From: Valerie Oster
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Subject: FW: Fate and Transport Jan. 30 2008 Meeting Notes
Date: 02/07/2008 05:35 PM

Chip, Eric,

Please see below from Carl.

cheers
valerie

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From: Carl Stivers
Sent: Thu 2/7/2008 2:12 PM
To: Valerie Oster
Subject: Fate and Transport Jan. 30 2008 Meeting Notes

Valerie - Please pass this on to EPA with a copy to LWG Fate and Transport Peer Group and Exec. Thanks.

Chip and Eric -

Below are highlights and agreements on the Fate and Transport Modeling from the January 30 meeting between LWG, EPA, and EPA partners. We are providing these to reflect our understanding of the path forward on these issues.

1) All comments - Discuss incorporating changes into future modeling reports rather than revising existing report. It was agreed that future modeling reports will document changes.

2) Comment 3 - Clarification of method to meet Modeling Objective 1 (estimate of sediment contributions to surface water chemical concentrations). It was agreed that the Abiotic Fate and Transport (AFT) model as well as other empirical tools and estimates would be used to estimate sediment contributions to surface water concentrations.

3) Comments 13 and 49 - Agree on chemical list for future model runs. It was agreed that:

a) Additional chemicals other than just bioaccumulatives could be used in AFT portion of the model

b) Bioaccumulatives are the only chemicals that can be applied to whole Hybrid model

c) Further discussion is needed on the list of chemicals to be modeled (first for the RI and then again for the FS)

d) Given EPA's direction to have PRGs in the FS, the primary purpose of RI modeling will be for Fate and Transport analysis chapter.

4) Comment 14 - Discuss handling of "active layer depth" in future model runs. It was agree that:

a) Future reports need more consistency in definition of active depth and a clearer definition of it

b) A sensitivity analysis of active depth will be conducted

c) Data from other project efforts that supports the active layer depth chosen should be presented it in the next report

d) Reevaluate if this is an accurate representation for modeled high flow event (95th percentile flow). Include evaluation of maximum scour (not net) over the event, and see if active layer depth is scoured over substantial portions of site.

e) Impacts of high erosion events will be evaluated outside of the Hybrid model using the EFDC modeled erosion depths and subsurface core chemistry data.

5) Comment 25 - Agree on correct equation for FSW. It was agree that:

a) A more complex diffusion equation that accounts for concentration gradient impacts on diffusion rates should be incorporated into the model, if possible

b) Sensitivity analysis where diffusion is turned completely on and off will be tested.

6) Comment 27 (and others) - Agree on units for CSS. It was agreed that the LWG will double check that raw data is in kg/L. If not, conversion to kg/L will be presented in next report.

7) Comment 31 - If necessary, discuss methods for incorporating sediment consolidation in active layer. It was agreed that the LWG response suggested approach will be followed.

8) Comment 40 - Agree on calibration procedures for future model runs (including degradation values for HLS term). It was agreed that EPA will have to discuss this further internally before deciding on an approach.

9) Comment 42 - Discuss derivation of initial VW value and flow years for calibration run. It was agreed that the next report should discuss why the derivation of the initial VW value is a reasonable approach.

10) Comment 49 - Discuss "independent" calibration of AFT model. It was agreed that the actual flow years from the calibration data as modeled using EFDC will be used for future calibrations.

11) Comments 55 and 53 - Discuss acceptable goals/outcomes of calibration exercises. It was agreed that LWG will meet with EPA after the next set of calibrations and present the calibration results (e.g., in a meeting presentation) before embarking on the RI model runs.

12) Comments 56 and 65 - Discuss significance of resuspension to water column concentrations. It was agreed that no further action was needed other than to present additional data from model runs to support any conclusions about this issue.

13) Comment 58 - Agree on future sensitivity analysis runs. It was agreed that EPA would review the LWG detailed response of sensitivity analyses that cannot be done or have already been done to confirm the final list of additional sensitivity runs.

14) Comment 69 - Discuss incorporation of groundwater advection into model using existing data. The LWG will get back to EPA on suggested methods for incorporating groundwater advection into modeling. LWG will consider whether a technical memo, meeting, or simply presenting the approach in the RI is the best path forward to resolution.

15) Comments 74 and 78 - Agree on modeling/project schedule. It was noted that approximately earl April was the anticipated schedule for revised EFDC model runs incorporating SedFlume calibrations. Agreed to revisions to the Hybrid Model could also be made in this time. All Round 3 data and stormwater loads would be available approximately early June. Calibration model runs will commence approximately at this time, assuming those other parts are complete. EPA and LWG will meet after calibration runs complete. The LWG will get back to EPA with regards to a likely time for this calibration meeting (but an early September timeframe was discussed as a goal).

16) Comment 79 - Agree on method of comparison to existing sediment data for calibration purposes. It was agreed that more discussion was needed in the next report on the issues of comparing model cell results to existing sediment data given that empirical data can vary considerably within one model cell. It was also noted that the LWG and EPA have not yet fully discussed all the issues related to when to use SWACs and when not to.

Thanks.

Carl

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