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September 2, 2005

Ms. Kimberly Tisa
EPA New England, Region 1
1 Congress Street
Suite 1100 (CPT)
Boston, MA 02114-2023

Re: McCoy Field – Wetlands Restoration Project
Risk Based Cleanup Request
Response to Versar Supplemental Review Comments

Dear Ms. Tisa:

This letter responds to the supplemental Eco-Risk comments prepared by Versar that you forwarded to us via email on August 29th. The supplemental review comments were compiled by Versar, based upon their review of our response letter dated August 15, 2005. The (abbreviated) comments and our responses are as follows:

General Comment: If a congener specific analysis is not to be included in the report then the potential risk to ecological receptors from exposure to dioxin-like PCB congeners needs to be adequately addressed in the uncertainty section.

Response: The following changes are hereby made to the executive summary and uncertainty analysis sections of the ecological risk characterization report:

Executive Summary (additions in ***bold italics***)

The human health risk characterization assessed the potential risk posed by the Site to recreational receptors, pedestrians, and trespassers, all of which were assessed for the same level of exposure. These receptors were assessed for exposure through soil/sediment ingestion, soil/sediment dermal contact, inhalation of entrained soil particles (dust), surface water ingestion, and surface water dermal contact. Constituents of concern (COCs) included PCBs (as Aroclor 1254), thirteen PAHs, and the metals barium, cadmium, total chromium, lead, mercury, and selenium. ***Soil and sediment data were analyzed for PCBs as Aroclor mixtures, so information on the presence and concentrations of dioxin-like PCBs was not available. Therefore, risks associated with exposure to dioxin-like PCBs were not estimated. This may underestimate total risks posed to exposed human and environmental receptors.***

4.4.1 Uncertainties Associated with Site Data (additions in ***bold italics***)

One hundred twenty two (122) to 124 soil/sediment samples collected from a depth interval of 0 to 6 inches were applied to the risk characterization, depending on the analyte. These samples were collected from throughout the wetland area. The number, location, and depth of the soil/sediment samples are judged to contribute a low degree of uncertainty to the risk characterization.

Soil samples were analyzed for PCBs (as various Aroclor types), PAHs, pesticides (which were not detected), and RCRA metals. The analytical suite was based on the release type and results from sampling conducted in the upland area and is judged appropriate. A low degree of uncertainty is associated with the scope of analyses.

Because soil and sediment data were analyzed for PCBs as Aroclor mixtures, information on the presence and concentrations of individual polychlorinated biphenyl constituents (e.g., congeners) was not available. A dozen PCB congeners (PCB-77, -81, -105, -114, -123, -126, -156, -157, -167, -169, and -189) are believed to possess dioxin-like effects. Exposure to these congeners could provide additional risk to exposed humans over the risk estimate derived for total PCBs. Although information is available on the percentage of dioxin-like PCBs in commercial Aroclor mixtures, it is not considered appropriate to use such composition data to estimate environmental media concentrations of specific PCB congeners, since the composition of PCB mixtures will change over time after release to the environment. For these reasons, risks associated with exposure to dioxin-like PCBs were not estimated. A moderate degree of uncertainty is associated with this omission and may underestimate total risks posed to exposed human receptors.

Overall, the uncertainty associated with Site data is judged low ***to moderate***.

5.4.1 Uncertainties Associated with Site Data (additions in ***bold italics***)

Soil/sediment from the wetland area was sampled in December 2004, January 2005, and April 2005 from 0-6 inches throughout the wetland area. These data are anticipated to provide minimal uncertainty to the risk characterization.

Because soil and sediment data were analyzed for PCBs as Aroclor mixtures, information on the presence and concentrations of individual polychlorinated biphenyl constituents (e.g., congeners) was not available. A dozen PCB congeners (PCB-77, -81, -105, -114, -123, -126, -156, -157, -167, -169, and -189) are believed to possess dioxin-like effects. Exposure to these congeners could provide additional risk to exposed environmental receptors over the risk estimate derived for total PCBs. Although information is available on the percentage of dioxin-like PCBs in commercial Aroclor mixtures, it is not considered appropriate to use such composition data to estimate environmental media concentrations of specific PCB congeners, since the composition of PCB mixtures will change over time after release to the environment. For these reasons, risks associated with exposure to dioxin-like PCBs were not estimated. A moderate degree of uncertainty is associated with this omission and may underestimate total risks posed to exposed environmental receptors.

Overall, the uncertainty associated with Site data is judged low to moderate.

Specific Comment: Section 5.2.2.2 - Aquatic Invertebrates and evaluation of sediment pathway. It is understood that sediment benchmark concentrations may not be accurate to use in the analysis if they do not consider site-specific factors such as total organic content (TOC).

It may be preferable, however, to use a modified sediment benchmark concentration (e.g., the equilibrium partitioning method) which accounts for TOC in sediment, rather than not including sediment exposure in the evaluation for aquatic invertebrates.

Response: This is, in fact, what was done, but in reverse. Aquatic invertebrates were assumed exposed to sediment interstitial water concentrations resulting from partitioning of constituents from sediment to interstitial water, using the equilibrium partitioning approach and Site-specific total organic carbon (TOC), and then comparing the interstitial water concentrations to water-based TRVs. To derive modified sediment benchmark concentrations, one would start with the water-based TRV and predict a bulk sediment concentration using the equilibrium partitioning approach and Site-specific total organic carbon (TOC), and then compare the Site sediment concentrations with these benchmarks. Both ways are based on the TRVs and TOC and assess Site sediments, but are just expressed differently.

We trust the above responses address the concerns raised in Versar's review. Please call either Cyndee Fuller (401/330-1220) or Al Hanscom (781/255-1982) with any questions related to the above responses, or any further comments that may arise.

Very truly yours,

BETA GROUP, INC.

Alan D. Hanscom, P.E., LSP
Associate

ESS GROUP, INC.

Cynthia Fuller

Cynthia Fuller
Risk Assessor

Attachments

Cc: Scott Alfonse, City of New Bedford
Sarah Porter, City of New Bedford
Jacqueline Coucci, City of New Bedford
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