

## **APPENDIX A**

### **STATEMENT OF WORK AND DELIVERABLES**

#### **Introduction**

This Statement of Work (SOW) describes the planned CONTRACTOR activities through June 30, 2019.

The Spokane River Toxics Task Force is a group of governmental agencies, private industries, and environmental organizations who developed a plan to bring the Spokane River into compliance with water quality standards for polychlorinated biphenyls (PCBs). The objective of this statement of work is to identify and remove sources of PCBs in the Spokane River per the Spokane River Regional Toxics Task Force's 2016 Comprehensive Plan. Funding for this work is provided by the State General Fund.

The CONTRACTOR is leveraging funding from this contract with funding from other sources. The tasks will be completed using a combination of the funding sources. Therefore if funding for this contract expires but all the deliverables are not achieved, the additional funding sources will be used to complete the task and will be reported upon after final completion. The activities funded by ECOLOGY under this contract are described below along with its corresponding budget.

Based upon current understanding of the scope for each task (Task 1 through Task 8), the budget for each task may need to be revised in the future. Should a scope revision for any task result in the allocated funding for that task not being fully utilized, the surplus funding will be reallocated as appropriate to other tasks. Any reallocation of budget must be mutually agreed upon between the parties.

#### **Task 1: Develop Plan for the Identification of Suspected PCB Sources Up-gradient of Kaiser Aluminum**

In support of the SRRTTF's Comprehensive Plan Element 5.14 (Category C – Identification of Sites of Concern for Contaminated Groundwater), the CONTRACTOR in collaboration with ECOLOGY's Toxics Control Program will assure completion of the following:

- A. Mine existing data to assess potential significance of groundwater sites contributing PCBs to the Spokane River. The assessment will take the form of a homolog pattern analysis between existing groundwater and river data which includes the area up and downstream of the Kaiser site.
- B. Compile and review all up-gradient groundwater and related data collected by Kaiser Aluminum under Agreed Order No. 2692 and its amendments.
- C. Develop a strategy and sampling plan (quality assurance project plan) to determine the location of suspected PCB sources in the vicinity of the Spokane Industrial Park. This may involve the compilation of information on the availability of existing area groundwater monitoring wells, information on area groundwater flow direction, and area groundwater quality data.
- D. This task could potentially include the placement and sampling of new groundwater monitoring wells and is dependent upon receiving landowner permission and access.

Deliverables & Due Dates:

Copies of the following deliverables are to be provided to the ECOLOGY Contract Manager.

Deliverable	Due Date
Progress report of activities and associated costs	Quarterly
A memo comparing homolog-patterns for groundwater well data and suspected loads from the river	October 31, 2017
A report of all existing groundwater data and related information from the industrial park area	January 30, 2018
The strategy and sampling plan for determining the location of suspected PCB sources	April 1, 2018
Final report of the results of the work including documenting any installation of groundwater monitoring wells and groundwater sampling results.	June 30, 2019

**Task 2:** Perform a PCB Mass Balance Assessment from Plantess Ferry Park to Nine Mile reaches and collect additional samples to fill gaps for an ongoing synoptic study.

In support of the SRRTTF's Comprehensive Plan Element 5.14 (Category C – Identification of Sites of Concern for Contaminated Groundwater), the CONTRACTOR will assure completion of the following:

- A. Collect dry weather (low river flow) flow data and ambient surface water samples from the Plantess Ferry Park to Nine Mile reaches to better determine the impacts of the gaining and losing reaches in this area of the Spokane River. The inclusion of the Upriver Dam sampling location will provide data for the assessment of the impact of groundwater entering the gaining reach between Upriver Dam and Greene Street where a known PCB contaminated groundwater site is located. This data will also be used to validate the previous correlation efforts with respect to PCB homologue patterns between the calculated river loading from groundwater in the gaining reach and the contaminated groundwater site.
- B) This task will coordinate with synoptic sampling to address the Barker Road to Plantess Ferry Park groundwater contribution and track concentration changes.
- C) Groundwater sampling may be conducted at the former GE site to determine groundwater flow direction and support PCB homologue pattern analysis.

Deliverables & Due Dates:

Copies of the following deliverables are to be provided to the ECOLOGY Contract Manager.

Deliverable	Due Date
Progress report of activities and associated costs	Quarterly
A quality assurance project plan for flow and surface and ground water sample collection.	June 30, 2018
A progress report describing all sampling related activities and an assessment of the groundwater loading to the Spokane River in the Upriver Dam to Greene Street reach.	March 30, 2019
A draft report of the correlation validation efforts with respect to PCB homologue patterns between the calculated river loading from groundwater in the gaining reach and the contaminated groundwater site.	June 30, 2019

**Task 3: Product Testing**

In support of the SRRTTF’s Comprehensive Plan Element 5.8 (Product Testing), the CONTRACTOR in collaboration with ECOLOGY and others, such as the Spokane Solid Waste Directory, will assure completion of the following:

- A. Determine how to best support Ecology’s PCB testing efforts. This task may include such activities as additional product testing for PCB content, the identification of low/no PCB containing alternatives for products previously identified, or developing strategies to distribute testing results.
- B. To advance PCB reductions, product testing results could be advanced to Task 4 Green Chemistry for potential development of alternatives.

Deliverables & Due Dates:

Copies of the following deliverables are to be provided to the ECOLOGY Contract Manager.

Deliverable	Due Date
Progress report of activities and associated costs	Quarterly
A report documenting any PCB content data generated, the results of any efforts to identify any low/no PCB containing alternatives for products tested, and/or the strategy for distributing testing results.	June 30, 2019

**Task 4: Green Chemistry Advancement**

In support of the SRRTTF’s Comprehensive Plan Element 5.7.2 (Support of Green Chemistry Alternatives), the CONTRACTOR will assure completion of the following:

- A. Coordinate with ECOLOGY’s HWTRP to prepare a presentation/proposal to entities, academic programs or professors working on green chemistry.
- B. Engage with academia and other entities to pursue green chemistry alternatives.

Deliverables & Due Dates:

Copies of the following deliverables are to be provided to the ECOLOGY Contract Manager.

Deliverable	Due Date
Progress report of activities and associated costs	Quarterly
Materials and presentation prepared for a presentation/proposal to green chemistry programs or professors.	June 30, 2018

**Task 5: Develop Outreach Materials**

In support of the SRRTTF’s Comprehensive Plan Element 5.8.2 (Conduct public education on products containing PCBs), Element 5.9.2 (Waste Disposal Assistance), Element 5.13 (Building Demolition and

Renovation Control), and Element 5.15.2 (Actions That Require Development of New Work Plans), the CONTRACTOR in collaboration with ECOLOGY’s Toxics Control Program will assure completion of the following outreach materials to increase business and public awareness:

- A. Develop or update various outreach materials including, but not limited to:
  - a. A website for the SRRTTF
  - b. How to identify and dispose of PCB-containing items
  - c. How to adjust purchasing practices to select products with lower PCB content
  - d. An information package and checklist for use by agencies that make site visits to businesses on PCB issues and management
  - e. Public education and outreach materials on PCB waste disposal and selecting products with lower PCB content
  - f. Adapting the San Francisco Estuary Project (SFEP) document to make it suitable for use as a guidance document for Spokane-area building contractors on how to reduce PCB load during demolition and remodeling
  - g. Benefits of Low Impact Development

Deliverables & Due Dates:

Copies of the following deliverables are to be provided to the ECOLOGY Contract Manager.

Deliverable	Due Date
Progress report of activities and associated costs	Quarterly
A functional website URL	January 31, 2018
Copies of outreach material prepared	June 30, 2019

**Task 6: Conduct Watershed-wide PMF Analysis**

In support of the SRRTTF’s Comprehensive Plan Element 6.3 (Studies to Address Data Gaps), the CONTRACTOR will assure completion of a watershed scale **Positive Matrix Factorization (PMF)** analysis. The analysis will use all available analytical data (from EPA Method 1668), which includes river data, discharger monitoring data, and groundwater data. The purpose of this analysis would determine if any “PMF factors” can be identified that would assist in the identification of specific PCB source types such as Aroclors (legacy sources) or inadvertently produced PCBs (on-going sources).

- A. Develop a scope of work for the analysis given the available data and identify what additional data, if any, needs to be collected.
- B. The CONTRACTOR will develop a sub-contract with Dr. Rodenburg at Rutgers to perform the PMF or related analysis.
- C. If data is available, complete the PMF or related analysis. If the analysis can be completed, complete a final report documenting the findings of the PMF analysis by June 30, 2019.

Deliverables & Due Dates:

Copies of the following deliverables are to be provided to the ECOLOGY Contract Manager.

Deliverable	Due Date
Progress report of activities and associated costs	Quarterly
The scope of work	March 31, 2018
The contract with Dr. Rodenburg	June 30, 2018
Final report (if data available)	June 30, 2019

**Task 7:** Limnotech technical support

Limnotech is the SRRTTF's contractor and as such participates in SRRTTF and Technical Track Workgroup meetings. The SRRTTF requires Limnotech's technical expertise to make informed decisions. In addition to directly managing technical projects such as sampling and data analysis, LimnoTech may be called upon to manage other projects that would benefit from their overall knowledge of the PCB data and information that the SRRTTF's previous work has generated. This task will help pay for analysis and information requests that arise which are outside the scope of other tasks in this contract.

- A. Draft and final technical memos will be generated as requested by the SRRTTF. The memos will be provided to the Project Manager 30 days after they are completed.
- B. Project management as needed.

Deliverables & Due Dates:

Copies of the following deliverables are to be provided to the ECOLOGY Contract Manager.

Deliverable	Due Date
Progress report or list of requests or activities and associated costs	Quarterly

**Task 8:** ACE Administration

The CONTRACTOR will incur administrative costs as a result of contract requirements and contracting with third parties to carry out requirements for the previously described tasks. For example, for the previously described tasks, third party preparation of requests for proposals for sampling and laboratory services will be incurred. In addition, expenses for such contract requirements for insurance will be incurred. The CONTRACTOR may seek reimbursement for these administrative expenses.

- A. The CONTRACTOR is responsible for entering all surface, flow, and groundwater water quality data generated as a result of this contract into ECOLOGY's Environmental Information Management System.
- B. Facilitation services for all SRRTTF and other workgroup meetings by the Ruckelshaus Center may be funded by this contract and other sources of funding.
- C. The CONTRACTOR will develop one contract with Limnotech to cover support for all technical tasks.

Deliverables & Due Dates:

Copies of the following deliverables are to be provided to the ECOLOGY Contract Manager.

Deliverable	Due Date
Progress report of activities and associated costs	Quarterly
EIM data entry verification	June 30, 2019

**Budget:**

Based upon the current understanding of the statement of work for each task (Task 1 through Task 8), the budget for each task may need to be revised in the future. Should a scope revision for any task result in the allocated funding for that task not being fully utilized, the funding will be reallocated as appropriate to other Tasks. Any reallocation of budget must be mutually agreed upon between the parties.

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<b>Task</b>	<b>Description</b>	<b>Fiscal Year 2018</b>	<b>Fiscal Year 2019</b>	<b>Total Contract Funding Amount</b>
Task 1	Develop Plan for the Identification of Suspected PCB Sources Up-gradient of Kaiser Aluminum	\$45,000	\$25,000	\$70,000
Task 2	Perform a PCB Mass Balance Assessment for the Plantes Ferry to Nine Mile Reaches and synoptic sampling	\$20,000	\$60,000	\$80,000
Task 3	Product Testing	\$20,000	\$ 5,000	\$25,000
Task 4	Green Chemistry Advancement	\$ 5,000	\$ 5,000	\$10,000
Task 5	Develop Outreach Materials	\$10,000	\$15,000	\$25,000
Task 6	Conduct Watershed-wide PMF Analysis	\$20,000	\$20,000	\$40,000
Task 7	Limnotech technical support	\$10,000	\$10,000	\$20,000
Task 8	ACE Administration	\$25,000	\$15,000	\$40,000
	<b>Total Project Cost</b>	<b>\$155,000</b>	<b>\$155,000</b>	<b>\$310,000</b>

