Meeting Minutes
Cleanup Standards Scientific Advisory Board
Webex Meeting
July 30, 2020

CSSAB Members Present:

Chuck Campbell, Chairman
Joel Bolstein
James Connor
Colleen Costello
Annette Guiseppi-Elie
Michael Meloy
Craig Robertson
Mark Smith
Mark Urbassik
Don Wagner

Department of Environmental Protection (DEP) Staff Present:

Abbey Cadden
Troy Conrad
Randy Farmerie
John Gross
Darek Jagiela
Mike Maddigan
Frank Nemec
Krishnan Ramamurthy
Valerie Shaffer
Nikolina Smith
Brie Sterling

Audience Present:

Deborah Barsotti
David Bauer
Will Hitchcock
Jenny Kachel
Neil Ketchum
Randy Shuler
Kierstin Turnock

Open Meeting

Mr. Chuck Campbell, Chairman of the Cleanup Standards Scientific Advisory Board (CSSAB), called the meeting to order at 0930.

Mr. Campbell asked for approval of the draft CSSAB meeting minutes from October 29, 2019. Mr. Craig Robertson requested that the first sentence on Page 3 (Total PCBs & Aroclors bullet point) be revised as the CSSAB did not recommend this statement that was attributed to them. Additionally, Mr. Robertson and Mr. Michael Meloy requested the language at the end of the same bullet point reflect that a remediator may select relief of liability between total PCBs OR individual Aroclors after sampling for both, if they choose. Mr. Michael Maddigan stated that was the intent of the language written in the minutes. Additionally, Ms. Colleen Costello requested consideration of deleting the second paragraph under the "Language for Public

Involvement Plan" bullet point, as most of the statements in this paragraph were not discussed during the meeting. Mr. Maddigan requested specific language revisions desired from the Board to be submitted via email. The Board agreed and decided to forego approval of the draft meeting minutes from the October meeting until the revised draft meetings are distributed for review.

Land Recycling Program (LRP) Update

Administrative Issues/Hazardous Sites Cleanup Fund (HSCF): Mr. Troy Conrad reported that the HSCF is expected to remain solvent through the 2021-2022 fiscal year. Unexpected revenue was realized via the Capital Stock and Franchise Tax, and projected personnel costs have been reduced due to a hiring freeze as a result of the COVID-19 pandemic. No new cleanup projects will be undertaken at this time to preserve funding.

Per- and Polyfluoroalkyl Substances (PFAS) Action Team update from Mr. Conrad: The state's public drinking water supplies are scheduled to be sampled and analyzed for the presence of PFAS at PA's laboratory. This sampling began before the COVID-19 pandemic, and although it was paused to initiate safe protocols, it has resumed. The sampling plan is initially focused on drinking water supply sources that are in proximity to known PFAS contaminant sources. Additionally, testing of firefighting foam incineration has begun to identify best disposal practices and to determine the toxicity of incinerated by-products.

New Rulemaking Timeline: Mr. Conrad reported the revised rulemaking package will be presented to the CSSAB in the October 2020 scheduled meeting. The new Chapter 250 regulations are then expected to be promulgated approximately 6 months after the October 2020 meeting.

Personnel update: Mr. Conrad reviewed DEP's new personnel. Since Krishnan Ramamurthy was named Deputy Secretary of Waste, Air, Radiation, and Remediation, no new personnel issues to report. The Bureau is still seeking to fill the Program Manager position, formerly held by Mr. Lee McDonnell.

Mr. Joel Bolstein asked if the DEP has any ability to track incoming Notices of Intent to Remediate (NIR) on a monthly basis to determine if the COVID-19 pandemic is affecting the volume of incoming site work, and if the overall Land Recycling Program's navigation difficulty is affecting site numbers. Mr. Meloy requested monthly incoming NIR statistics for the last 2 years and sorted by region. Mr. Conrad stated that he will submit NIR statistics to the CSSAB for review.

Membership update: Mr. Maddigan reviewed Board member status. DEP is challenged in getting renewal of appointments that have expired, and Mr. Maddigan suggested that members with expired terms should again reach out to their respective appointing bodies for re-appointment updates. There are currently two vacancies on the Board: A House Minority appointment and a Senate Minority appointment. To get his term renewed, Mr. Mark Smith reported that he wrote the letter needed for re-appointment and submitted it to the House Speaker for approval and signature.

Chapter 250 Proposed Rulemaking – Overview of public comments, DEP's proposed responses and changes to Annex A including soil lead values.

Mr. Maddigan presented an overview of the public comments received regarding the proposed rulemaking. In addition, Mr. Maddigan summarized two infographic flow charts which illustrate the differences between the general thought processes of selecting the correct medium specific concentration (MSC) when only the Chapter 250 tables are considered and when sub-surface conditions are also considered. The consensus from the CSSAB regarding the infographics was that although the 450 mg/kg of lead determined in the first example (Selecting a Non-residential soil MSC using ONLY the numeric values in Chapter 250 tables) is accurate, DEP should not try to over-simplify the process of selecting an MSC which may ignore some of the specific framework of the regulations. Mr. Maddigan completed his summary of public comments received and reported that the DEP has decided to decrease the target blood lead level input values for the Adult Lead Methodology (ALM) and Integrated Exposure Uptake Biokinetic Model (IEUBK) from 10 µg/dL to 5 µg/dL. In doing so, this would change the calculated non-residential direct contact soil value for lead to 1,050 mg/kg (from 1,000 mg/kg) and the residential direct contact soil value to 153 mg/kg (from 500 mg/kg).

Following Mr. Maddigan's presentation, a discussion regarding the DEP's proposal to revise the blood lead level ensued:

- Mr. Bolstein remarked that implementing these revisions would create a greater need for soil disposal at Act 2 sites. He inquired as to where this additional soil waste stream would be disposed as a result of the decreased MSCs. Mr. Conrad reported that the decision to revise the blood lead levels is strictly based on the latest science; disposal options were not considered.
- Mr. Campbell inquired whether this proposed revision would affect use of the Background cleanup standard for lead. Mr. Maddigan stated that it should not, and the Department does not anticipate reopening sites that have successfully completed the Act 2 process.
- Mr. Don Wagner inquired whether the comments received were accurate and considered valid by the DEP. Mr. Maddigan replied that all comments were catalogued, but not all comments were accepted at face value. Mr. Wagner requested a discussion on validity of the 5 µg/dL target blood lead level. Ms. Annette Guiseppi-Elie stated that the 10 µg/dL blood lead level is out-of-date. The Center for Disease Control and Prevention's (CDC) current target blood lead level is 5 µg/dL. The EPA's November 2017 Recommendations for Default Age Range in IEUBK Model recommends a 2 µg/dL to 8 µg/dL target blood lead level range in children. Presently, studies are continuing at EPA to determine an appropriate target blood lead level to use at Superfund sites. Subsequent discussion centered on what target blood lead level may be utilized in PA to calculate the associated MSCs in soil (with respect to lead, there is no cancer risk, and a hazard index is not applicable). The Board was reminded that DEP has limited resources to research and determine the appropriate blood lead level to utilize. In summary, the Board could not agree upon a target blood lead level to recommend; Ms. Costello suggested this should be further discussed and recommendations developed within the risk assessment

subcommittee or a lead workgroup. Mr. Maddigan replied that DEP is intending the final rulemaking package to be presented to the CSSAB during the October 2020 meeting and confirmed that revising the blood lead screening level should not trigger a new public comment period.

- Mr. Conrad polled CSSAB members who have not had their opinion heard in this matter: Mr. Mark Urbassik agreed that 10 µg/dL is not the appropriate blood lead level to use but is unsure if 5 µg/dL is appropriate. The prudent approach would be to select a blood lead level between 5 and 10 µg/dL.
- Mr. Campbell summarized the Board's recommendations: have the proper blood lead screening level be further examined by the Risk Assessment and Standards Subcommittees or a lead workgroup, with recommendations submitted to the CSSAB.

Mr. Maddigan continued his presentation regarding proposed responses to public comments resulting from Chapter 250 rulemaking changes.

- Economic impact of MSC changes: CSSAB discussed their concern regarding economic impacts of the reduction of MSCs, especially inorganics that are naturally occurring in PA. DEP will consider adding language to the preamble to the final Chapter 250 Rulemaking discussing this possibility.
- DEP's process for calculating MSCs for certain polycyclic aromatic hydrocarbons (PAHs): Due to time constraints, DEP will evaluate the process of calculating MSCs and evaluating transport factors during the next proposed rulemaking. Mr. Meloy encouraged evaluation of these factors now by the subcommittees, rather than waiting another several years. Mr. Maddigan suggested that if the CSSAB would recommend specific revisions, DEP would take them into consideration for the upcoming rulemaking.

Potential solution to vanadium residential direct contact soil MSC issue – Mr. Meloy and Mr. Will Hitchcock presented an overview of proposed solutions (alternate MSCs) to the DEP's current 15 mg/kg MSC for residential direct contact for vanadium. The CSSAB states that the cleanup standard is unsustainable and problematic to both Act 2 and implementation of the Bureau of Waste Management's Management of Fill Policy.

Mr. Meloy presented results of two United States Geological Survey studies regarding naturally-occurring vanadium concentrations in soil conducted throughout PA: one conducted in 1981 which yielded an average soil vanadium concentration of 80 mg/kg, and one conducted in 2007 which yielded an average soil vanadium concentration of 66 mg/kg. Less than 1% of the total samples collected during these two studies would attain the current residential direct contact soil MSC of 15 mg/kg. Mr. Meloy summarized four possible options for the vanadium residential direct contact MSC in soil:

- Option 1: Status Quo - Based on provisional peer-reviewed toxicity values (PPRTV), the residential direct contact soil MSC is calculated as 15 mg/kg (current MSC);
- Option 2: EPA Regional Screening Level (RSL) Approach - Based on the Integrated Risk Information System (IRIS) toxicity information for vanadium pentoxide, the residential direct contact soil MSC is calculated as 1,100 mg/kg;

- Option 3: Conservative EPA RSL Approach - With an added uncertainty factor to Option 2, the residential direct contact soil MSC is calculated as 368 mg/kg; and,
- Option 4: More Conservative EPA RSL Approach - With a higher added uncertainty factor to Option 2, the residential direct contact soil MSC is calculated as 110 mg/kg.

Mr. Meloy followed with a summary of the origin of New Jersey Department of Environmental Protection's proposed residential soil cleanup standard of 390 mg/kg for vanadium. Mr. Meloy recommended the Department use the IRIS value for vanadium pentoxide with an adjustment for molecular weight of vanadium pentoxide and an additional uncertainty factor of three to calculate new MSCs for vanadium. This approach would result in direct contact soil numeric values of 370 mg/kg for residential and 5,500 mg/kg for non-residential and groundwater numeric values of 70 µg/L for residential and 200 µg/L for non-residential. Following Mr. Meloy's presentation, Mr. Bolstein, Mr. Wagner, Mr. Urbassik, and Mr. Robertson agreed that maintaining the current MSCs for vanadium will be extremely problematic with respect to Act 2 sites as well as with its interaction with the Management of Fill Policy. Additionally, these Board members suggested that there needs to be a naturally occurring concentration established for vanadium in Pennsylvania. Ms. Guiseppi-Elie stated that none of the studies undertaken to determine vanadium toxicity are perfectly sound and all studies must use varying degrees of uncertainty factors. Mr. Robertson added that other state agencies (NJ, NY, and CA in particular) employ expert toxicologists to assist in generating scientifically sound cleanup values, and PA does not. Mr. Conrad added that DEP adheres to a specific regulatory process in generating MSCs, and it is not the intent of the agency to promulgate problematic MSCs. Mr. Conrad also requested that the Board examine the four options presented previously and recommend the best option for re-calculating the vanadium direct contact soil MSC. Mr. Maddigan confirmed that any formal decisions derived as a result of any subcommittee meeting are subject to public notification. Any subsequent subcommittee meetings must be open for a public audience.

Mr. Meloy called for a vote from the CSSAB: should the residential soil direct contact MSC for vanadium be maintained at 15 mg/kg? All but one Board members agreed that the value should be revised as per one of the options presented earlier. Ms. Guiseppi-Elie abstained from voting, stating that further study should be undertaken prior to any vote at this time. Mr. Robertson suggested composing a follow-up letter to the December 2019 letter, signed by the CSSAB, that rejects the current vanadium soil MSC. This motion was seconded. Mr. Urbassik suggested a modification of the motion: rescinding the vanadium soil MSC until further study can be undertaken. This motion likewise was seconded. Ultimately, a vote was taken for the following motion: the CSSAB will prepare a letter recommending a new MSC for vanadium in soil. This motion passed unanimously. Mr. Maddigan commented that the processes outlined during this discussion are contrary to the regulatory hierarchy of determining MSCs. Since PA DEP does not employ toxicologists, Mr. Maddigan queried if it was proper to utilize the work conducted by toxicologists employed by bordering states. Mr. Conrad concluded discussion regarding this topic, stating that the processes used in the past has 25 years of success. Going forward, the processes will continue as governed by the regulations.

How can members of the CSSAB assist and support DEP's Act 2 program – Mr. Campbell stated that CSSAB would like to continue support of the DEP's Act 2 in the most helpful and efficient way going forward. To accomplish this, Mr. Campbell proposes to re-open several

subcommittees and workgroups. DEP agrees that workgroups staffed with CSSAB members and non-board members, would be beneficial to the Act 2 program. Any new experts outside of DEP and CSSAB would be vetted (for qualifications) prior to joining the workgroups.

Mr. Campbell suggested the following subcommittees/workgroups to be opened in the immediate future: risk assessment and cleanup standards and the following workgroups: risk assessment, PFAS, Lead, and Vanadium. The intent of the subcommittee/workgroup resurrection is to examine issues brought to the CSSAB by the Department, as well as issues that may improve the LRP overall. DEP staff can be members of a workgroup, but not a subcommittee. Mr. Campbell will organize and manage volunteers for each subcommittee/workgroup and meeting schedules.

It was confirmed that any further recommendations regarding lead and vanadium from CSSAB will need to be submitted to the DEP in approximately two weeks from this meeting. Mr. Meloy requested a separate call from DEP to summarize DEP's reaction to the material presented during today's meeting regarding the alternate vanadium MSC. Mr. Conrad reminded the CSSAB that subcommittee meetings (and calls) are subject to the provisions of public participation requirements and would need to be announced on the DEP website prior to commencement.

Meeting Adjourned at 1540.