UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2

DATE: May 12, 2010

SUBJECT: Biological Technical Assistance Group Review
Kentucky Avenue Wellfield - Koppers Pond
Ecological Risk Assessment Steps 3 Through 5

FROM: Vince Pitruzzello, Chair
Biological Technical Assistance Group (ERRD-TSB)

TO: Isabel Rodrigues, Project Manager
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The following comments represent the Region II Biological Technical Assistance Group (BTAG) review. The document reviewed was the draft, "Ecological Risk Assessment Steps 3 Through 5 Koppers Pond," dated February 9, 2010 and prepared by Integral Consulting, Inc. for the Kentucky Avenue Wellfield Site, OU 4 located in Horseheads, New York. These comments include input from NYSDEC.

Section 3.1.1 Refined Surface Water COPEC Screening, Surface Water Inorganics, pages 3-2 – 3-3: It is unclear how a comparison of magnesium concentrations in the pond and outlets would indicate that concentrations "represent an existing condition that does not reflect any contribution from Site-related chemicals." This discussion should be removed from the workplan. However, as magnesium is an essential nutrient it may be removed from the contaminant of concern list as it does not need to be further evaluated in the BERA.

Section 3.1.2 Refined Sediment COPEC Screening, page 3-3: In order to enhance the transparency of the "refinement of contaminants of concern" and ensure that this process is clearly understood, data tables showing SLERA and BERA screening values, along with exceedances of the BERA values should be provided. In addition, site figures showing BERA exceedances would also be useful.

Section 3.1.2 Refined Sediment COPEC Screening, page 3-3: Please include a discussion of the range of TOC concentrations in the pond sediments, mudflat areas and outlet channel sediments and note whether elevated concentrations of contaminants are associated with areas noted to have higher TOC concentrations.

Section 3.1.2 Refined Sediment COPEC Screening, Sediment VOCs, page 3-2: Please note that the acetone ESV from Region 6 (TCEQ) is also based on equilibrium partitioning and assumed 1% TOC.

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Section 3.1.2 Refined Sediment COPEC Screening, Sediment Inorganics, page 3-5: Site-specific reference data may be used to screen out inorganic contaminants whose concentrations are equal to or below reference inorganic values. However, the use of the USGS Hudson River Watershed and National Geochemical Database – Reformatted Data from the National Uranium Resource Evaluation (NURE) Hydrogeochemical and Stream Sediment Reconnaissance (HSRR) Program is not acceptable. There are several concerns associated with using this database, including but not limited to: 1) It is unclear whether the 28 sediments (Elmira quadrant) characterized represent a similar environment to Koppers Pond; 2) It is unknown whether the 28 sediment samples were collected from contaminated locations; and 3) Sampling methodology and analysis are unknown. Any inorganics (aluminum and iron) removed as a contaminant of concern based on regional reference data should be retained until data are available from an appropriate reference pond. Section 4.1.5 Collection of Sediment and Biota Samples from a Reference Pond should be revised to indicate that inorganic analysis will be included in all media, and inorganics in reference sediment may be used to screen out inorganics identified in site sediments.

Section 3.1.2 Refined Sediment COPEC Screening, Sediment Inorganics, *Antimony*, page 3-5: Please provide information regarding how the "probable no effects concentration" reported by the European Chemicals Bureau of the European Union was derived.

Section 3.1.2 Refined Sediment COPEC Screening, Sediment Inorganics, Selenium, page 3-8: The second to last sentence in this section indicates that "the comparability of the outlet channel and mudflat samples suggests that these values may be similar to regional background concentrations." It is unclear which background samples this statement is referring to, nor is it understood how this determination can be made due to the similarity in selenium concentrations.

Section 3.1.3 Refined Forage Fish COPEC Screening, page 3-9: A discussion should be included regarding the size of the fish commonly consumed by the piscivorous receptors selected. If the receptors are known to consume larger game fish, than data from both the smaller forage fish and larger fish need to be used to model risk to piscivorous receptors. As the remaining carcass of the game fish was not analyzed for contaminants, a fillet to whole fish ratio needs to be used to estimate whole body contaminants prior to further analysis in the BERA. For example, ratios for mercury and total PCB (tPCB) are available in the Onondaga Lake Baseline Ecological Risk Assessment, Volume 1 of 2, (2002). The ratio of fillet to whole body fish for tPCBs is 2.5; therefore, simply multiply the fillet concentrations by 2.5 for an estimate of whole body fish tPCB. The fillet to whole body ratio will need to be applied for all COPECs, and an analysis will need to be done to determine if the extrapolated game fish exceed tissue criteria. Alternately, additional fish collection can be conducted at Koppers Pond.

Section 3.2 Developing A Refined Conceptual Site Model, page 3-11: Please provide more information to support the last bullet in this section.

Section 3.3 Identifying Assessment and Measurement Endpoints to Frame the Evaluation, page 3-11: This section should be consistent (e.g. identify similar organisms) with Section 3.5 Selecting Representative Receptors To Be Evaluated Further In The ERA. An assessment endpoint for the benthic invertebrate community should be included in this list of endpoints. Measurement endpoints should include comparing measured sediment and surface water concentrations to appropriate screening values as well as conducting toxicity tests. Assessment endpoints identifying herbivorous birds (in addition to piscivorous birds) as well as herbivorous mammals should be included as well.