

## MPCA Comments regarding USACE's MN Point HHRA Submitted 1/28/2020 and April Sampling of 2019 Placement Site

Document Preparation Date: February 14, 2020

### Comments

- Site-specific sediment values calculations are consistent with what has been agreed to between MPCA and USACE and are appropriate to use to assess potential risks to people from dioxin in sediment. Based on the HHRA and preliminary data from the sediment study at Minnesota Point, it appears that future placement of dredge material on Minnesota Point in recreational areas will not pose risks to people, although it is important for MPCA to review the applicable proposed dredged sediment data before approving additional placements. It also appears that placing sediments on the rest of the peninsula including behind residential housing may be appropriate depending on the specific material to be dredged, the sampling that was conducted in the harbor to characterize the sediment and the results from the April 2020 sampling as part of the sediment study at Minnesota Point.
  - *USACE April/June 2020 response: The comment is understood. We appreciate that we have come to agreement on the derivation of site-specific sediment values for dioxin that are protective of human health on all reaches of Minnesota Point Beach.*
- Data Evaluation and Hazard Assessment: MOB 2 is not mentioned, only MOB 1, 3 and 4. It would be beneficial to mention this data also since it does provide another line of evidence that may be taken into consideration when evaluating potential risks and support for decreases in dioxin concentrations after sediment dredging and management.
  - *USACE April/June 2020 response: The MOB 2 sampling results will be included in the data presentation and will be considered in the uncertainty analysis and HHRA conclusions.*
- Exposure Concentrations: This section states “If the post-placement sampling results continue to verify the modeled loss of dioxin concentrations from the dredged material once placed on the beach, the fate and transport model may be used to estimate dioxin concentrations on the beach from future navigation channel sampling results.” A 90% decrease was used to estimate post sediment dredging and management concentrations. MPCA cannot agree to using this amount of a decrease for all harbor sediment concentrations based on the data provided and the type of sampling that has been conducted in the harbor in the past. MPCA can work with USACE to develop a sampling plan that more adequately characterizes the sediments in the harbor and discuss the use of some type of a reduction to use in the future based on the revised sampling plan, this data and the data from the April sampling event. In addition, if USACE begins using a revised sampling plan, the use of a more central tendency exposure concentration may be appropriate.
  - *USACE April/June 2020 response: This discussion of modeling concentrations on the beach using measurements made from material within the navigation channel will be removed from the HHRA. We will continue to work towards a mutually agreeable sediment characterization strategy.*
- Uncertainty Related to Derivation of Dioxin TEQ: Most of the PCB sampling that was conducted previously was based on aroclors which would not be appropriate in this case. The sampling of

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some congeners in 2011 only included five of the 12 normally recommended to analyze per the World Health Organization. MPCA recommends the analysis of the 12 PCB congeners to determine if they significantly contribute to dioxin concentrations. To ensure all of the data needed to support future placements of sediments on the entire area of Minnesota Point, MPCA recommends analyzing the April samples from the 2019 placement area for the 12 PCBs. MPCA also recommends analyzing for the 12 PCB congeners during the next round of harbor sampling after USACE and MPCA agree on a new sampling strategy.

- *USACE April/June 2020 response: PCB congeners were added to the analytical suite for both pre- and post-placement (November) samples from Minnesota Point (removed from archive and re-submitted to the laboratory), as well as spring 2020 sampling. The June 2020 HHRA will incorporate results from PCB analysis of these samples. The PCB congeners which contribute to dioxin-like toxicity will be included in the calculation of the dioxin TEQ and used to assess risk from exposure to beach sediments.*
- Site-specific value calculation spreadsheets: A surface area used for a child 0 to years of 3,835 cm<sup>2</sup> is used in the calculation spreadsheets E, P, S and T., but 3,384 cm<sup>2</sup> should be used. This has been corrected in the range of risks (ROR) spreadsheet, but not in the calculation spreadsheets. It does not appear to make a difference in the site-specific sediment values so there is no need to re-submit this at this time. Please change for future submissions.
  - *USACE April/June 2020 response: This has been corrected in the calculation workbooks. They are not being re-submitted in June because they were previously reviewed and approved, but can be provided again if requested.*
- Site-specific value calculation spreadsheets: Calculations spreadsheets C and R and the ROR spreadsheet list an adherence factor for the child ages 0 to 6 of 2.93 mg/cm<sup>2</sup>, but is listed as 2.9 in the adherence factor calculations. This was changed in the ROR spreadsheet, but not in the actual calculation spreadsheets. Rounding to two significant figures is more appropriate to use in the derivation. It does not appear to make a difference in the site-specific sediment values now that they are rounded to two significant figures so there is no need to re-submit this at this time. Please change for future submissions.
  - *USACE April/June 2020 response: This has been corrected in the calculation workbooks. They are not being re-submitted in June because they were previously reviewed and approved, but can be provided again if requested.*

### **Bonnie Brooks, M.S., Environmental Research Scientist**

Minnesota Pollution Control Agency

520 Lafayette Road North

St. Paul, MN 55155

651 331 6173

[bonnie.brooks@state.mn.us](mailto:bonnie.brooks@state.mn.us)