

Secretaries' Science Advisory Board

MEETING SUMMARY

Archdale Building, Ground Floor Hearing Room, Raleigh, NC

Monday, August 20, 2018

10:00 AM-4:30 PM

The Department of Environmental Quality (DEQ) and the Department of Health and Human Services (DHHS) Secretaries' Science Advisory Board (SAB) met on Monday, August 20, 2018 at the Ground Floor Hearing Room of the Archdale Building in Raleigh, NC. SAB members in attendance were: Jamie Bartram, PhD (Chair), Viney Aneja, PhD, David Dorman, DVM, PhD, Gina Kimble, PhD, Richard T. Di Giulio, PhD, Tom Augspurger, PhD, Jaqueline MacDonald Gibson, PhD, Elaina Kenyon, PhD, Detlef Knappe, PhD., John Vandenberg, PhD., Woodhall Stopford, MD, MSPH, Michael Stoskopf, DVM, PhD., Thomas Starr, PhD, Mr. Phillip Tarte, MPH. Betsy Tilson, MD, MPH, and Greg Cope, PhD were present via telephone. Also in attendance were DEQ Assistant Secretary Sheila Holman, Sandy Mort, PhD, DHHS Zack Moore, MD, MPH, Mina Shehee, PhD, DEQ and DHHS support staff.

I. Call to Order (Chairman Jamie Bartram)

Chairman Bartram called the meeting to order at 10:00 am.

II. Ethics Statement

Chairman Bartram read the ethics statement and reminded the members that if anyone had any conflict of interest to indicate so. No one identified conflicts.

III. Approval of Meeting Minutes for June 18th

The meeting minutes were circulated to all members, including all changes. Chairman Bartram asked if everyone had any additional comments on the minutes; there were grammatical changes and adjustments, so the June minutes were approved and adopted unanimously once those changes are made.

IV. GenX Report

The draft GenX report was circulated to all members, and copies provided for the members of the public to read while the Board went through it section by section to make changes before its formal adoption and publication. Minor changes, made as edits after this meeting, will be incorporated in the draft made available for a 30-day public comment period.

There was discussion by the board members regarding each section and the structure of the report itself, and these changes are to be incorporated in the report before publication and release for public comment. The major changes desired were to incorporate the background information on GenX into one section, and group the board recommendations together, bolding and/or italicizing for emphasis. At present, there is no NC Drinking Water Standard for GenX. Dr. Augspurger recommended that the report should state the board's recommendations be used for guidance to set environmental standards for water, air and soil in regard to human health. Dr. Mort responded to Dr. Aneja's query regarding air standards that there are no studies on inhalation and there are no models to extrapolate oral exposures to inhalation dose for GenX. Dr. Kenyon advised against oral to inhalation extrapolation without the appropriate PBPK models. Chairman Bartram then asked the board for a motion to adopt the report by consensus, with incorporated changes, and publish it for public comment; the board unanimously agreed. The board will review the changes to verify they are made correctly, examine the public comments, and review again before final publication.

V. TCE (Trichloroethylene)

Chairman Bartram then re-introduced the request of the DEQ DWM to review TCE indoor air actions levels and the action level implementation guidance developed to protect for the fetal cardiac malformation effect, reminding the board that Dr. Mort and Mr. Jim Bateson had given an informative presentation on it at the last meeting, and will give an update as to the follow-up done by DEQ. Dr. Mort stated Mr. Glenn Adams, Chief of the Scientific Support Section at EPA Region 4 representative is slated to speak on the TCE action levels at the upcoming board meeting in September. Mr. Adams will present how EPA, DEQ and DHHS have worked together to define the indoor air action levels and develop response implementation guidance, as well as how the three agencies coordinate response to suspected and known exceedances of the action levels to protect vulnerable populations. The Board was reminded they were provided a package of related information prior to the pervious SAB meeting, and it was requested that this package be re-circulated to the Board. It was further discussed that DEQ will develop a report summarizing the toxicological science, the action levels and response implementation guidance, as well as case studies for distribution to the Board. The goal is to have this information to the Board in advance of the September meeting with the plan to further

discuss the topic and the Board provide recommendations at this meeting. Chairman Bartram asked if the members had any questions for Dr. Mort or Mr. Bateson; there were none, and he asked Dr. Mort to review the Board's charge regarding TCE. Dr. Mort read the charge as provided to the Board in their packet for the meeting (see attachment).



SSAB Subject
Charge-2018_TCE_Hi



TCE IA AL
package_SAB_June.'

Dr. Bartram asked regarding the use of the word “implementation;” Dr. Mort replied that the word choice refers to the guidance, outlined in the packet of information provided to the Board before the last meeting, in the Division of Waste Management's TCE Indoor Air Action Level Package. The request is to see if the action/implementation guidance recommended in the report is appropriate, according to the Board. The documents are available through the SSAB SharePoint site, and access to it by the Board will be resolved through the presentation during the lunch break and by DEQ support personnel. There were questions regarding TCE and the concentrations of the action levels calculated, and Dr. Mort replied that they were calculated using the IRIS 2011 reference dose (RfD) levels for residential and occupational (40-hour adult worker) populations using EPA's default exposure parameters. Dr. Bartram asked that the Board members review the documentation for the implementation guide. Dr. Bartram asked DEQ to draft a report on TCE for board consideration. He suggested the lunch break begin so the outside presenter scheduled for 1:45 PM can begin promptly; the Board broke for lunch at 11:54 AM.

VI. Hexavalent Chromium (Cr6)

Chairman Bartram recalled the meeting to order at 1:40 PM, introducing the outside speaker, Dr. Ivy Moffat.

Ivy Moffat, PhD, Senior Scientific Evaluator for Water and Air Quality Bureau, Health Canada, gave a report on Health Canada's development of a threshold approach protective of non-cancer and cancer effects associated with drinking water exposures to Cr6 and their development of a reference dose (RfD) for drinking water. Dr. Moffat referred the Board to Health Canada's document summarizing their Cr6 review that was available on August 17, 2018 (<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality.html#guidance>).



Health Canada NC
SAB Cr6.pdf

Chairman Bartram thanked Dr. Moffat for her patience and careful preparation of her informative report on Cr6. Several Board members had questions for Dr. Moffat, which she answered, and Chairman Bartram again thanked her for her patience, commending her clear explanations and presentation. Dr. Moffat supplied her contact information so any further questions could be answered through email.

There was discussion of the SSAB Charge on Cr6; there was enough comment on it that the Board agreed the charge needs to be clarified as it speaks to oral and inhalation guidance, and it should be done within the Cr6 report. Chairman Bartram deferred further discussion until the other outside presenter from California had completed her presentation.

Elaine M. Khan, PhD, Chief, Water Toxicology Section, Office of Environmental Health Hazard Assessment, California Environmental Protection Agency, gave a report on the California EPA's 2011 development of a Cr6 Cancer Slope Factor based on the agency's identification of mutagenic mode of action (MOA) for Cr6 and their development of a drinking water Public Health Goal (PHG).



Calif EPA
Hexavalent Chromiu

Chairman Bartram thanked Dr. Khan for her presentation, as he was aware remote presentations are difficult. There were few questions; Chairman Bartram referred to Health Canada's presentation, to draw Dr. Khan's attention to its just published report, and Dr. Khan said California would be looking at and considering other states' work and other agencies' reports in updating their PHG for Cr6. In reply to a question from Dr. Kenyon regarding mutagenic MOA, Dr. Khan also said they consider an indication of genotoxicity without the requirement for the positive mutagenicity indication to be in the target tumor location. Chairman Bartram again thanked Dr. Khan for a very professional presentation. There was further discussion on this matter after Dr. Khan left the meeting; Chairman Bartram said a scoping literature review, review of evidence, is necessary before further recommendation can happen by the Board; he recommended a cutoff year of 2008 and forward. He said the Board will wait for the literature review. There was a 5-minute break before moving to Public Forum.

VII. Public Forum

Chairman Bartram thanked everyone for attending, and asked if anyone had anything they wanted to say. No one from the public requested to speak. There being no comment, Dr. Bartram reviewed the future meeting dates, thanked everyone again for their attendance, and adjourned the meeting at 3:10 PM.

VIII. Next Meetings

Action Items:

Future meeting dates:

- (i) September 24, 2018
- (ii) October 22, 2018

All meetings to be held in the Ground Floor Hearing Room of the Archdale Building.

There being no further questions or comments from the public, Chairman Bartram thanked everyone again for their attendance and ended the Public forum at 3:10 pm, adjourning the meeting.

Respectfully submitted,

Louise G. Hughes

Louise G. Hughes

Executive Assistant to Assistant Secretary Sheila Holman, DEQ