Message

From: Post, Gloria [Gloria.Post@dep.nj.gov]
Sent: 2/15/2019 2:12:10 PM
To: Strynar, Mark [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5a9910d5b38e471497bd875fd329a20a-Strynar, Mark]
Subject: FW: PFAS of interest
Attachments: Wang et al 2013 figure 1.pdf

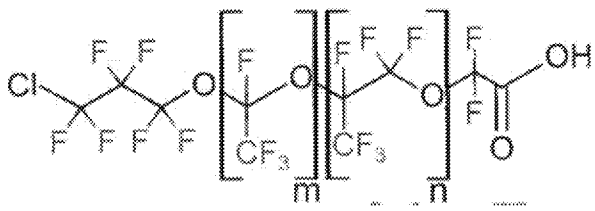
From: Post, Gloria
Sent: Wednesday, January 30, 2019 6:39 PM
To: 'Ng, Carla' <carla.ng@pitt.edu>
Subject: PFAS of interest

Carla,

I am sending information on the PFAS that we are interested in learning more about. I can explain why these PFAS are of interest to NJDEP when we speak on the phone. Can you let me know when a good time for us to talk on the phone would be during the week of Feb. 12?

1. Congeners of the substance referred to as "Solvay's Product" in Figure 1 (attached) of Wang et al. (2013).

   This is another version of its structure:



The congeners of interest are shown below. The 8 carbon congener is of greatest interest, but it would be great to have information on all of them.

Carbon Chain Length	Anion Formula	Number of Ethyl, Propyl Groups	I
7	$C_7ClF_{12}O_4$	1,0	
8	$C_8ClF_{14}O_4$	0,1	
9	$C_9ClF_{16}O_5$	2,0	
10	$C_{10}ClF_{18}O_5$	1,1	
11	$C_{11}ClF_{20}O_5$	0,2	
11	$C_{11}ClF_{20}O_6$	3,0	
12	$C_{12}ClF_{22}O_6$	2,1	
13	$C_{13}ClF_{24}O_6$	1,2	
14	$C_{14}ClF_{26}O_6$	0,3	

2. We would like to compare information for the congeners shown above to other PFAS ethers for which there is some information on toxicity and/or human bioaccumulation as follows. These are shown in the table below, which is excerpted from Table 1 on the website of the NC State Univ GenX Exposure Study at https://chhe.research.ncsu.edu/the-genx-exposure-study/ . These are:

   - GenX

   - The four PFAS polyethers that have been found in blood serum of NC residents who were exposed to them through drinking water (see Slide 21 of https://chhe.research.ncsu.edu/wordpress/wp-content/uploads/2018/11/Community-event-BLOOD-slides.pdf)

   I have the structures of some, but not all, of the compounds in the table below. If you need the structures, I think that the NC researchers can provide them.

Short Name	Chemical Name	Chemical Formula	CAS Number
GenX	Perfluoro-2-propoxypropanoic acid	$C_6HF_{11}O_3$	13252-13-6
Nafion byproduct 2	Ethanesulfonic acid, 2-[1-[difluoro(1,2,2,2-tetrafluoroethoxy)methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoro-	$C_7H_2F_{14}O_5S$	749836-20-2
PFO4DA	Perfluoro(3,5,7,9-tetraoxadecanoic) acid	$C_6HF_{11}O_6$	39492-90-5
PFO5DoDA	Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	$C_7HF_{13}O_7$	39492-91-6
Hydro-EVE	2,2,3,3-tetrafluoro-3-((1,1,1,2,3,3-hexafluoro-3-(1,2,2,2-tetrafluoroethoxy)propan-2-yl)oxy)propanoic acid	$C_8H_2F_{14}O_4$	773804-62-9

Thank you!

Gloria