SRRTTF-ACE
Specification No. 001-18
January 10, 2018

Technical Consultant Support to Spokane River Regional Toxics Task Force
2018 Technical Activities
Scope of Work

This document describes the activities to be conducted in support of the Spokane River Regional Toxics Task Force (SRRTTF) in their implementation of the Comprehensive Plan to Reduce PCBs in the Spokane River.

Work will initially be conducted through four tasks:

1. Continuing Task Force Support
2. Technical Track Work Group Support
3. PCB Mass Balances for Identified River Reaches
4. Individual Work Group Scoping Support

As described below, the fourth task is intended to provide for initial technical support for individual work groups as they develop a scope of work its project or projects. Once this initial scoping support has been completed, it is anticipated that this specification will be amended to incorporate the identified additional work required.

Each of the four current tasks is described below.

Task 1: Continuing Technical Support for Task Force

Supplier will provide technical support for the Task Force through the attendance by phone for all full Task Force meetings and Technical Track Work Group (TTWG) meetings. It is anticipated that full task Force meetings and TTWG meetings will be held on a monthly basis. Full Task Force meetings are expected to be no more than 4 hours in duration and TTWG meetings are expected to be no more than 2 hours in duration.

Task 2: Technical Track Work Group (TTWG) Support

On an as requested basis, it is anticipated that the TTWG will identify technical issues that it wishes to receive input on that are not directly connected to a specific Task. Supplier will provide requested in the form of a brief Technical Memorandum to the TTWG. Owner will provide authorization to proceed and an individual scope in writing for each request.

Task 3: PCB Mass Balances for Identified River Reaches

Based upon the inability to obtain the necessary river flow information during previous synoptic sampling events and the findings of the prior mass balance efforts, a repeat of the synoptic sampling event through identified river reaches is to be undertaken in support of the mass balances effort during low flow conditions in 2018. This repeated sampling event will take place in the reaches from Plantes Ferry Park (Trent Ave) to Greene Street (with an intermediate sampling location at Upriver Dam), from Greene Street to the Spokane Gage, and from the Spokane Gage to below Nine Mile Dam. In order to accomplish this task, the Supplier will:

- Prepare an overall summary of the field sampling plan that address the duration of the sampling event, sampling locations, flow measurement locations, analytical parameters to be measured and any other information relative to the sampling effort for QAPP preparation. This task is to be completed by February 28, 2018 to support QAPP preparation.

- Prepare an updated Quality Assurance Project Plan (QAPP) that describes the quality procedures, criteria and corrective actions associated with the analysis program conducted in the tasks described below. The QAPP will be the basis for ensuring the type and quality of environmental data and information needed for a specific decision and that the quantity and quality objectives of EPA's Quality System (EPA, 2001; Requirements for Quality Assurance Project Plans, EPA QA/R-5) are met. The purpose of the QAPP is to assure that calculations, evaluations, and decisions completed or deduced based on the results of the monitoring activities are accurate, appropriate, and consistent with the objectives of the water quality monitoring activities. A draft of the updated QAPP will be provided to the Task Force for review. After review by the Task Force, Ecology will also review the draft QAPP. Following Ecology acceptance of the draft QAPP, a final QAPP will be provided to the Task Force. This task is to be completed by April 15, 2018 so that other outside resources for sampling and laboratory analyses can be arranged for in advance of the sampling event during low flow conditions.

- Provide field support for the sampling effort identified above, including preparation of field logs and the preparation of a sampling event report to be finalized after Task Force review. Review all laboratory data relative to the data quality objectives specified in the QAPP.

- Conduct a homolog-specific mass balance analyses on the three river reaches identified above to determine the presence of other potential sources, and to calculate homolog distributions for any identified sources. LimnoTech will conduct mass balance analyses similar to those contained in the 2014 and 2015 Technical Activities Reports, but will modify those analyses to provide results by reach on a homolog-specific basis. For the Plantes Ferry to Greene Street reach, the reach will be divided into two segments: 1) the losing section from Plantes Ferry to just downstream of Upriver Dam, and 2) the gaining section from just downstream of Upriver Dam to Green St. Groundwater additions and losses for these sections will be based upon flow measurements conducted by USGS below Upriver Dam for Spokane County in September, 2015 as well as results from the Ground-Water Flow Model for the Spokane Valley-Rathdrum Prairie Aquifer.

- Supplier shall incorporate in its work effort the potential for including in the sampling event a sampling location at Barker Road and at Mirabeau. In addition, the potential for the collection of groundwater samples at the former General Electric site shall be included.

- The Supplier will provide:

    - Draft technical memorandum, documenting homolog-specific mass balance analyses
    - Presentation of draft results at Technical Track Work Group or Task Force meeting
    - Final technical memorandum, revised in response to comments from Task Force

Task 4: Individual Work Group Scoping Support

Supplier will assist identified Work Groups in the development of the scopes of work for their specific projects. Based upon the initial scoping work by the Work Group, Supplier will prepare a draft task description that will serve as the basis for amending this Specification.

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Budget and Schedule

BUDGET

Task	Task Description	Budget
1	Continuing Task Force Support	$15,000
2	Technical Track Work Group Support	$10,000
3	PCB Mass Balances for Identified River Reaches	$41,000
4	Individual Work Group Scoping Support	$10,000
Total		$76,000

SCHEDULE

Task	Task Deliverable	Completion Date
1	Continuing Task Force Support	12/31/18
2	Technical Track Work Group Support	12/31/18
3	PCB Mass Balances for Identified River Reaches	12/31/18
4	Individual Work Group Scoping Support	12/31/18

SRRTTF-ACE
Specification No. 001-18
Amendment No. 1
February 8, 2018

Technical Consultant Support to Spokane River Regional Toxics Task Force
2018 Technical Activities
Scope of Work

This amendment provides for support of the efforts related to the identification of groundwater sources upgradient of the Kaiser Trentwood facility.

Task 5: Groundwater PCB Sources Upgradient of Kaiser Trentwood Facility

The purpose of this task is to determine if PCB data being collected upgradient of the Kaiser Trentwood facility indicates an upgradient PCB source and if a source is present could it be contributing a PCB loading to the Spokane River. Additionally, can an assessment of that loading contribution be made.

This task will likely be carried out in phases as early-on sub-tasks provide information and direction for subsequent sub-tasks.

Sub-task 5A

Conduct on-site reconnaissance of existing monitoring well locations and the associated river reach and conduct necessary information collection activities in support of efforts to be undertaken related to Sub-task 5B through Sub-task 5D.

Sub-task 5B

Compile installation details for the five upgradient monitoring wells at Kaiser Trentwood identified in Sub-task 5C and confirm, if appropriate, that these monitoring wells are not impacted by any on-site conditions. At a minimum, well installation data to be compiled includes location (latitude/longitude), boring logs, well construction details and soil chemistry data. Prepare a technical memorandum containing all information compiled and findings of background assessment.

Compile all available information from Ecology and any other sources on existing monitoring wells upgradient of the Kaiser facility or adjacent upgradient areas that may exist for purposes of potential future groundwater contour mapping, modeling, or sampling.

- Location (latitude/longitude)
- Ownership
- Construction details (screened interval)
- Top of casing elevation (surveyed datum)
- Existing water chemistry data

Sub-task 5C

Compile PCB groundwater monitoring data (EPA Method 1668) from shallow aquifer monitoring wells and validate the data sets. In addition, compile collected field data (Temperature, pH, Specific Conductivity, Dissolved Oxygen, Turbidity, and ORP) associated with the PCB sampling event. Once their screened intervals have been verified, the shallow aquifer monitoring wells are to be divided into three categories, with sub-categories as appropriate:

- Kaiser upgradient/cross gradient monitoring wells
  - RM-MW-5S, MW-4, MW-11, MW-10, MW-5
- Kaiser downgradient/cross gradient monitoring wells (along river)
  - MW-16, MW-3, MW-25S, MW-23S, MW-15, MW-21S, MW-14, MW-19S, MW-13, MW-9, MW-8
- Kaiser on-site monitoring wells
  - RM-MW-08S, RM-MW-13S, RM-MW-15S, RM-MW-16S, RM-MW-17S, RM-MW-1S, HL-MW-17S, HL-MW-26S, HL-MW-29S, HL-MW-5, HL-MW-7S, HL-MW-25S, HL-MW-14S, HL-MW-30S, MW-17S, HL-MW-32S, HL-MW-23S, MW-12A, MW-27S, MW-28S

Prepare a technical memorandum containing all information compiled.

Sub-task 5D

Develop PCB profiles, such as Total PCB, homologue distributions, or other appropriate pattern analyses for each of the categories and sub-categories of monitoring wells identified. Based upon an analysis of the monitoring well PCB profiles developed for the categories and sub-categories identified, provide an assessment of the likelihood that groundwater PCB levels upgradient of the Kaiser facility are providing a PCB flux to the river through the Kaiser facility. Prepare a technical memorandum containing all information developed in preparing and providing the assessment referenced above and, if appropriate, any recommendations for conducting a more robust assessment.

Sub-task 5E

If supported by the assessment conducted in Sub-task 5D, prepare a technical memorandum that proposes and evaluates the efficacy of options that would quantify PCB flux rates to the river in this area via in river sampling or some alternative approach.

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BUDGET

Task	Task Description	Budget
5	Groundwater PCB Sources Upgradient of Kaiser Trentwood	
5A	On-Site Reconnaissance and Data Collection	$4,000
5B	Upgradient Well Information Collection and Compilation	$6,500
5C	Compile Kaiser Site Groundwater	$4,500
5D	Groundwater PCB Flux Assessment to River	$12,000
5E	Evaluation of Efficacy of Flux Rate Determination Options	$3,200
Total		$30,200

SCHEDULE

Task	Task Deliverable	Completion Date
5	Groundwater PCB Sources Upgradient of Kaiser Trentwood	
5A	On-Site Reconnaissance	March 31, 2018
5B	Technical Memorandum containing all information compiled and findings of upgradient validation	April 30, 2018
5C	Technical Memorandum containing all groundwater related data compiled	April 30, 2018
5D	Technical Memorandum containing all information developed related to the assessment of PCB flux to the river	April 30, 2018
5E	Technical Memorandum that proposes and evaluates the efficacy of options for determining PCB flux to the river	April 30, 2018