



HOUSATONIC REST OF RIVER MUNICIPAL COMMITTEE

January 20, 2022

Dean Tagliaferro, EPA Project Manager
GE-Pittsfield/Housatonic River Site
Boston, MA
Submitted via email to R1Housatonic@epa.gov

Re: Comments on the *Pre-Design Investigation Work Plan for Reach 6*

Dear Mr. Tagliaferro:

The Housatonic Rest of River Municipal Committee (the Committee) respectfully submits the following comments on the *Pre-Design Investigation Work Plan for Reach 6* (hereafter referred to as the Reach 6 PDI Work Plan).

While the Reach 6 PDI Work Plan adheres to the general requirements set forth in the Final Revised SOW and the Revised Final Permit, the Committee has significant concerns. In order to meet the established performance standards it is likely that recently-deposited surface sediments will be removed. Although historical data indicate that the highest PCB concentrations are in the surface sediments, 10-20 years have passed since these data were collected, and sediments have continued to accumulate. These newer sediments should have relatively low concentrations of PCBs and removal of the surface sediments may expose some of the most contaminated sediment layers.

EPA should require that the Plan be revised to address potential additional data quality objectives and sampling needs, interpretation of the historical data, and potential issues of data quality that need to be evaluated before relying on this historical information. The Committee's full comments on the *Pre-Design Investigation Work Plan for Reach 6* are enclosed as Attachment A.

Sincerely,
The Housatonic Rest of River Municipal Committee

Enclosure: Attachment A - Housatonic Rest of River Municipal Committee Comments on the Pre-Design Investigation Work Plan for Reach 6

Enclosure: Attachment B - Technical Assistance Services for Communities Comments, January 9, 2023

ATTACHMENT A
HOUSATONIC REST OF RIVER MUNICIPAL COMMITTEE
Comments on the *Pre-Design Investigation Work Plan for Reach 6*
GE/Housatonic River - Rest of River

The *Pre-Design Investigation Work Plan for Reach 6* (hereafter referred to as the Reach 6 PDI Work Plan) adheres to the general requirements set forth in the Final Revised SOW and the Revised Final Permit. However, EPA should require that the Plan be revised to address the following:

- Potential additional data quality objectives and sampling needs in specific areas, such as the headwaters transition area immediately downgradient of Reach 5C, and specific areas within Woods Pond (shallow areas with deep sediments, near shore and the channel immediately upgradient of the Dam).
- Interpretation of the historical data used to design the proposed sampling efforts, and to be relied on for certain sample results.
- Potential issues of data quality that need to be evaluated before relying on this historical information.

In addition, the Committee offers the following comments:

1. The Woods Pond (Reach 6) Revised Final Permit performance standards state “sediment shall be removed throughout the pond and an Engineered Cap shall be placed over residual PCBs to result in a post-capping minimum water depth of 6 feet measured from the crest of the dam, except in near shore areas where the slope from the shore to the 6-foot water depth shall be as steep as possible...”. In essence, the amount of sediment to be removed is not based on PCB content; it is based on a bathymetry endpoint. To achieve the bathymetry endpoint, it is likely that the recently-deposited surface sediments will be removed. Historical data indicate that the highest PCB concentrations are in the (historical) surface sediments. However, 10-20 years have passed since these data were collected, and sediments have continued to accumulate. These newer sediments should have relatively low concentrations of PCBs. If the remedy action for Woods Pond is to ‘remove all sediments’ (with no defined depth interval), it seems possible that some of the most contaminated sediment layers may be exposed by the removal. It is not clear if all sediment is to be removed. The Reach 6 PDI Work Plan does not mention if ‘subsurface’ sediment PCB concentration results will (or will not) affect the remedy design.

EPA should require that subsurface sediment PCB results from the proposed PDI sampling will influence the forthcoming PDI work plan for Woods Pond.

2. The amount of sampling completed and proposed for Reach 6 is substantial. The Reach 6 PDI work plan proposes strategic sample collection of depth fractions with possible data gaps

informed by previous PCB concentration information. Some of these data date back to the 1998-2002 EPA investigations. There are several uncertainties associated with the use of historical data:

- Additional samples need to be collected to determine whether the historical PCB concentrations remain comparable to current PCB conditions.
- Historical data from the 2003 RFI revealed elevated detection limits due to the analytical and preparation methods that were available at the time of this study that may no longer be appropriate.
- Each proposed sampling location should be compared to archive samples to determine if conditions have changed since the historical sample was collected.

At a minimum, GE should be required to review the historical results in comparison to current site conditions in order to fully understand if the historical results accurately reflect current conditions.

3. As per methods described in EPA's Contaminated Sediment Remediation Guidance for Hazardous Waste Sites (EPA, 2005), it works well to conduct sampling of biota, soil/sediment and water chemistry concurrently to gain a thorough snapshot-in-time of the exposure and effect conditions on all media in contaminated settings. Co-located spatial and temporal sampling efforts should be considered to possibly gain useful information that may identify current or baseline cause-and-effect relationships of PCB-contaminated soil and sediment on the ecological communities in the natural settings. Similarly, any encountered cultural resource during Reach 6 PDI Work Plan sampling would amend the CRA inventory and assessment.
4. Woods Pond is a strategic element to the Revised Final Permit 'Downstream Transport' performance standard (Revised Final Permit pdf pages 17 - 19). This standard states that "the Downstream Transport Performance Standard shall be the PCB flux over Woods Pond Dam and Rising Pond Dam" where upon completion of construction-related activities, there will be a monitored flow-weighted PCB flux (expressed in kg/yr.). It seems important to begin collecting baseline and pre-remedy action monitoring before any construction, to observe changes in PCB flux over time. The Reach 6 PDI Work Plan does not mention the Woods Pond role in the Downstream Transport Performance standard. GE should incorporate baseline PCB flux monitoring at the Woods Pond into the Reach 6 PDI Work Plan.
5. The focus of Reach 6 is Woods Pond; however, the headwaters transition zone area (500- to 900-foot portion of the headwaters leading into Woods Pond) is a transition zone between the downstream end of Reach 5C and Woods Pond. The post-capping minimum water depth applicable to Woods Pond property does not apply to this portion of Reach 6. In addition, Attachment E of the Revised Final Permit (pdf page 141, fourth bullet) states that "EPA agrees

to work with GE to design an appropriate transition and hybrid disposal averaging area in the Woods Pond Headwaters area between Reach 5C and Woods Pond.” It appears that the exact disposition of contaminated materials within this area remains unknown.

Disposal (off-site/out-of-State vs. reliance on the Upland Disposal Facility) is dependent on media average PCB concentrations. This headwaters transition zone borders a backwater area and envelops Core Areas 1 and 2, which have discrete total PCB performance standards (>50 milligrams per kilogram [mg/kg] in surficial sediment). Given the unique setting of this area, it is important to design Reach 6 sampling to completely characterize the area so that the ‘appropriate transition and hybrid’ disposal practice can be designed. It may be consistent and prudent to follow Revised Final Permit standards that are applicable to backwaters habitats. If this area adheres to sampling practices (and Performance standards) that are comparable to other ‘backwater’ areas, the proposed sampling may need to be revised; backwaters sampling for PCBs in sediment relies on a method for averaging surface and subsurface PCB concentrations using a 50-foot grid (Revised Final Permit pdf page 32), rather than the proposed 200-foot grid size. In addition, given the potential ecological habitat value this area may provide, it would likely be valuable to coordinate treatment with natural resource stakeholders such as the Massachusetts Division of Fisheries and Wildlife.

The Committee has significant concerns regarding the proposed 200-foot grid size. GE should work with EPA to address applicable performance standards and the timing for associated sampling strategies for the headwaters transition zone area that occurs above-gradient of Woods Pond.

6. The Reach 6 PDI Work Plan states the sediment removal in Reach 6 (which includes Woods Pond) will be conducted in parallel with sediment/soil removal in Reach 5A. Engineered capping in Woods Pond will be delayed until all sediment and soil removal, backfill/capping, and placement of sediment amendments is complete in upstream RUs (i.e., Reaches 5A, 5B, and 5C). It will be important to develop this future monitoring plan in coordination with this proposed sampling in the Reach 6 PDI Work Plan, to develop a sampling strategy that will capture ‘before and after’ PCB concentration trends.

The proposed pre-engineered cap design monitoring program should be developed to coordinate with the proposed sampling described herein in order to capture changes in PCB trends before and after remedy actions.

7. Section 2 - It is not clear why this section does not provide data summaries from which the section summaries are drawn. To enable transparency of the proposed sampling design process, it would be useful for this document to provide an attachment with data summaries that were relied on from previous studies. It is also unclear why there is no discussion of the available data for riverbank soils in Reach 6.

The Reach 6 PDI Work Plan defers discussion of vernal pools to a later date, indicating that these features may be absent. However, data for three vernal pool samples within Segment 6 are available (pdf page 366 of the 2003 RFI). RFI results state that vernal pool samples were collected (from 0-6 inches) with PCB concentrations of 2.3, 3.2 and 109 mg/kg. There is no data from other depths, so vertical delineation of PCBs in vernal pools could not be performed. However, one out of the three results exceed the vernal pool performance criteria of 3.3 mg/kg; it could be helpful for these historical data to be considered as part of this assessment.

GE should include data summaries relied on for the proposed sampling designs and should include an explanation of whether historical data from riverbank soils and vernal pools were not evaluated as part of this Reach 6 PDI Work Plan.

8. Section 2.1 states that EPA sampling between 1998 and 2002 collected about 700 sediment samples within Reach 6. The section provides surface sediment summary statistics and general PCB trends from these sampling events. GE should provide Figure 4-8 and Table 4-8 from the 2003 RFI for reference in this document, including the entire sediment data set (all 700 samples) used to define PCB nature and extent. In addition, a more thorough presentation of the data relied on for this document should be shared to better understand the rationale behind the sampling design decision process.
9. Section 3.1 summarizes applicable Data Quality Objectives (DQOs) for the proposed sampling efforts. It may be appropriate to develop specific DQOs for the headwaters/transition zone sampling because treatment of contaminated materials in this area has not been determined and could help the characterization of nearshore Woods Pond sediments that will likely remain in place post-remedy. In addition, it appears that DQO 9 (pdf page 16) should likely include Core Area 2, as it overlaps with the Core Area 1 (maps in Attachment B of the Revised Final Permit, pdf pages 108-110).

GE should amend the DQOs in Section 3.1 to include objectives appropriate to the headwaters/transition area and the Woods Pond nearshore area.

10. The proposed sediment sampling program shown in Figure 3-2 captures a consistent approach to characterize all sediments to be disposed of. This information is necessary to identify the suitable sediment disposal repository. However, the proposed sampling could characterize:
 - Shallow sediments that will need to be removed to achieve the necessary depth for the engineered cap installation.
 - Nearshore sediments to characterize PCB nature and extent in sediments likely to remain in place after remedial action.
 - The channel (immediately upgradient of the Dam) where historical (and potentially contaminated) sediments may have accumulated.

GE should amend the proposed sediment sampling in Woods Pond to target shallow sediment depositional areas that are known to be removed, nearshore line areas that are likely to remain, and channel areas before the Dam.

11. Section 3.3.1 describes the proposed sediment core samples to be collected throughout Woods Pond and the headwaters transition zone. There are 18 proposed core samples for the headwaters transition zone. Since the treatment of the headwaters transition area is unknown, it is important to analyze and interpret all available data gathered during this sampling effort. All of the core depth fractions gathered from the headwaters transition zone should be analyzed and evaluated proactively, as the ultimate treatment of the contaminated media from this area is unknown.



Technical Assistance Services *for* Communities GE-Pittsfield/Housatonic River Site Comments on Pre-Design Investigation Work Plan for Reach 6 January 9, 2023

Contract No.: 68HERH21A0018

Call Order Number: 68HERH22F0082 (14.0.0 OSRTI – Regional & Headquarters
TASC/CI Support)

Technical Direction: R1 2.7.14 GE Pittsfield

**Technical Assistance Services for Communities (TASC)
Comments on GE-Pittsfield/Housatonic River Site –
Pre-Design Investigation Work Plan for Reach 6,
November 2022**

Introduction

This document provides TASC comments on the GE-Pittsfield/Housatonic River Site – Pre-Design Investigation Work Plan for Reach 6 (the Reach 6 PDI Work Plan). This document is for the Berkshire Regional Planning Commission (BRPC) and municipalities to use as they develop comments to share with the U.S. Environmental Protection Agency (EPA). TASC does not make comments directly to EPA on behalf of communities. This document is funded by EPA’s TASC program. The contents do not necessarily reflect the policies, actions or positions of EPA.

GE is required to prepare pre-design investigation work plans for the collection of data to support design of the Rest of River (ROR) remedial activities. This requirement is pursuant to Section II.H.3 of the Revised Final Resource Conservation and Recovery Act (RCRA) Permit Modification (Revised Final Permit) issued by EPA to GE on December 16, 2020, for the ROR portion of the GE-Pittsfield/Housatonic River site. Requirements for Pre-Design Investigation (PDI) work plans for ROR areas are specified in Section 4.2.3.1 of the Final Revised Rest of River Statement of Work (Final Revised SOW) submitted by GE and approved by EPA in September 2021. The Reach 6 PDI Work Plan includes the plan for sediment removal in Reach 6, which includes Woods Pond. Reach 6 sediment removal will be conducted in parallel with sediment/soil removal in Reach 5A; sediment removal in both reaches will be completed at about the same time.

Summary

The November Reach 6 PDI Work Plan has five sections and one Appendix:

- Introduction.
- Summary of Prior Reach 6 Investigations and Field Surveys.
- Pre-Design Investigation Activities.
- Schedule and Reporting.
- References.
- Appendix A – Proposed Floodplain PCB Sample Tracking Matrix.

While sediment and floodplain soil removal in Reach 6 will be conducted in parallel with sediment/soil removal in Reach 5A, engineered capping in Woods Pond will be delayed until sediment and soil removal, backfill/capping, and placement of sediment amendments has been completed in all upstream remediation units (RUs), which include Reaches 5A, 5B, and 5C. Remediation in Woods Pond will involve removal and engineered capping of sediments in the pond. The delay in cap placement is anticipated to be about 5 to 6 years. This Reach 6 PDI Work Plan describes only the PDI activities and data collection required to support the sediment and floodplain soil removal components of the remedy in Reach 6. An addendum to this Reach 6 PDI Work Plan will be prepared in the future to propose additional PDI data collection needed to support the engineered capping component of the remedy for this reach.

TASC Comments

Review of the GE-Pittsfield/Housatonic River Site, Rest of River, Reach 6 PDI Work Plan indicates that this document adheres to the general requirements set forth in the Final Revised SOW (pdf page 45-47, Section 4.2.3.1) and the Revised Final Permit (pdf pages 17-21; 30-33; 102-110; and 140-142). TASC comments below are centered primarily on:

- Potential additional data quality objectives and sampling needs in specific areas, such as the headwaters transition area immediately downgradient of Reach 5C, and specific areas within Woods Pond (shallow areas with deep sediments, near shore and the channel immediately upgradient of the Dam).
- Interpretation of the historical data used to design the proposed sampling efforts, and to be relied on for certain sample results. There may be issues of data quality that need to be evaluated before relying on this historical information.
- Possible concerns regarding the schedule associated with the required vernal pool inventory. TASC also raises the possibility of combining the proposed sampling with any planned biological measurements (e.g., abundance of species) to gain a real-time snapshot of the ecological conditions from which potential cause-and-effect relationships could be drawn (e.g., low species abundance as related to high PCB levels).

Specific TASC comments are:

1. The Woods Pond (Reach 6) Revised Final Permit performance standards state “sediment shall be removed throughout the pond and an Engineered Cap shall be placed over residual PCBs to result in a post-capping minimum water depth of 6 feet measured from the crest of the dam, except in near shore areas where the slope from the shore to the 6-

foot water depth shall be as steep as possible...” (pdf page 32). In essence, the amount of sediment to be removed is not based on PCB content; it is based on a bathymetry endpoint. To achieve the bathymetry endpoint, it is likely that the recently-deposited surface sediments will be removed. Historical data (such as data obtained from the 2003 Resource Conservation and Recovery Act (RCRA) Facilities Investigation (RFI) and more recent sampling in 2010, etc.) indicate that the highest PCB concentrations are in the (historical) surface sediments. However, 10-20 years have passed since these data were collected, and sediments have continued to accumulate. These newer sediments should have relatively low concentrations of PCBs. If the remedy action for Woods Pond is to ‘remove all sediments’ (with no defined depth interval), it seems possible that some of the most contaminated sediment layers may be exposed by the removal. It is not clear if all sediment is to be removed. The Reach 6 PDI work plan does not mention if ‘subsurface’ sediment PCB concentration results will (or will not) affect the remedy design.

The community may want to ask EPA if subsurface sediment PCB results from the proposed PDI sampling will influence the forthcoming PDI work plan for Woods Pond.

2. The amount of sampling completed and proposed for Reach 6 is substantial. The Reach 6 PDI work plan proposes strategic sample collection of depth fractions with possible data gaps informed by previous PCB concentration information. Some of these data date back to the 1998-2002 EPA investigations. The use of historical data is an acceptable strategy, but there are several uncertainties associated with this approach:
 - This approach assumes the historical PCB concentrations remain comparable to current PCB conditions. It seems appropriate to collect a small number of samples during the PDI effort to test this assumption.
 - This approach assumes the data quality of the historical analysis is accurate and precise. A cursory review of historical data from the 2003 RFI revealed elevated detection limits (due to the analytical and preparation methods that were available at the time of this study) that may no longer be appropriate.
 - In settings affected by soil/sediment deposition and movement (i.e., from flooding), the value of historically-gained information at a defined depth becomes uncertain. It may be appropriate to compare each proposed sampling location to archive samples to determine if conditions have changed since the historical sample was collected.

The community may want to ask if a review of the historical results and comparison to current site conditions will be a part of the PDI efforts in order to fully understand if the historical results accurately reflect current conditions.

3. The ROR schedule necessitates addressing field elements of sampling and inventory in sequence or separately. For instance, the Baseline Restoration Assessment acquires baseline assessment of pre-remediation conditions, functions and values of river bottom, bank, Backwater, Floodplain, Impoundment and Vernal Pool habitat, and the occurrence

of threatened, or endangered species. Similarly Cultural Resources Assessments (CRA) are being completed before final remedy design to avoid resource impacts. As per methods described in EPA's Contaminated Sediment Remediation Guidance for Hazardous Waste Sites (EPA, 2005), it works well to conduct sampling of biota, soil/sediment and water chemistry concurrently to gain a thorough snapshot-in-time of the exposure and effect conditions on all media in contaminated settings. Co-located spatial and temporal sampling efforts should be considered to possibly gain useful information that may identify current or baseline cause-and-effect relationships of PCB-contaminated soil and sediment on the ecological communities in the natural settings. Similarly, any encountered cultural resource during Reach 6 PDI Work Plan sampling would amend the CRA inventory and assessment.

The community may want to ask if continued observation of ecological and cultural resources features could occur during the proposed Reach 6 PDI Work Plan sampling in order to understand the relationship between PCB contamination and biotic assemblage characteristics such as species abundance, as well as acquire additional CRA inventory.

4. Woods Pond is a strategic element to the Revised Final Permit 'Downstream Transport' performance standard (Revised Final Permit pdf pages 17 - 19). This standard states that "the Downstream Transport Performance Standard shall be the PCB flux over Woods Pond Dam and Rising Pond Dam" where upon completion of construction-related activities, there will be a monitored flow-weighted PCB flux (expressed in kg/yr.). It seems important to begin collecting baseline and pre-remedy action monitoring before any construction, to observe changes in PCB flux over time. The Reach 6 PDI Work Plan does not mention the Woods Pond role in the Downstream Transport Performance standard.

The community may want to ask EPA if baseline PCB flux monitoring at the Woods Pond could be incorporated into the PDI work plan.

5. The focus of Reach 6 is Woods Pond. However, treatment of the headwaters transition zone area (500- to 900-foot portion of the headwaters leading into Woods Pond) is a transition zone between the downstream end of Reach 5C and Woods Pond. The post-capping minimum water depth applicable to Woods Pond property does not apply to this portion of Reach 6. In addition, Attachment E of the Revised Final Permit (pdf page 141, fourth bullet) states that "EPA agrees to work with GE to design an appropriate transition and hybrid disposal averaging area in the Woods Pond Headwaters area between Reach 5C and Woods Pond." It appears that the exact disposition of contaminated materials within this area remains unknown.

Disposal (off-site/out-of-State vs. reliance on the Upland Disposal Facility) is dependent on media average PCB concentrations. This headwaters transition zone borders a backwater area (BWL_10 as shown in Figure 3-17 of GE 2010, pdf page 260) and envelops Core Areas (1 and 2; as shown in Core Habitat maps in Attachment B to the Revised Final Permit, pdf pages 108-110), which have discrete total PCB performance

standards (>50 milligrams per kilogram [mg/kg] in surficial sediment). Given the unique setting of this area, it may be important to design Reach 6 sampling to completely characterize the area so that the ‘appropriate transition and hybrid’ disposal practice can be designed. It may be consistent and prudent to follow Revised Final Permit standards that are applicable to backwaters habitats. If this area adheres to sampling practices (and Performance standards) that are comparable to other ‘backwater’ areas, the proposed sampling may need to be revised; backwaters sampling for PCBs in sediment relies on a method for averaging surface and subsurface PCB concentrations using a 50-foot grid (Revised Final Permit pdf page 32), rather than the proposed 200-foot grid size. In addition, given the potential ecological habitat value this area may provide, it would likely be valuable to coordinate treatment with natural resource stakeholders such as the Massachusetts Division of Fisheries and Wildlife.

The community may want to ask EPA about applicable performance standards and the timing for associated sampling strategies for the headwaters transition zone area that occurs above-gradient of Woods Pond.

6. The Reach 6 PDI Work Plan states the sediment removal in Reach 6 (which includes Woods Pond) will be conducted in parallel with sediment/soil removal in Reach 5A. The Reach 6 PDI Work Plan indicates that “in the event that vernal pools are identified in the Reach 6 floodplain, Section II.B.3.b sets forth the applicable Performance Standards... etc.”. The document also states (Footnote 3, pdf page 14) the Data Quality Objectives (DQOs) do not include characterizing the existing habitat in Reach 6 since it is covered by GE’s Revised Baseline Restoration Assessment Work Plan for ROR Reaches 5B through 8 (AECOM 2022). Historical vernal pools have been identified (Figure 5-5, pdf page 300 of the 2003 RFI) and as per the BRA WP (pdf page 39-40), “Reach 6 vernal pools are to be identified using remote sensing data (e.g., aerial photographs from various dates over the past 20+years) and the results of previous or current field surveys (e.g., the Example Area surveys in 2009, the PDI topographic survey of the PSA [Primary Study Area]) will be reviewed to determine if there are other potential amphibian breeding/vernal pool habitat areas that could constitute vernal pools.” The BRA WP also states that information on vernal pools in Remedy Units (RUs) downstream of Reach 5A may require a second year of vernal pool surveys to make a final determination of whether the vernal pool meets Massachusetts Natural Heritage and Endangered Species Program (MNHESP) guidelines to be a certified pool (BRA WP pdf page 41). Vernal pools contain sediment with defined performance standards. To provide a complete sampling plan for sediment removal vernal pools and amphibian habitats need to be identified so that they can be sampled appropriately.

The community may want to ask EPA if vernal pools can be identified to make a final determination on vernal pool cleanup needs.

7. The Reach 6 PDI Work Plan states the sediment removal in Reach 6 (which includes Woods Pond) will be conducted in parallel with sediment/soil removal in Reach 5A. Engineered capping in Woods Pond will be delayed until all sediment and soil removal,

backfill/capping, and placement of sediment amendments is complete in upstream RUs (i.e., Reaches 5A, 5B, and 5C). It seems important to develop this future monitoring plan in coordination with this proposed sampling in the Reach 6 PDI Work Plan, to develop a sampling strategy that will capture ‘before and after’ PCB concentration trends.

The community may want to ask if the proposed pre-engineered cap design monitoring program could be developed to coordinate with the proposed sampling described herein in order to capture changes in PCB trends before and after remedy actions.

8. Section 2 provides a summary of prior Reach 6 investigations and field surveys. TASC had several general comments on the section, as well as individual subsections (Comment 9). General comments that pertain to the entire section are:
 - It is not clear why this section does not provide data summaries from which the section summaries are drawn. As stated in the ROR SOW, the PDI Work Plans are to “provide an evaluation and summary of existing PCB data and identification data needs” (pdf page 46). To enable transparency of the proposed sampling design process, it would be useful for this document to provide an attachment with data summaries that were relied on from previous studies (for example, Table 4-8 and Figure 4-8 from the 2003 RFI, pdf pages 308-310, and 246).
 - It is not clear why there is no discussion of the available data for riverbank soils in Reach 6. A narrative summary provided within the 2003 RFI (Subsection 5.4.3.2 pdf page 366) indicates that there were two riverbank soil samples collected; one from 0-0.5-foot interval with a PCB detection of 24 mg/kg and the second from 0.5-1-foot interval with a PCB detection of 17 mg/kg.
 - The Reach 6 PDI Work Plan defers discussion of vernal pools to a later date, indicating that these features may be absent. However, data for three vernal pool samples within Segment 6 are available (pdf page 366 of the 2003 RFI). RFI results state that vernal pool samples were collected (from 0-6 inches) with PCB concentrations of 2.3, 3.2 and 109 mg/kg. There is no data from other depths, so vertical delineation of PCBs in vernal pools could not be performed. However, one out of the three results exceed the vernal pool performance criteria of 3.3 mg/kg; it could be helpful for these historical data to be considered as part of this assessment.

The community may want to ask if data summaries relied on for the proposed sampling designs could be provided within this document, and to ask for an explanation why historical data from riverbank soils and vernal pools were not evaluated as part of this Reach 6 PDI Work Plan (or if they were evaluated, why this information was not included).

9. Section 2.1 summarizes the sediment PCB investigations that were compiled to assist with the Segment 6 PDI Work Plan. This section states that EPA sampling between 1998 and 2002 collected about 700 sediment samples within Reach 6. The section provides surface sediment summary statistics and general PCB trends from these sampling events.

This section relies on Table 4-8 of the 2003 RFI (pdf pages 308-310 of the 2003 RFI). TASC noted several observations on the Table 4-8 data:

- Data in Table 4-8 capture results from 476 samples collected from Woods Pond; the summary text states that about 700 sediment samples were collected. This suggests there are about 224 additional samples from Segment 6 available for additional evaluation.
- The Reach 6 PDI Work Plan states that “these previous investigations show that average PCB concentrations in this reach generally decrease with depth and are at or below 1 mg/kg at depths greater than six feet” (pdf page 11) and the data in Table 4-8 of the 2003 RFI demonstrate a trend of ‘decreasing PCB concentrations by depth.’ However, there are considerably fewer samples from depths greater than 6 inches (e.g., 113 samples collected from 0-6 inches while four samples or fewer were collected from each 6-inch depth intervals greater than 108 inches). The data distribution in Figure 4-8 (pdf page 246 of the 2003 RFI) provides a more thorough depiction of the data distribution (and uncertainty) by depth.
- The Segment 6 PDI Work Plan states that the maximum measured PCB concentration in surface sediment is 210 mg/kg, but some of the highest detections occurred below the surface layer (0-6 inches) at depths of 6-12 inches (244 mg/kg), 12-18 inches (224 mg/kg), 24-30 inches (229 mg/kg), and 42-48 inches (290 mg/kg).
- Data from Woods Pond could be considered ‘weighted’ for analysis of the surface sediment layer compared to sediment PCB results in deeper layers, which could create uncertainty in assumptions of the nature and extent of PCBs at depth.

The community may want to ask EPA to provide Figure 4-8 and Table 4-8 from the 2003 RFI for reference in this document, including the entire sediment data set (all 700 samples) used to define PCB nature and extent. The community may also want to ask EPA if a more thorough presentation of the data relied on for this document could be shared to better understand the rationale behind the sampling design decision process.

10. Section 3.1 of the Reach 6 PDI Work Plan summarizes applicable DQOs for the proposed sampling efforts. It may be appropriate to develop specific DQOs for the headwaters/transition zone sampling because treatment of contaminated materials in this area has not been determined (refer to Comment 5), and it could help the characterization of nearshore Woods Pond sediments that will likely remain in place post-remedy. In addition, it appears that DQO 9 (pdf page 16) should likely include Core Area 2, as it overlaps with the Core Area 1 (maps in Attachment B of the Revised Final Permit, pdf pages 108-110).

The community may want to ask EPA if the DQOs in Section 3.1 should be amended to include objectives appropriate to the headwaters/transition area and the Woods Pond nearshore area.

11. As acknowledged in the document, “there are no prescribed sediment sampling requirements in the Revised Final Permit or Final Revised SOW to meet the Performance Standards for Reach 6” (pdf page 9). The proposed sediment sampling program shown in Figure 3-2 (pdf page 36) captures a consistent approach to characterize all sediments to be disposed of. This information is necessary to identify the suitable sediment disposal repository. However, the proposed sampling could characterize:
- Shallow sediments that will need to be removed to achieve the necessary depth for the engineered cap installation.
 - Nearshore sediments to characterize PCB nature and extent in sediments likely to remain in place after remedial action.
 - The channel (immediately upgradient of the Dam) where historical (and potentially contaminated) sediments may have accumulated.

Based on TASC’s review, additional samples to capture shallow sediments could be collected in areas shown in Figure 3-2 between grid blocks B8-E9, the area between E8, F8, E9 and F9, and general shallow areas northeast and northwest within the pond. Also, samples could be collected at the shoreline around the perimeter of the pond to characterize PCB concentrations in materials likely to be left after remedial action. As shown in Figure 3-2, there are several historical nearshore samples that might help address this, if the data quality of these historical samples is adequate. Finally, the proposed samples to be collected at the channel immediately before the Dam are spaced significantly apart because “this approach is consistent with the transect spacing for channel sampling prescribed in Attachment E of the Revised Final Permit” (pdf page 17 of the document). This area may be a significant sediment depositional zone given its proximity to the Dam, and therefore may require additional samples.

The community may want to ask EPA to consider amending the proposed sediment sampling in Woods Pond to target shallow sediment depositional areas that are known to be removed, nearshore line areas that are likely to remain, and channel areas before the Dam.

12. Section 3.3.1 (pdf page 16) describes the proposed sediment core samples to be collected throughout Woods Pond and the headwaters transition zone. There are 18 proposed core samples for the headwaters transition zone. These cores “will be advanced to a depth of 4 feet below the existing mudline elevation or to a depth of refusal if encountered first.” Sediment cores will be sampled in 12-inch depth increments, “except that the bottom two feet of each core sample will be archived for potential future PCB analysis after review of analytical results” for the upper sampling intervals. These bottom depth increments are anticipated to represent sediment that will remain after dredging is complete. Since the treatment of the headwaters transition area is unknown, it is important to analyze and interpret all available data gathered during this sampling effort.

The community may want to ask if all of the core depth fractions gathered from the headwaters transition zone should be analyzed and evaluated proactively, as the ultimate treatment of the contaminated media from this area is unknown.

References Cited

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