

Secretaries' Science Advisory Board

MEETING MINUTES

Ground Floor Hearing Room, Archdale Building

Monday, October 3, 2022

10:00 AM-3:00 PM

The Department of Environmental Quality (DEQ) and the Department of Health and Human Services (DHHS) Secretaries' Science Advisory Board (SAB) met on Monday, October 3, 2022 in person in the Ground Floor Hearing Room, Archdale Building, in a public meeting. SAB members in attendance were: Tom Augspurger, PhD, Chair; Viney Aneja, PhD; Jamie DeWitt, PhD; David Dorman, PhD; David Howard; Elaina Kenyon, PhD; Gina Kimble, PhD; Betsey Tilson, PhD and John Vandenberg, PhD. Also, in attendance were DEQ and DHHS staff: Frannie Nilsen, PhD; Stephanie Bolyard, PhD; Kim Gaetz, PhD; Kennedy Holt PhD; JW Spoo, PhD; Mike Abraczinskas, Michael Pjetraj; Brian Wrenn; Michael Scott; Richard Rogers; Sharon Martin, Indyah Bryant, Paula Chappell and Peter Johnston.

I. Call to Order

Meeting called to order at 10:00 AM. Chairman ("Chair") Augspurger convened the meeting at 10:00 AM, noting it is an in-person meeting. He thanked Dr. Dorman for serving as Temporary Chair at the August meeting, and for everyone's attendance virtually.

II. Review and Approve Agenda

Chair Augspurger asked for a motion and second to accept the agenda, as it was shared on September 27. The agenda was approved by unanimous vote.

[October 3, 2021 Agenda](#)

III. Ethics Statement

Chair Augspurger read the ethics statement and reminded the members that if anyone had any conflict of interest, or issues for which a conflict may be perceived, to indicate so. Dr. DeWitt explained that she is currently working on research on PFAS, receives funding from the NC General Assembly and the federal government for said research, and serves as an expert witness in cases involving PFAS.

IV. Approval of Meeting Minutes for August 1, 2021

The draft meeting minutes were circulated to all members and minor edits were requested; Chair Augspurger abstained from voting, as he was absent, and the August minutes were adopted unanimously as amended by verbal vote.

V. DEQ and DHHS updates

DEQ Update:

Provided by Michael Scott, Director, Division of Waste Management, NC DEQ.

PFAS Updates:

- NPDES Discharge permit approved for Chemours, as part of barrier wall project

- Barrier wall will include GAC filtration system, and permit limits for GenX, PMPA and PFMOAA; significant reduction, 99.9% removal; weekly monitoring during barrier wall construction, and permit can be reopened if federal guidance changes, or if other compounds break through the parameters set for the three compounds already identified/noted
- Mass remediation project of barrier wall is the largest project undertaken; includes 70 extraction wells to remove contaminated groundwater from barrier wall proximity, passes through GAC system to intercept and treat contaminated flow from facility at 99.9% efficiency for PFAS compounds before being released into Cape Fear River. Must be operational by March 15, 2023.
- Approval letter for final plans of 6,000 ft. barrier wall and adding monitoring wells, sampling of groundwater extraction wells, and management of contaminated groundwater extracted during barrier wall construction
- DAQ stack test data under review; measures specified to reduce emissions at Chemours
- Lower Cape Fear – October 11 public meeting to provide updates on private well sampling and remediation; 270 residential wells in lower Cape Fear affected by Chemours’ effluent, including New Hanover, Brunswick, Pender and Columbus Counties; 1,200 well sampling examined by Chemours and DEQ; 3,500 lower Cape Fear households eligible for private well testing; 33 households with PFAS levels detected above EPA health advisory level of 10 PPT; much ongoing work, not just building, but remediation of exposures in that region
- DWR monitoring of 50 public water supply systems across NC that have tested levels of PFOA, PFOS and GenX that warrant further sampling and efforts; the first round completed of three (3) rounds of testing both raw and finished water in those facilities and testing will finish by November 2022.

DHHS Update:

Provided by Dr. Zack Moore, Section Chief, Epidemiology Section, NC DHHS

Dr. Moore thanked the staff for their response to Hurricane Ian.

PFAS Updates:

- Updated version of clinician’s guidance to reflect updates from national academies, including from Dr. Hoppin, who will present later, who participated in national review of recommendations for clinicians around PFAS exposure and monitoring of levels in clinical samples; inkling information on compounds specific to NC, not necessarily included in National Academies’ recommendations; shared widely and available on DHHS’ website (*include link here*)
- Wastewater monitoring efforts: Dr. Guidry’s group in Environmental Health is expanding beyond COVID testing, including testing for other respiratory viruses, as well as influenza detection; early warning of impacts on healthcare system
- Environmental Justice work: the [Environmental Health Dashboard \(NCDHHS\)](#) includes information from the CDC EJ tool regarding cumulative exposures

VI. PFMOAA Recommendation ([meeting recording](#) at 25:11)

The full discussion of this topic can be heard in the meeting recording, the highlights are provided below.

- *Summary of August Meeting’s discussion:* PFMOAA is a PFAS compound identified with toxicological data, which Dr. Nilsen shared with the Board in the form of two (2) studies, and summarized the discussion from the previous meeting, asking the Board to (1) evaluate the quality of the studies; and (2) whether the two studies’ analyses and conclusions could provide the basis for deriving a Reference Dose (RfD). There were many questions and comments

from Board members on this, and the consensus was that the quality of the studies was excellent, however, more data are needed to provide enough information to successfully derive a RfD.

- *Regarding Benchmark Dose Modeling of PFMOAA*: Chair Augspurgen remarked that it can be done, as it was with GenX, and another member remarked that trends are informative. Dr. Nilsen observed that biomedical science shows that not only statistical significance is important, but also effects in different populations is considered as well.
- *Regarding other approaches*: A Board member suggested a need to look at a broader landscape, to see if other approaches can be used, which was followed by the suggestion to seek a middle ground, waiting for additional data to be published for evaluation, but ask staff to start the process to expedite deriving a RfD when additional data become available. Chair Augspurgen reiterated that the study quality is sufficient, however, more data are needed to derive a RfD. Dr. DeWitt pointed out that the timeline is somewhat pressing, as PFMOAA does break through the GAC filtration; she suggested that DEQ move forward to examine the studies, but fold in future science/data as they become available.

VII. PFOS and PFOA Bioaccumulation Factor Evaluation ([meeting recording at 1:00:00](#))

Provided by Chris Ventaloro, DWR Standards and Planning Branch, DEQ.

[DEQ DWR BAF Evaluation presentation](#)

Bioaccumulation Factors (BAFs) are specific to protecting aquatic life, not necessarily protective of human health, as DHHS sets fish consumption advisories, and DEQ is working to prevent excessive exposure in water. There was discussion of types of fish consumed, and whether downstream exposure is considered, and established the study was based on generic individuals, not high-risk populations.

VIII. Lunch Break – 11:45 AM - 12:55 PM

To keep the meeting on schedule, facilitate the guest speaker and the virtual audience, the Consent Order Toxicity Studies Update and the Water and Fish Collection Project Update were moved to follow Dr. Hoppin's presentation.

IX. GenX Study Presentation ([meeting recording at 1:42:34](#))

Provided by Jane Hoppin, PhD, NC State University

[GenX Exposure Study Update presentation](#)

Chair Augspurgen thanked Dr. Hoppin for the presentation; there were several comments by Board members, and the discussion centered on comparison between GenX and the Nafion by-product, which is not something EPA studies, but is measured in NC, and whether a health advisory is prudent. Dr. Hoppin suggested, because it is not transported by air, but is found in blood and wells in Fayetteville, it is work considering remediation at the source, studying bioaccumulation of chemicals in humans.

X. Consent Order Toxicity Studies Update ([meeting recording at 2:28:35](#))

Provided by Frannie Nilsen, PhD, Environmental Toxicologist, DEQ.

[DEQ Consent Order Toxicity Studies – Status Update presentation](#)

Dr. Nilsen reviewed the Paragraph 14 PFAS, and the five (5) compounds to be studied: PFMOAA, PMPA, PFO2HxA, PEPA, Nafion BP2. She said Chemours is required to complete the rodent toxicity and ecological toxicity studies for these 5 compounds. There were questions and comments from Board members that can be heard in the meeting recording.

XI. Water and Fish Collection Update ([meeting recording](#) at 2:35:23)

Provided by Frannie Nilsen, PhD, Environmental Toxicologist, DEQ.

[DEQ 2022 Water and Fish Collection Update presentation](#)

Chair Augspurger thanked Dr. Nilsen for the review of the fish tissue collection project and remarked that bioaccumulation is to be determined through this study, which is a huge leap forward. He congratulated Dr. Nilsen and the team on the good work being done.

XII. Public Forum ([meeting recording](#) at 2:44:08)

Mr. Mike Watters spoke on his experience with the GAC system and asked that DEQ give good guidance to Chemours regarding PFMOAA, and how the PQL could guide the work toward a RfD.

XIII. Adjourn

Chair Augspurger thanked Mr. Watters for his comments, and the Board's participation in the day's discussions. The next meeting is scheduled for Monday, December 5, and he expressed a hope it could be a dual virtual/in-person meeting. It is intended to revisit the issues raised in this meeting; other background material to be circulated. Chair Augspurger thanked the DEQ and DHHS staff for their support: Paula, Peter, Frannie, and others.

The meeting adjourned at 2:51 pm.

Respectfully submitted,

Louise G. Hughes

Assistant to Sushma Masemore, Assistant Secretary for the Environment, DEQ