuming all goes well I should have numbers by Tuesday afternoon.

Mark

From: Buckley, Timothy
Sent: Thursday, December 13, 2018 9:47 AM
To: Culpepper, Linda <linda.culpepper@ncdenr.gov>; Strynar, Mark <strynar.mark@epa.gov>
Cc: Allenbach, Becky <Allenbach.Becky@epa.gov>; Sullivan, Kate <Sullivan.Kate@epa.gov>
Subject: RE: [External] RE: Nafion® Byproduct analysis?

Linda and Becky,

Mark is running these samples now and then leaving for the holiday on the 20th. Can we arrange a meeting for the afternoon of the 19th for a preliminary verbal presentation of results? These results will not have been QAed but we can give you a general sense for what we are seeing. We likely will not be able to get you a formal report with these results until the end of January.

Becky, let me know if you would like to arrange the meeting or if you prefer I do it. In addition to those on this email, I would include Myriam Medina-Vera and Andy Lindstrom.

Tim

Timothy J. Buckley, PhD

Director of the Exposure Methods & Measurements Division
National Exposure Research Laboratory
109 TW Alexander Drive
Research Triangle Park, NC 27711

Email: buckley.timothy@epa.gov
URL: http://www.epa.gov/heasd/staff/buckley.html
Phone: (919) 541-2454 (O); FAX: -0239
(919) 308-3480 (C)

From: Culpepper, Linda <linda.culpepper@ncdenr.gov>
Sent: Thursday, November 15, 2018 10:44 AM
To: Strynar, Mark <strynar.mark@epa.gov>
Cc: Allenbach, Becky <Allenbach.Becky@epa.gov>; Buckley, Timothy <Buckley.Timothy@epa.gov>
Subject: RE: [External] RE: Nafion® Byproduct analysis?

Mark – one Chemours wastewater sample, 6 drinking water samples = 7 samples
Two sampling teams = 2 trip blanks

Statement of need: NC DEQ requests EPA ORD support to analyze a set of samples for current PFAS analytes including NVHOS, with one sample from each of the following locations: the Chemours Fayetteville NC facility's outfall 002; and finished drinking water from 6 public water utilities- Hoffer, Bladen Bluff, Pender County, International Paper, NW Brunswick and CFPUA. This will allow NC DEQ to have a snapshot of analyte concentrations for the Nafion® byproducts and more recent analytes such as NVHOS which have been a focus of ORD research, which will be shared with the NC Department of Health and Human Services for evaluation and communication regarding potential health impacts.

> We want to get an idea of what the values are for the newer analytes: NVHOS, Hydro EVE, E1 and E2. Given the recent release of EPA's draft Ref. Doses, it would be helpful to have the following analytes: HFPO-DA, PFAB, PFOA and PFOS along with those we continue to see PFHpA, PFHxA, PFHxS, PFNA and more consistently seeing PFPeA. Attached a recent lab report from Athens.

If the sampling containers can't be ready for tomorrow's meeting, I'm glad to drive over to your lab next Mon or Tues. to get them.
Our sampling teams are going out Mon & Weds next week for Chemours, and then Mon & Thurs the following week at Chemours and the drinking water facilities.

Let me know what works best for you.
Linda

Linda Culpepper
Interim Director
NC DEQ Division of Water Resources

Email: linda.culpepper@ncdenr.gov
Phone: 919-707-9014

From: Strynar, Mark [mailto:Strynar.Mark@epa.gov]
Sent: Wednesday, November 14, 2018 2:51 PM
To: Buckley, Timothy <Buckley.Timothy@epa.gov>; Allenbach, Becky <Allenbach.Becky@epa.gov>; Culpepper, Linda <linda.culpepper@ncdenr.gov>
Cc: Scott, Michael <michael.scott@ncdenr.gov>; Watkins, Tim <Watkins.Tim@epa.gov>; Gillespie, Andrew <Gillespie.Andrew@epa.gov>; Sullivan, Kate <Sullivan.Kate@epa.gov>; Medina-Vera, Myriam <Medina-

Vera.Myriam@epa.gov>
Subject: RE: [External] RE: Nafion® Byproduct analysis?

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Can we get more details. How many samples? Spiked with what analytes? Number of bottles needed?

Mark

From: Buckley, Timothy
Sent: Wednesday, November 14, 2018 10:30 AM
To: Allenbach, Becky <Allenbach.Becky@epa.gov>; Culpepper, Linda <linda.culpepper@ncdenr.gov>
Cc: Scott, Michael <michael.scott@ncdenr.gov>; Watkins, Tim <Watkins.Tim@epa.gov>; Gillespie, Andrew <Gillespie.Andrew@epa.gov>; Sullivan, Kate <Sullivan.Kate@epa.gov>; Medina-Vera, Myriam <Medina-Vera.Myriam@epa.gov>; Strynar, Mark <strynar.mark@epa.gov>
Subject: RE: [External] RE: Nafion® Byproduct analysis?

Linda and Becky,

My Lab Director, Tim Watkins, has given us a green light to conduct these analyses. We can rely on study documentation that supported our earlier work. If it works for you, I can bring sampling containers, field blanks, and field spikes with me when we get together this Friday at Reedy Creek. Do you know when these samples will likely be collected and brought back to us?

Tim

Timothy J. Buckley, PhD
Director of the Exposure Methods & Measurements Division
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(919) 308-3480 (C)

From: Allenbach, Becky
Sent: Tuesday, November 06, 2018 6:36 AM
To: Culpepper, Linda <linda.culpepper@ncdenr.gov>
Cc: Buckley, Timothy <Buckley.Timothy@epa.gov>; Scott, Michael <michael.scott@ncdenr.gov>
Subject: Re: [External] RE: Nafion® Byproduct analysis?

Thanks Linda. I am not sure that I was aware that this was going on. It May have been discussed on one of the conference calls that I had to miss, so I apologize.

The region certainly supports and appreciates ORD doing the analysis for you.
Tim, do you need anything else from us?

Becky

Becky B. Allenbach, Deputy Director
Water Protection Division - Region 4
404-562-9687

On Nov 5, 2018, at 11:33 PM, Culpepper, Linda <linda.culpepper@ncdenr.gov> wrote:

Becky - we are asking for another round of analysis from ORD since Athens is still having difficulty with these newer analytes, and we need a view of the conditions for the chemicals Drs. Strynar and McCord are recently reporting using additional lab standards. We appreciate the extra support and are in the process of hiring our new lab staff and equipment. Hope to have both in place by the end of December.

Statement of need: NC DEQ requests EPA ORD support to analyze a set of samples for current PFAS analytes including NVHOS, with one sample from each of the following locations: the Chemours Fayetteville NC facility's outfall 002; and finished drinking water from 6 public water utilities- Hoffer, Bladen Bluff, Pender County, International Paper, NW Brunswick and CFPUA. This will allow NC DEQ to have a snapshot of analyte concentrations for the Nafion byproducts and more recent analytes such as NVHOS which have been a focus of ORD research, which will be shared with the NC Department of Health and Human Services for evaluation and communication regarding potential health impacts.

Tim - let me know if you need something further. We would like to start with the above samples to assess if the source is Chemours before determining if other sampling/analysis is warranted. I'm giving a presentation during our EPA/ NC DEQ conf call time tomorrow. Can talk around 4:30pm if that's helpful. Copying Michael as he may be able to join the call tomorrow and speak to the topic. On another front, I'll check with our General Counsels Office on the review of the agreement for Chris Johnson to work in Mark's lab.

Thank you,
Linda

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From: Wellborn, Floyd <wellborn.floyd@epa.gov>
Sent: Monday, November 5, 2018 12:42 PM
To: Culpepper, Linda
Subject: RE: [External] RE: Nafion® Byproduct analysis?

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Unfortunately, it was not successful last week. We're recalibrating today and trying again tomorrow.

Thanks for your patience.

Floyd

From: Culpepper, Linda <linda.culpepper@ncdenr.gov>
Sent: Monday, November 05, 2018 12:31 PM
To: Wellborn, Floyd <Wellborn.Floyd@epa.gov>
Subject: RE: [External] RE: Nafion® Byproduct analysis?

Good morning – I am giving a presentation tomorrow on emerging compounds and will not be able to join the EPA/NC DEQ conf. call at 2:30pm.

Know our staff are interested in the timeframe for when should we expect the results from the Nafion® byproduct analysis run last week.

Was the analysis process successful and when should we receive the results? Appreciate any insight on timing.

Thank you,
linda

Linda Culpepper
Interim Director
Division of Water Resources
North Carolina Department of Environmental Quality

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Phone: 919-707-9014

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From: Wellborn, Floyd <Wellborn.Floyd@epa.gov>
Sent: Monday, October 22, 2018 2:58 PM
To: Culpepper, Linda <linda.culpepper@ncdenr.gov>
Cc: Sivertsen, Scott <Sivertsen.Scott@epa.gov>; France, Danny <France.Danny@epa.gov>; Tellis, Vickie <Tellis.Vickie@epa.gov>
Subject: [External] RE: Nafion® Byproduct analysis?

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Hi, Linda.

Thanks for your email. I've been meaning to call you and update you. I do plan on being on the call tomorrow and can reiterate at that time the status of the analysis. In the meantime, I will update you with this email. We are still working on the calibration. As I mentioned previously, we had a setback when the instrument had a major component foul. We've replaced the fouled components and have been recovering the ground we'd lost. While we've been getting back to where we were, we identified a degradation in the standards for PMPA and PEPA. There appears to be a formation of an unknown compound in them. I'm afraid we won't be able to obtain any information about those two compounds without finding another standard source. To that end, we are contacting Dr. Strynar to find out if he has an alternate source or whether perhaps we could have some of his stock of those two standards if they have not degraded.

In any case, the status of the analysis, as of today, is that we are finalizing the standard mix in order to make the serial dilution of the calibration range as efficient as possible.I expect the calibration curve will be done by Thursday and the samples will be run by October 31st.

I hope this helps. And I thank you again for your patience with us. I remember that you have many people calling you for the results and I am certain it isn't easy to delay answering them. Please feel free to call me or email me at any time if you have questions or if you need another update.

Best regards,
Floyd

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From: Culpepper, Linda [mailto:linda.culpepper@ncdenr.gov]
Sent: Monday, October 22, 2018 11:59 AM
To: Wellborn, Floyd <Wellborn.Floyd@epa.gov>
Subject: Nafion® Byproduct analysis?

Hi Floyd – I was just on a conf. call with Drs. Buckley and Strynar discussing Mark's recent slideshow on NVHOS.
We are wondering what the current schedule is for the Nafion® Byproduct analysis from our samples. Didn't know
if you were available for the EPA/DEQ check in call tomorrow at 2:30pm, as we can talk then or work via email.

Thanks for your help,
linda

Linda Culpepper
Interim Director
Division of Water Resources
North Carolina Department of Environmental Quality

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