

# Secretaries' Science Advisory Board

## MEETING SUMMARY Webex Event Virtual Meeting Monday, October 5, 2020 10:00 AM-2:00 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 5, 2020 by Webex Event as a virtual public meeting. SAB members in attendance were: Tom Augspurger, PhD (Chair); Viney Aneja, PhD; Richard DiGiulio, PhD; Jamie DeWitt, PhD; David Dorman, PhD; Elaina Kenyon, PhD; Gina Kimble, PhD; Detlef Knappe, PhD; Thomas Starr, PhD; Phillip Tarte; and Betsey Tilson, MD, MPH. Also in attendance were Sheila Holman; Mike Abraczinskas (DAQ); Danny Smith (DWR); Zack Moore (DHHS); Virginia Guidry, MD (DHHS), and DEQ and DHHS support staff.

### **I. Call to Order (Chairman Tom Augspurger)**

Chairman Augspurger called the meeting to order.

### **II. Review and approve agenda**

Chairman Augspurger asked if there were any modifications to the meeting agenda sent by Ms. Bridgette Morris-McLawn on September 24 and posted on the Board webpage. There were no changes; Dr. DeWitt moved acceptance, Dr. DiGiulio seconded, and the agenda was approved by unanimous rollcall vote.

### **III. Ethics Statement**

Chairman Augspurger read the ethics statement and reminded the members that if anyone had any conflict of interest to indicate so. Dr. Jamie DeWitt explained that she co-authored papers which have been shared with the Board, and is currently working with Dr. Ian Cousins, the presenter scheduled for today. There were no other conflicts expressed.

### **IV. Approval of Meeting Minutes for August 31, 2020**

The draft meeting minutes were circulated to all members for review on September 24.



SAB\_Minutes  
8-31-2020\_DRAFT.pdf

Chairman Augspurgen asked for any additional comments on the minutes; he mentioned the tracked changes he has made. There were none others, so he asked for a motion to approve and adopt the minutes. Dr. DeWitt moved to approve the minutes; Dr. Knappe seconded, and the August minutes were approved with the tracked changes and adopted unanimously by rollcall vote.

Chairman Augspurgen welcomed Louise Hughes back, and thanked Bridgette Morris-McLawnhorn for her support while Mrs. Hughes was redeployed. He remarked that this month marks the third year of the reconstituted SAB, with the expanded charge, charter and new members. He reviewed the members who, for different reasons, have left the board: Drs. Jamie Bartram, Jackie MacDonald-Gibson, Sandy Stopford, Sandy Mort and Greg Cope. He thanked those who have been part of the Board since 2017: Drs. Rich DiGiulio, Dave Dorman, Elaina Kenyon, Tom Starr, Michael Stoskopf, John Vandenberg, Betsey Tilson, Viney Aneja, Gina Kimble, Detlef Knappe and Mr. Phillip Tarte.

### **DEQ and DHHS updates**

Chairman Augspurgen asked for the DEQ update.

#### DEQ Update:

- Mrs. Sheila Holman thanked the Chairman; she expressed her thanks to Bridgette Morris-McLawnhorn for her support to the Board during Mrs. Hughes' redeployment to DES, and welcomed Mrs. Hughes back.
- She thanked the Board for sharing their expertise with DEQ and DHHS.
- COVID-19: Governor Cooper has moved the State to Phase 3 of reopening, maintaining the limit of 25 for indoor meetings, which will require board, commission and stakeholder meetings to be held as virtual events, as it is challenging to limit the public participation to 25 and maintain social distancing. All boards, commissions and stakeholder meetings will be held virtually through the end of 2020. The majority of the DEQ staff is continuing to work remotely, with some staggered scheduling to allow for social distancing and maintaining safety for all employees and the public.

- The Environmental Toxicologist position, held by Dr. Sandy Mort before her retirement, has been reposted and the posting closes today; she hopes to announce the new Toxicologist at the December meeting. She thanked the Board members for circulating the opening.
- The Environmental Management Commission (EMC) reviewed the methyl bromide (MeBr) AAL proposal, and Mrs. Holman asked Mr. Mike Abraczinskas to provide the Board with a summary of the EMC action.
- Mr. Abraczinskas thanked the Board for the opportunity to summarize, and said that the EMC took final action on short term (acute) and long term (chronic) AALs for MeBr on September 10. The AALs adopted were 0.005 milligram per cubic meter (annual) for chronic and 1.0 milligram per cubic meter 24-hr for acute. This deliberation included modeling, and the effective date of the AALs could be as soon as November 1, 2020. He thanked the Board for their input and work in 2018 and 2019 to have this significant outcome.

Chairman Augspurger thanked Mrs. Holman and Mr. Abraczinskas for their updates, and asked Dr. Zack Moore for the DHHS update.

#### DHHS Update:

- Dr. Moore thanked the Board for the opportunity to update on behalf of DHHS, and for Chairman Augspurger's efforts to keep the work of the Board on track in these challenging, unprecedented times.
- COVID-19 update: There are overall declines with peaks in July and again in mid-August with college students returning to campuses. The number of cases is going up slightly now; it is not localized, with no particular age group, which intensifies DHHS' work in prevention efforts. The flu season is here, and DHHS is putting out weekly reports now, and urging people to get the flu vaccine. The work being done by Dr. Virginia Guidry and her epidemiology team is helping with the tracking and trends of COVID-19, including wastewater surveillance; NC has been selected as a partner in this surveillance effort.
- DHHS' work on PFAS: DHHS is recruiting focus groups for feedback, collaborating with NIEHS on research, monitoring public water supplies; NC is

one of nine states asked to participate in these efforts. The agency is working with NC State to support the GenX study. Dr. Jackie MacDonald-Gibson is heading an EPA-funded study of rural, private wells and risk management decisions with RTI and Indiana University.

- The PFAST Collaboratory is holding webinars to review its findings as part of the National Citizen science campaign; a townhall meeting is scheduled October 24, 2020. Duke University is conducting testing in the Pittsboro area.
- A report of CDC-funded private well testing is coming out this month; DHHS has received an award from the CDC to build resilience in environmental health, and it plans to unveil its environmental health data dashboard, which will make data available to the public.
- Climate change and health effects: DHHS is working with the Interagency Climate Change Council (IACCC) to address climate change and health concerns, especially on children ages 0-8 as part of the NC Early Childhood Action Plan.

Chairman Augspurger thanked Dr. Moore for the update and asked if any of the Board had questions for Dr. Moore. Mr. Phillip Tarte asked about the end-goal of the study of wastewater distribution of COVID-19. Dr. Moore replied that DHHS is working at the municipal and facility level to identify trends of COVID-19 transmission by testing wastewater; it is not about disinfection of wastewater or safety of water supply, but surveillance and understanding where and when COVID-19 activity is increasing.

Chairman Augspurger again thanked Dr. Moore for his update.

#### **V. Hexavalent Chromium – Chairman Augspurger**

The SAB approved a draft hexavalent chromium recommendation document be sent for public comment during their February 24<sup>th</sup> meeting. The draft recommendations were subsequently posted for 45-day public comment. Public comment closed on June 1<sup>st</sup>. A copy of the comments received was shared with board members on June 15<sup>th</sup>. The board discussed the comments during the August board meeting. During the discussion nine comments were flagged for follow up. These comments questioned interpretation and/or consistency with documents the board cited during their review. Dr. DeWitt and Dr. Kimble volunteered to review the comments

and write a draft response for the Board to review. Their work was compiled on a spreadsheet that was shared with the board on September 24<sup>th</sup>.

Chairman Augspurger shared his screen of the nine comments highlighted for follow-up from the August meeting, and the Board proceeded to review them to forge a path forward for the Cr(VI) document. He stated there would not be a need to vote on the comments or feedback at this time; however, he would like the Board's concurrence or directions for changes needed for a revised draft. The revised draft will be available to the Board in November for internal review in preparation for the December Board meeting.



Cr(VI)%20Comments  
%20Received\_draft%2

- Line 6, columns B and C: Chairman Augspurger asked Dr. DeWitt to summarize her findings on the comment. She said that she looked at the referenced documents and provided exact wording; it does not appear the Board was confused by the references, and a specific change is not needed. The references are provided, and the research was appropriately interpreted. Drs. Dorman, DiGiulio and Knappe agreed, saying Dr. DeWitt did an excellent job of clarifying; Dr. Knappe said he felt the language could be strengthened in response to the comments in order to eliminate any ambiguity.
- Line 13, columns B and C: Dr. DeWitt agreed the Board's interpretation of the research is correct.
- Line 16, columns B and C: Dr. Dorman asked why the two were linked there, if there is any additional clarity provided by such a link. Dr. DeWitt agreed that the document should make a distinction between the two lines of evidence; Dr. Augspurger noted the proposed change. Dr. DiGiulio concurred with Dr. Dorman's modification.
- Line 18, columns B and C: Dr. DeWitt disagreed with the commenter that the Board was inconsistent with the ATSDR 2012 report, and no change is needed in the current section of the Cr(VI) document. Dr. Knappe agreed with Dr. DeWitt's summary; he asked as a point of procedure if the Board plans to respond directly

to comments received. Chairman Augspurger replied he did not know if it is needed, as all comments have been shared with the public, recorded for the public, and this file contains the Board's responses to the comments and is also available to the public. Dr. Aneja asked whether specifying what form of inhalation is referenced, particulate matter or other, is needed. Dr. Aneja noted that such specificity may be needed, in order to know that Cr(VI) is working its way to the cellular level to create the effects that it does. Dr. DeWitt answered that most understand the form of chromium may change between exposure and cellular level effects, but she can consult the ATSDR reference in question to see if they offer more specificity. Chairman Augspurger asked Drs. Aneja and DeWitt to consult further on this.

- Line 22, columns B and C: Dr. DeWitt stated the document was consistent with the mechanism of action put forth by other agencies; Dr. Dorman agreed, with the previous clarification requested. Chairman Augspurger said the comments from this particular commenter seem to focus on epidemiological data.
- Line 38, columns B and C: Dr. DeWitt's response quotes the NTP report that the micronucleus results were mixed which is how we also characterized them; Dr. DiGiulio suggested to add the quotation from the NTP report so it is clear that the Board is not re-interpreting the report but referencing it directly. Drs. DiGiulio, Aneja and DeWitt agreed that the quote and its source / citation be included.
- Line 40, columns B and C: Dr. Dorman said the last sentence of the explanation states that gavage is useful in hazard characterization, but less useful in dose response, which Chairman Augspurger added to the document. Dr. Kenyon agreed with Dr. Dorman's point.
- Line 48, columns B and C: Dr. Kimble considered both components of this comment; she said the uncertainties were addressed and documented in response to the first point. A potential modification to the second point may be to expand on why overestimation of the dose may result in overestimation of the risk. Dr. Starr interjected that it depends on how the dose is being used; if as a model for specific administration, it is restricted by the data, if the dose is extrapolated as a predictor of risk, then the answer changes. Dr. Dorman said no extrapolation

modeling was considered, and such granularity is not providing additional clarity for the Board's document. There was more discussion of this point including whether the sentence the commenter questions is needed; Chairman Augspurger noted that in preparing the revision, he will check to see if deleting the statement changes the context.

- Line 56, columns B and C: Chairman Augspurger said there were no suggested changes, but is open for discussion, and asked if any Board members had concerns with leaving it as is? None were stated.

Chairman Augspurger thanked Drs. DeWitt and Kimble for their work on addressing the comments and providing their input. He will coordinate with Agency leadership to see the path forward for the Cr6 document, anticipating a vote at the December meeting. He will circulate to the Board the revisions to the document during November. He announced the lunch break for an hour at this time.

## **VI. PFAS mixtures**

Chairman Augspurger reconvened the meeting at 12:30, sharing his screen of a few PowerPoint slides to introduce the topic on PFAS chemicals as a class or classes and how to best address them individually or as class(es).



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topic intro\_TPA.pdf

There are a variety of proposals, including the papers shared with the Board. Chairman Augspurger suggested the approach for the Board will be to review the papers he shared in March, April, and September, hear presentations from several experts, and determine a path forward. Today's external presenter, Ian Cousins, PhD (Professor and Group Leader, Department of Environmental Science, Stockholm University, Sweden), will provide more information for the Board, and Chairman Augspurger has scheduled Mr. Steve Sliver, Executive Director of the Michigan PFAS Action Response Team, to speak at the December 7 meeting regarding Michigan's decisions to go compound-by-compound. There are other speakers he could recommend to the Board: Robert Buck, technical Fellow at Chemours, whose 2011 paper on chemicals and terminology is cited by many other researchers. He would like for the Board to

share their perspective on the papers and the speakers' presentations, as well as what Board members believe would be helpful to explore on this important topic in order to help the agencies explore and potentially develop a charge.

Dr. Virginia Guidry said she was looking forward to hearing from Dr. Cousins.

Chairman Augspurger shared information regarding a virtual workshop scheduled October 26-27: Federal Government Human Health PFAS Workshop.

Dr. DeWitt said table 3 in Dr. Cousins' paper which was shared with the Board was particularly helpful. She suggested another paper for review, authored by Gloria Post of the New Jersey Department of Environmental Protection, Environmental Toxicology section, which examines different states' grouping or compound-by-compound examination of PFAS, helping to understand the variability of regulations between states.

Dr. Knappe suggested an additive approach may be a reasonable approach dealing with PFAS mixtures.

Chairman Augspurger asked how groupings should be examined; Dr. Guidry remarked that PFAS can bio-accumulate, and how they reach hazardous levels is a key concept; she asked for comments from the Board regarding bioaccumulation. Dr. DeWitt said she would share a paper by Pachkowski et.al., which examines New Jersey's rationale for selecting a human serum for the level of a reference dose based on internal dose concentration. Chairman Augspurger asked if there is a compiled list of prioritized PFAS for NC; Mrs. Holman replied such a list has not yet been developed, and all data collected need to be examined. There are data collected from out of state as well as in-state on individual PFAS chemical occurrence. Dr. Knappe agreed with the approach that occurrence could drive the priority listing, and he will share with the Board the results from the PFAST Network. Dr. DeWitt elaborated on the role she had with another state's SAB in developing health goals.

Chairman Augspurger then introduced Dr. Ian Cousins, Professor at Stockholm University, whose 2020 article on grouping strategies has been shared with the Board. Dr. Cousins presented "Strategies for grouping per- and polyfluoroalkyl substances."



At the conclusion of Dr. Cousins' presentation, Chairman Augspurger asked if the Board had questions for Dr. Cousins; Dr. Knappe asked regarding Europe's restriction of PFAS. Dr. Cousins replied that Sweden and other countries are very active in their restriction of PFAS; they are pursuing phasing out uses of PFAS. The outdoor clothing industry is quickly phasing out use of PFAS, as is the cosmetics industry. Chairman Augspurger suggested the Board consider compiling a priority list of PFAS, and by Dr. Knappe agreed to present results from studies of North Carolina's environment and public. Chairman Augspurger thanked Dr. Cousins for his presentation.

Chairman Augspurger then opened the floor for the public forum.

## **VII. Public Forum**

Chairman Augspurger said there were six members of the public who signed up to speak in the public forum, and he would call their names in the order they signed up. He asked that the speakers keep their remarks short, as the time remaining in the meeting is limited.

1. **Cori Bell:** Natural Resources Defense Council. She urged the Board for regulation of PFAS as a class, as it is cost effective and most protective of public health. She asked the Board to consider the EU drinking water directive.
2. **Emily Donovan:** thanked the Board for the opportunity to speak. She is a Brunswick county resident, which has the highest level of PFAS in their water. She is very concerned about her family's health, because they use the municipal water in daily cooking, bathing, and other cleaning, and the level of PFAS in the water is distressing to her. She urges the Board to move quickly regarding PFAS in NC, advocating a precautionary approach and looking at PFAS as a class.
3. **Dana Sargent:** Executive Director of Cape Fear Riverwatch. She cited other states' surface-water and drinking water levels, and that the EU established a regulatory level of 0.5 nanograms per liter. She asked the Board to recommend action based on research provided to limit and or ban PFAS.

4. **Grady McCallie:** Mr. McCallie is the policy director of NC Conservation Network, and sees a gap between what the SAB recommends and the actions taken by the EMC and other regulators. He said the EMC sees the numbers the SAB provides as ceilings, rather than advice; there are compromises made because of pressure by other stakeholders. He asked that the SAB make its recommendations explicit, leaving no question as to the purpose.

Two of the six speakers did not respond when called. Chairman Augspurger thanked the members of the public for their comments and their time, closing the public forum. He then asked if there were any more comments; there being none, he reminded the Board and public that the next meeting is scheduled for December 7, 2020 at 10 AM, and it will be a virtual meeting as well. The topic of PFAS will be covered again at that meeting. The meeting adjourned at 2 PM.

Respectfully submitted,

Louise G. Hughes

Assistant to Sheila Holman, Assistant Secretary for the Environment, DEQ