
CONSULTANT SERVICES AGREEMENT

TECHNICAL SUPPORT TO THE

SPOKANE RIVER REGIONAL TOXICS TASK FORCE (SRRTTF)

Estimated Maximum Agreement Value: \$750,000
Maximum Compensation Approved for Phase 1a: \$71,377
Maximum Compensation Approved for Phase 1b: \$72,998
Estimated Completion Date: December 31, 2016
Agreement Type: Labor and Expense, Not To Exceed

CLIENT:

SRRTTF ADMINISTRATIVE AND CONTRACTING ENTITY (ACE)

Address: C/O Kaiser Aluminum, P.O. Box 15108, Spokane Valley, WA 99215-5108

CLIENT Manager: Bud Leber

Phone: (509) 927-6554

Email: Bud.Leber@kaisertwd.com

CONSULTANT:

LimnoTech, Inc.

501 Avis Drive

Ann Arbor, MI 48108

Project Manager: David Dilks

Phone: (734) 332-1200

Email: ddilks@limno.com

WHEREAS, pursuant to chapter 24.03 of the Revised Code of Washington, the SRRTTF Administrative and Contracting Entity (ACE) has been incorporated as a non-profit corporation; and

WHEREAS, pursuant to the Request For Qualifications And Proposal issued by the Spokane River Regional Toxics Task Force (SRRTTF), Dated November 1, 2012, this Agreement is made by and between SRRTTF ACE, a non-profit corporation of the State of Washington hereinafter known as the "CLIENT" having offices for the transaction of business as listed above and LimnoTech Inc. hereinafter known as the "CONSULTANT", having offices for the transaction of business as listed above, jointly, hereinafter referred to as the "Parties".

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions set forth herein, the Parties mutually agree as follows:

ARTICLE 1. SUBJECT AND PURPOSE

Services will be provided and/or performed as outlined in Article 20 as set forth herein by reference.

ARTICLE 2. TERM

Services shall be performed as expeditiously as is consistent with professional skill and care and the orderly progress of the Work. Upon request from the CLIENT, and subject to the CLIENT's approval a schedule for the performance of the Services, which may be adjusted as the Project proceeds, shall be submitted for review and

approval. The schedule shall include allowances for periods of time required for review by the CLIENT and members of the SRRTTF, and for the receipt of submissions by authorities having jurisdiction over the project.

ARTICLE 3. COMPENSATION

The CLIENT agrees to make payment in the amount and manner stipulated in the Agreement. There will be no initial payment. Payments shall be made in monthly installments payable after review and authorization by the CLIENT Manager. Said authorization shall be conditioned upon the submittal of an invoice setting forth a breakdown of the services and costs performed in providing the services as set forth.

Payment shall be in arrears the later of 30 days from the date of receipt of a correct and proper invoice or date of receipt of acceptable goods/services (not from the postmark date or date shown on the invoice). All billing and correspondence shall be mailed to the designated CLIENT Manager.

The CONSULTANT will indicate "TECHNICAL SUPPORT TO THE SPOKANE RIVER REGIONAL TOXICS TASK FORCE" on all pay requests and documents associated with the Agreement. Pay requests will be numbered sequentially beginning with "Pay Request 1". If the billing cannot be identified or the charges correlated with this agreement, it shall be returned without action.

Date of payment of an invoice shall be the date appearing on the warrant issued in payment of the invoice.

Moneys past due may bear a finance charge as stipulated by law. The current rate is 1% per month.

Identification of final invoice. In order for the Parties to close their books and records, the CONSULTANT will state "Final Invoice" or other words to that effect on its final or last billing to the CLIENT for the work of the Agreement. Since this Agreement will thereupon be closed and any budget balances deleted, the CONSULTANT agrees that any further charges not properly included on this or previous billings shall be waived in their entirety.

ARTICLE 4. APPROVAL OF DOCUMENTS

The CLIENT's approval of Documents resulting from the services provided by the CONSULTANT shall not relieve the CONSULTANT from its responsibility to comply with the standard of care for performance of its services set forth in this Agreement.

ARTICLE 5. INSTRUMENTS OF SERVICE

Drawings, specifications and other documents, including those in electronic form, prepared by the CONSULTANT and the CONSULTANT's subconsultants are Instruments of Service. The CLIENT shall own all rights, title and interest in all of the Instruments of Service and all of the other materials conceived or created by the CONSULTANT, or its employees or subconsultants, either individually or jointly with others and which arise out of the performance of this Agreement, including any inventions, reports, studies, designs, drawings, specifications, notes, documents, software and documentation, computer-based training modules, electronically, magnetically or digitally recorded material, and other work in whatever form (hereafter "Materials"). All finished or unfinished Materials prepared by the CONSULTANT under this Agreement shall be the property of the CLIENT whether or not the Project is completed or this Agreement is canceled prior to expiration.

Because the CLIENT is a non-profit corporation, which includes public agencies of the State of Washington, all materials and documents prepared by the CONSULTANT under this Agreement will be considered as public documents and will be available to the SRRTTF. If the ACE incorporation is dissolved, ownership of all materials and documents prepared under this Agreement will be transferred to the SRRTTF.

The CONSULTANT hereby assigns to the CLIENT all rights, title and interest to the Materials. The CONSULTANT shall, upon request of the CLIENT, execute all papers and perform all other acts necessary to assist the CLIENT to obtain and register copyrights, patents or other forms of protection provided by law for the Materials such work being at additional expense to the CLIENT. The Materials created under this Agreement by the CONSULTANT, its employees or subconsultants, individually or jointly with others, shall be considered

"works made for hire" as defined by the United States Copyright Act. All of the Materials, whether in paper, electronic, or other form, shall be remitted to the CLIENT by the CONSULTANT, its employees and any subconsultants, and the CONSULTANT shall not copy, reproduce, allow or cause to have the Materials copied, reproduced or used for any purpose other than performance of the CONSULTANT's obligations under this Agreement without the prior written consent of the CLIENT's Manager except that the CONSULTANT may retain copies necessary for record keeping, documentation and other such business purposes related to the Agreement.

The foregoing shall not be construed to mean that the CLIENT shall acquire an exclusive possessory right, by copyright or otherwise, to the exclusion of the CONSULTANT, in standard elements found in the Materials (such as standard details) generated and authored by the CONSULTANT for its regular, repeated and ongoing use in designs, plans and drawings for its customers in the regular course of its business. The CLIENT further waives any claim it might have against the CONSULTANT for errors or omissions arising specifically from changes made by the CLIENT or others to the Materials after the completion of the work provided by this Agreement. This waiver does not extend to errors or omissions in the Materials unrelated to any such changes by the CLIENT or others.

The CONSULTANT represents and believes that Materials produced or used under this Agreement do not and will not infringe upon any intellectual property rights of another, including but not limited to patents, copyrights, trade secrets, trade names, and service marks and names. The CONSULTANT shall indemnify and defend the CLIENT at the CONSULTANT's expense from any action or claim brought against the CLIENT to the extent that it is based on a claim that all or part of the Materials infringe upon the intellectual property rights of another. The CONSULTANT shall be responsible for payment of any and all such claims, demands, obligations, liabilities, costs, and damages including, but not limited to, reasonable attorney fees arising out of this Agreement, amendments and supplements thereto, which are attributed to such claims or actions. This paragraph shall not apply to claims that arise from Materials specifically required by the CLIENT, or to portions of the Materials which the CLIENT directed the CONSULTANT to include within said Materials.

If such a claim or action arises, or in the CONSULTANT's or the CLIENT's opinion is likely to arise, the CONSULTANT shall, at the CLIENT's discretion, either procure for the CLIENT the right or license to continue using the Materials at issue or replace or modify the allegedly infringing Materials. This remedy shall be in addition to and shall not be exclusive to other remedies provided by law.

When applicable at the completion of the Agreement, upon request of the CLIENT, the CONSULTANT will furnish to the CLIENT, at no additional charge, two electronic copies on CD containing the final reports in Microsoft Word 2000 (PC based) or newer, all CAD drawing files in pdf format no older than one version previous to the current software version, and all data in a data base format acceptable to the CLIENT.

The CONSULTANT shall ensure that the substance of foregoing subsections is included in each subconsultant agreement for the Work under this Agreement.

ARTICLE 6. ENDORSEMENT OF PLANS

The CONSULTANT shall seal and sign all drawings prepared for the project as required or upon request of the CLIENT.

ARTICLE 7. NON-DISCRIMINATION

The CONSULTANT shall not discriminate against any employee who is employed in connection with the Work, or against any applicant for such employment, because of race, creed, color, sex, sexual orientation, national origin, marital status, or the presence of any sensory, mental or physical handicap.

ARTICLE 8. INSURANCE

The CONSULTANT shall maintain continuous coverage meeting the requirements as set forth in ATTACHMENT A for the duration of the Agreement.

ARTICLE 9. MAINTENANCE OF RECORDS

The CONSULTANT will maintain, for at least three (3) years after completion of this Agreement, all relevant records pertaining to the Agreement. The CONSULTANT shall make available to the CLIENT, Washington State Auditor, Federal Grantor Agency, Comptroller General of the United States or any of their duly authorized representatives, at any time during their normal operating hours, all records, books or pertinent information which the CONSULTANT shall have kept in conjunction with this Agreement and which the CLIENT may be required by law to include or make part of its auditing procedures, an audit trail or which may be required for the purpose of funding the services contracted for herein.

ARTICLE 10. COMPLIANCE WITH LAWS

The Parties hereto specifically agree to observe applicable federal, state and local laws, ordinances and regulations to the extent that they may have any bearing on either providing any money under the terms of this Agreement or the services actually provided under the terms of this Agreement.

ARTICLE 11. ASSIGNMENT

The CONSULTANT may not assign or transfer in whole or in part, its interest in this Agreement without the express written consent of the CLIENT.

ARTICLE 12. MODIFICATION

No modification or amendment to this Agreement shall be valid until the same is reduced to writing, in the form of a change order, and executed with the same formalities as this present Agreement.

ARTICLE 13. TERMINATION

This Agreement may be terminated by the CLIENT upon 30 days written notice. In the event of termination through no fault of the CONSULTANT, the CLIENT agrees to pay the CONSULTANT for all services performed to the date of termination based upon actual costs and expenses incurred according to this Agreement. Payment will be based upon an itemized breakdown and documentation by the CONSULTANT that services have been performed to the date of termination and acceptance of said documentation by the CLIENT.

ARTICLE 14. VENUE STIPULATION

This Agreement has and shall be construed as having been made and delivered in the State of Washington, and the laws of the State of Washington shall be applicable to its construction and enforcement of this Agreement or any provision hereto shall be instituted only in the courts of competent jurisdiction within Spokane County, Washington.

ARTICLE 15. WAIVER

No officer, employee, agent or otherwise of the CLIENT, has the power, right or authority to waive any of the conditions or provisions of this Agreement. No waiver of any breach of this Agreement shall be held to be a waiver of any other or subsequent breach. All remedies afforded in this Agreement or a law shall be taken and construed as cumulative, that is, in addition to every other remedy provided herein or by law. Failure of the CLIENT to enforce at any time any of the provisions of this Agreement or to require at any time performance by the CONSULTANT of any provision hereof, shall in no way be construed to be a waiver of such provisions, nor in any way affect the validity of this Agreement or any part hereof, or the right of the CLIENT to hereafter enforce each and every such provision.

ARTICLE 16. INDEMNIFICATION

The CONSULTANT agrees to defend, indemnify and hold the CLIENT harmless from any and all claims, including but not limited to reasonable attorney fees, demands, losses and liabilities to or by third parties arising from, resulting from, an error, omission or negligent act of the CONSULTANT performed under this Agreement by the CONSULTANT, its agents or employees to the fullest extent permitted by law. The CONSULTANT's duty to indemnify the CLIENT shall not apply to liability for damages arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of the CLIENT, its agents or employees. The CONSULTANT's duty to indemnify the CLIENT for liability for damages arising out of bodily injury to persons or damage to property caused by or resulting from the concurrent negligence or (a) the CLIENT, its agents or

employees, and (b) CONSULTANT, its agents or employees shall apply only to the extent of negligence of the CONSULTANT or its agents or employees. CONSULTANT's duty to defend, indemnify and hold the CLIENT harmless shall include, as to all claims, demands, losses and liability to which it applies, the CLIENT's personnel-related costs, reasonable attorney's fees, court costs and all other claim-related expenses.

The CONSULTANT's indemnification shall specifically include all claims for loss liability because of wrongful payments under the Uniform Commercial Code, or other statutory or contractual liens or rights of third parties, including taxes, accrued or accruing as a result of this Agreement or work performed or materials furnished directly or indirectly because of this Agreement.

CONSULTANT further agrees that this duty to indemnify CLIENT applies regardless of any provisions in RCW Title 51 to the contrary, including but not limited to any immunity of CONSULTANT for liability for injuries to CONSULTANT's workers and employees, and CONSULTANT hereby waives any such immunity for the purpose of this duty to indemnify CLIENT.

ARTICLE 17. NOTICES

All notices or other communications given hereunder shall be deemed given on: (1) the day such notices or other communications are received when sent by personal delivery; or (2) the third day following the day on which the same have been mailed by first class delivery, postage prepaid.

ARTICLE 18. RELATIONSHIP OF THE PARTIES

The Parties intend that an independent consultant relationship will be created by this Agreement. The CLIENT is interested only in the results that could be achieved and the conduct and control of all services will be solely with the CONSULTANT. No agent, employee, servant or otherwise of the CONSULTANT shall be deemed to be an employee, agent, servant, or otherwise of the CLIENT for any purpose and the employees of the CONSULTANT are not entitled to any of the benefits that the CLIENT provides for CLIENT employees. The CONSULTANT will be solely and entirely responsible for its acts and the acts of its agents, employees, servants, subconsultants or otherwise, during the performance of work under this Agreement.

ARTICLE 19. HEADINGS

The Article headings in this Agreement have been inserted solely for the purpose of convenience and ready reference. In no way do they purport to, and shall not be deemed to, define, limit, or extend the scope or intent of the Articles to which they appertain.

ARTICLE 20. STATEMENT OF WORK AND FEE FOR SERVICES

A. STATEMENT OF WORK: The CONSULTANT will provide consulting services as described in Attachment B, attached hereto and incorporated herein by reference. The Agreement will be administered by the CLIENT Manager.

B. BASIS OF COMPENSATION: Fee not to exceed the Maximum Compensation Approved without a written change order. There will be no initial payments. Compensation will not include fees, licenses, permits, and change orders caused by the CONSULTANT's errors or omissions.

Compensation for labor will be on a per diem basis, as listed in the Per Diem Rates Schedule on Attachment C. Compensation for direct expenses will be based on actual cost.

C. BASIC SERVICES: The following items are budget estimates of CONSULTANT prices represented by Item, fee and approximate percentage of the total work. Billing will be for work completed and will be in the form of a percent of completion of the applicable item. The budgeted amounts may be reallocated between items as the scope and work dictates.

Item	Description	Amount	Percent
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1	Technical Consultant Work Plan	\$ 2,456	
2	Data Request Memo	\$ 3,051	
3	Standard Operating Procedures	\$ 3,384	
4	Collection of Existing Data	\$14,238	
5	Data Review and Evaluation	\$17,190	
6	Data Gap Identification	\$15,640	
7	Review of Modeling Tools	\$ 5,808	
8	Data Collection Strategy	\$15,660	
9	QAPP/SAP	\$27,948	
10	Scoping for Later Phases	\$ 3,232	
11	Meetings and Coordination	\$32,388	
	TOTAL	\$144,375	100%

ARTICLE 21. AGREEMENT DOCUMENTS

The Agreement Documents consist of this Agreement and the other documents listed below and all modifications and Amendments issued subsequent thereto. These form an Agreement and all are as fully a part of the Agreement as if attached to this Agreement or repeated herein. In the event of any inconsistency between the provisions of this Agreement and the documents listed below, the provisions of this Agreement will control and the order of precedence will be in the order listed. An enumeration of the Agreement documents is set forth below:

1. Amendments; and
2. This Agreement with attachments; and
3. Scope of work and fee per Attachment "B" (8 pages); and
4. Request for Qualifications and Proposals; and
5. CONSULTANT response to Request for Qualifications dated November 27, 2012

ARTICLE 22. OTHER EMPLOYMENT—CONFLICT OF INTEREST

Agreements resulting from this RFQ are not exclusive services Agreements. The CONSULTANT may take on other professional assignments while completing work under this RFQ. However, before agreeing to perform any new professional assignments related to water quality or water quality modeling for the Spokane River from Lake Coeur d'Alene to Lake Roosevelt, CONSULTANT shall provide a description of the proposed scope of services for said assignment to the CLIENT Manager, and shall receive written notification from the CLIENT Manager confirming that the assignment is not a conflict of interest with the work under this Agreement

ARTICLE 23. PAYMENT OF TAXES

This Agreement is for the employment of the CONSULTANT as an independent consultant. The CONSULTANT holds that they are an independent consultant doing business as listed above and is solely responsible for paying any and all taxes associated with the work of this Agreement including but not necessarily limited to income and social security taxes.

ARTICLE 24. RECOVERY OF FUNDS

Whenever, under the Agreement, any sum of money shall be recoverable from or payable by the CONSULTANT to CLIENT, the same amount may be deducted from any sum due to the CONSULTANT under the Agreement or under any other agreement between the CONSULTANT and CLIENT including reasonable attorney fees and or any other collection costs. The rights of CLIENT are in addition and without prejudice to any other right CLIENT may have to claim the amount of any loss or damage suffered by CLIENT on account of the acts or omissions of the CONSULTANT.

ARTICLE 25. SEVERABILITY

In the event any term or condition of this Agreement or application thereof to any person or circumstances is held invalid, such invalidity shall not affect other terms, conditions, or applications of this Agreement, which can be given effect without the invalid term, condition, or application. To this end the terms and conditions of this Agreement are declared severable.

ARTICLE 26. SPECIAL PROVISION

The CLIENT's failure to insist upon the strict performance of any provision of this Agreement or to exercise any right based upon breach thereof or the acceptance of any performance during such breach, shall not constitute a waiver of any right under this Agreement.

ARTICLE 27. ENFORCEMENT COSTS

If any legal action or other proceeding is brought for the enforcement of this Agreement, or because of an alleged dispute, breach, default or misrepresentation in connection with any provisions of this Agreement, the successful or prevailing party or parties shall be entitled to recover reasonable attorney's fees, court costs, and all expenses (including taxes) even if not taxable as court costs (including, without limitation, all such fees, costs, and expenses incident to appeals), incurred in that action or proceeding, in addition to any other relief to which such party or parties may be entitled.

ARTICLE 28. ALL WRITINGS CONTAINED HEREIN

This Agreement contains all the terms and conditions agreed upon by the Parties. No other understandings, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or to bind any of the Parties hereto. The CONSULTANT has read and understands all of this Agreement, and now states that no representation, promise, or Agreement not expressed in this Agreement has been made to induce the CONSULTANT to execute the same.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed on the day and year set forth herein above.

**SRRTTF CONTRACTING AND
ADMINISTRATIVE ENTITY**

Bernard P. Leber, Jr.
President

BERNARD P. LEBER, JR

LimnoTech, Inc.

By: David Dilks
David Dilks
(print name)

Title: Vice President

NOTARY

STATE OF Michigan)
COUNTY OF Lapeere) ss.

I certify that I know or have satisfactory evidence that the above David Dilks is the person who appeared before me, and said person acknowledged that he/she signed this instrument and acknowledged as the authorized agent for the CONSULTANT to be the free and voluntary act of CONSULTANT for the uses and purposes mentioned in this instrument.

DATED this 5th day of March, 2013.

Darlene M. Pyle
Notary Signature

Notary Public In And For The State Of Michigan
residing at Adrian Michigan

My commission expires 6-29-13

ATTACHMENT A - INSURANCE REQUIREMENTS

The CONSULTANT shall furnish and maintain all insurance as required herein and comply with all limits, terms and conditions stipulated therein, at their expense, for the duration of the Agreement. Following is a list of requirements for this Agreement. Any exclusions must be pre-approved by the SRRTTF ACE CLIENT Manager. Work under this contract shall not commence until evidence of all required insurance and bonding is provided to the CLIENT. The CONSULTANT's insurer shall have a minimum A.M. Best's rating of A- and shall be licensed to do business in the State of Washington. Evidence of such insurance shall consist of a completed copy of the certificate of insurance, signed by the insurance agent for the CONSULTANT and returned to the CLIENT Manager. The insurance policy or policies will not be canceled, materially changed or altered without forty-five (45) days prior notice submitted to the department with whom the contract is executed. The policy shall be endorsed and the certificate shall reflect that the SRRTTF Administrative and Contracting Entity is named as an additional insured on the CONSULTANT's general liability policy with respect to activities under the Agreement. The policy shall provide and the certificate shall reflect that the insurance afforded applies separately to each insured against whom claim is made or suit is brought except with respect to the limits of the company's liability.

The policy shall be endorsed and the certificate shall reflect that the insurance afforded therein shall be primary insurance for the CONSULTANT. Any insurance or self-insurance carried by the CLIENT shall be excess and not contributory insurance to that provided by the CONSULTANT.

The CONSULTANT shall not commence work, nor shall the CONSULTANT allow any subconsultant to commence work on any subcontract until a Certificate of Insurance, meeting the requirements set forth herein, has been approved by CLIENT Manager. Upon request, the CONSULTANT shall forward to the CLIENT Manager the original policy, or endorsement obtained, to the CONSULTANT's policy currently in force.

Failure of the CONSULTANT to fully comply with the insurance requirements set forth herein, during the term of the Agreement, shall be considered a material breach of contract and cause for immediate termination of the Agreement at the CLIENT's discretion.

Providing coverage in the amounts listed shall not be construed to relieve the CONSULTANT from liability in excess of such amounts.

REQUIRED COVERAGE: The insurance shall provide the minimum coverage as set forth below, all coverage \$1,000,000.00 per occurrence.

GENERAL LIABILITY INSURANCE: The CONSULTANT shall have Commercial General Liability with limits of \$1,000,000.00 per occurrence, which includes general aggregate, products, completed operation, personal injury, fire damage and \$5,000.00 medical expense.

ADDITIONAL INSURED ENDORSEMENT: General Liability Insurance must state that SRRTTF Administrative and Contracting Entity, its officers, agents and employees, and any other entity specifically required by the provisions of this Agreement will be specifically named additional insured(s) for all coverage provided by this policy of insurance and shall be fully and completely protected by this policy from all claims. Language such as the following should be used **"SRRTTF Administrative and Contracting Entity, Its Officers, Agents, And Employees Are Named As Additional Insureds With Respect To The Agreement for Technical Support To The Spokane River Regional Toxics Task Force"**.

PROOF OF AUTOMOBILE INSURANCE: The Contractor shall carry, for the duration of this Agreement, comprehensive automobile liability coverage of \$100,000/\$300,000 and property damage coverage of \$50,000 or \$300,000 combined single limit for any vehicle used in conjunction with the provision of services under the terms of this Contract. Said policy shall provide that it shall not be canceled, materially changed, or renewed without forty five (45) days written notice prior thereto to CLIENT.

WORKERS COMPENSATION: When the CONSULTANT has employees of the company, the CONSULTANT shall show proof of Worker's Compensation coverage by providing its State Industrial Account Identification Number. Provision of this number will be the CONSULTANT's assurance that coverage is in effect.

PROFESSIONAL LIABILITY INSURANCE: The CONSULTANT shall carry Professional Liability insurance coverage in the minimum amount of \$1,000,000.00, with not more than a \$50,000 deductible.

ATTACHMENT B
TO THE AGREEMENT BETWEEN
ACE AND LIMNOTECH
TECHNICAL CONSULTANT SUPPORT TO SPOKANE RIVER REGIONAL TOXICS TASK FORCE
SCOPE OF WORK
February 28, 2013

This document describes the Phase 1 activities to be conducted by LimnoTech in support of the Spokane River Regional Toxics Task Force (SRRTTF). Phase 1 tasks will be broken down into Phase 1a and Phase 1b, and work on Phase 1b will not be commenced without written notice from the CLIENT. The Scope of Work is divided into sections corresponding to: 1) Technical Scope and Deliverables, 2) Budget, and 3) Schedule.

TECHNICAL SCOPE AND DELIVERABLES

Work will be conducted through a series of ten tasks:

PHASE 1a

1. Technical Consultant Work Plan
2. Data Request Memo
3. Standard Operating Procedures
4. Collection of Existing Data
5. Data Review and Evaluation
6. Data Gap Identification

PHASE 1B

7. Review of Modeling Tools
8. Data Collection Strategy
9. Quality Assurance Project Plan/Sampling and Analysis Plan
10. Scoping for Future Phases
11. Meetings and Coordination (Task 11 is split between Phase 1a and Phase 1b)

PHASE 1a

Task 1: Technical Consultant Work Plan

LimnoTech will update and revise the existing SRRTTF First Draft Work Plan adopted 10-24-2012 to make it a formal Technical Consultant Work Plan. The Technical Consultant Work Plan will include a detailed scope of work, budget, and schedule for Phase 1 work (consistent with the finalized version of the Scope of Work contained here). The Work Plan for Phases 2 through 4 will contain a more general description of tasks (data collection, analysis of data for characterization and quantification, assessment of BMPs, and development of a BMP plan) and sub-tasks for each phase, planning-level budgets estimates for each phase, and an estimated schedule corresponding to completion of all work by the end of 2016.

Deliverables:

- Draft Technical Consultant Work Plan

Scope of Work for Technical Consultant Support to SRRTTF

- Final Technical Consultant Work Plan, incorporating SRRTTF and Ecology comments on draft plan

Task 2: Data Request Memo

LimnoTech will prepare a technical memorandum listing all of the information required to define existing PCB and dioxin sources, loads and sinks. The memorandum will divide data needs into broad categories (e.g. point source loading, non-point source loading, environmental fate processes) and sub-categories (e.g. nonpoint source loads from industrial facilities, nonpoint source loads from railways, nonpoint source loads from residential areas). The memorandum will list the information needs required to define the magnitude of each category and sub-category. As appropriate, the memorandum will describe alternate means by which each data need can be satisfied (e.g. direct measurement, combination of indirect measurements and simple models, literature values). The memorandum will identify all data that has already been obtained, as well as other known and potential sources for satisfying each data need.

Deliverables:

- Draft Data Request Memo
- Final Data Request Memo, incorporating SRRTTF and Ecology comments on draft memo

Task 3: Standard Operating Procedures

LimnoTech will review the standard operating procedures for data analysis and collection currently employed by all agencies collecting data that may be used during this project. These procedures will be reviewed in order to ensure comparability of analytical data.

Deliverables:

- Memo summarizing standard operating procedures, and identifying any procedures that will not produce suitable data quality.

Task 4: Collection of Existing Data

LimnoTech will contact all data sources identified in the final Data Request memorandum. Initial contact will be made by telephone, with follow-up by emails as necessary. These calls will request existing information, as well as identify other sources of information or other relevant contacts. Any additional information sources identified during these calls will also be contacted. One visit to Spokane is planned to collect data that is best retrieved in person (e.g. historical land use documents). A log will be maintained documenting all calls/e-mails/visits and the information obtained from each source contacted.

Deliverables:

- Contact log documenting all calls/e-mails/visits and the information obtained.

Task 5: Data Review and Evaluation

LimnoTech will review all data collected in Task 3 and evaluate the quality and credibility of the data relative to satisfying the data needs identified in Task 1. This task will begin by defining the process to be

Scope of Work for Technical Consultant Support to SRRTTF

used for determining data acceptability. The data will be reviewed for abnormalities, inconsistencies, or unusual results. If any of these occur, the data will be traced back to look for possible causes of the error. In the event that no error is found, the data will be assumed to be normal and appropriate for use in project reports and in decision-making. If an error is found and no resolution can be arrived at concerning its source or cause, the data will be discarded. The results of the data review will be summarized in a technical memorandum. All relevant collected data will be placed in a database in a format suitable to SRRTTF and Ecology.

Deliverables:

- Technical memorandum summarizing data review
- Database containing all data in a format suitable to SRRTTF and Ecology.

Task 6: Data Gap Identification

LimnoTech will review the available data and determine where key information gaps exist in terms of assessing all relevant PCB and dioxin sources and sinks. This work will be conducted via two sub-tasks: 1) Development of an Initial Conceptual Model, and 2) Identification of Data Gaps and Refinement of Conceptual Model.

Subtask 6-1: Development of an Initial Conceptual Model

Based on both local and national knowledge of PCB and dioxin sources and sinks, LimnoTech will develop conceptual models identifying:

- Pollutant sources: This will focus on "true" sources, i.e. the ultimate origin of the pollutant in the watershed
- Delivery: The mechanisms by which each of the sources gets transported to the Spokane River or Lake Spokane
- Surface water processes: Fate processes occurring the Spokane River and Lake Spokane that may attenuate pollutant concentrations (e.g. volatilization)
- Sediment processes: Fate processes occurring the sediments beneath the Spokane River and Lake Spokane that may affect pollutant concentrations (e.g. resuspension, deep burial)

The intent of the initial conceptual model will be to include all mechanisms that could feasibly be important. Separate conceptual models will be developed for PCBs and dioxin.

Subtask 6-2: Identification of Data Gaps and Refinement of Conceptual Model

The information collected in Tasks 1 through 4 will be analyzed to estimate the magnitude of each component in the initial conceptual model. Best estimates, including uncertainty bounds, will be generated for each component of the conceptual model based on available data and/or scientific literature. This assessment will be used to divide all components of the conceptual model into three categories:

- Known to be insignificant: Not contributing to impairment, even at high end of the uncertainty range
- Known to be significant: Contributing to impairment, even at low end of the uncertainty range
- Significance uncertain: Uncertainty range too large to determine significance

Scope of Work for Technical Consultant Support to SRRTTF

Components identified as "Known to be insignificant" will be dropped from the final conceptual model. LimnoTech will then evaluate the uncertainty bounds for the remaining components and identify data gaps that must be filled to accurately quantify pollutant sources and sinks. This analysis will be conducted separately for dioxins and PCBs.

Deliverables:

- Initial conceptual model
- Refined conceptual model, with "insignificant" components eliminated
- Technical memorandum describing data gaps

PHASE 1B

Task 7: Review of Modeling Tools

LimnoTech will review all available modeling tools that could be used for identification and quantification of PCBs and dioxins in subsequent phases of work. This review will be documented in a technical memorandum describing each model's capabilities, data needs, advantages, and disadvantages. Recommendations will be provided regarding which models are most suitable for use in future phases.

Deliverables:

- Draft technical memorandum summarizing modeling tools
- Final technical memorandum summarizing modeling tools, incorporating SRRTTF and Ecology comments on draft memorandum

Task 8: Data Collection Strategy

This task is intended to develop a recommended strategy for collection of additional data for use in subsequent phases, giving consideration to the modeling tool(s) that are anticipated for use. Work will be conducted through two sub-tasks, corresponding to: 1) Attaining consensus on objectives, and 2) Development of strategy.

Subtask 8-1: Attaining Consensus on Objectives

LimnoTech will initiate this task by preparing a "data collection objectives" memorandum which will document all management-oriented objectives that need to be clarified prior to development of a data collection strategy. These objectives will cover the spectrum from overall project goals (e.g. "What is the magnitude of key sources?") to technical planning objectives (e.g. "What agencies will be responsible for conducting monitoring?") This memorandum will be provided to SRRTTF and Ecology in advance of a monitoring objectives meeting (Sub-task 10-2) designed to obtain consensus on these objectives.

Subtask 8-2: Development of Strategy

LimnoTech will prepare a draft data collection strategy, based on the consensus objectives defined in sub-task 8-1. The strategy will define sampling parameters, locations, frequency, and parties responsible for collection of the data. A draft strategy will be presented at a meeting with the SRRTTF (Sub-task 10-3) for discussion and comment. Based on feedback obtained at this meeting, LimnoTech will prepare a memorandum describing the data collection strategy.

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Deliverables:

- Draft data collection objectives memorandum
- Data collection objectives memorandum, incorporating feedback from monitoring objectives meeting
- Draft data collection strategy memorandum
- Final data collection strategy memorandum, incorporating SRRTTF and Ecology comments on draft plan

Task 9: Quality Assurance Project Plan/ Sampling and Analysis Plan

LimnoTech will prepare a Quality Assurance Project Plan (QAPP) that describes the quality procedures, criteria and corrective actions associated with the sampling and analysis program. 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. Secondary data to be used in the modeling effort will also be addressed.

The purpose of the QAPP is to assure that:

- Sample collection and field measurements are conducted at planned frequencies and locations using appropriate sampling protocols and equipment;
- Samples are properly handled in the field and delivered to the laboratory, using appropriate sample bottles, labels, and preservatives;
- Sample handling and delivery is conducted using sample tracking systems and chain-of-custody procedures that properly identify samples being collected and ensure the control of those samples from field collection through analysis and data reduction;
- Proper preventive maintenance, equipment calibration, and approved analytical protocols will be implemented so that all field measurements and sampling analytical results will be valid;
- Records are produced and retained to document the quality of samples collected and analyzed, the validity of applied procedures, and the completeness of the investigation in relation to the approved scope of the project;
- Generated data are validated; and
- 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.

LimnoTech will also develop a Sampling and Analysis Plan (SAP) that describes the objectives of the program, sampling locations, criteria for initiating sampling, sampling methods, analytical parameters and protocols, and data management, to ensure that all resulting data is of adequate and consistent quality for use in the subsequent assessment effort. The SAP will be included as an appendix to the QAPP.

Deliverables:

- Draft QAPP/SAPP

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- Interim QAPP/SAPP, incorporating feedback from SRRTTF
- Final QAPP/SAPP, incorporating feedback from Ecology

Task 10: Scoping for Future Phases

LimnoTech will prepare a detailed scope, schedule, budget for Phase 2 work, consistent with information contained in the QAPP and SAP. LimnoTech will also provide refined schedules and budgets for Phases 3 and 4, updating the estimates from Task 1 with information gained during the course of the first phase.

Deliverables:

- Draft scope, schedule, and budget
- Final scope, schedule, and budget, incorporating SRRTTF and Ecology comments on draft scope

Task 11: Meetings and Coordination

This task covers all meetings and other project coordination, and is divided into the following subtasks:

- Sub-task 11-1: Kickoff meeting (Phase 1a task)
- Sub-task 11-2: Monitoring objectives meeting (Phase 1a task)
- Sub-task 11-3: Mid-project meeting (Phase 1b)
- Sub-task 11-4: Public meeting (Phase 1b task)
- Sub-task 11-5: Project management and coordination (Split proportionately across Phase 1a and Phase 1b)

Any materials to be presented by LimnoTech at SRRTTF meetings will be provided to the SRRTTF no later than five working days before the meeting, to allow sufficient time for review prior to the meeting.

Sub-task 11-1: Kickoff meeting (Phase 1a)

LimnoTech will participate in a Kick-off Meeting with the SRRTTF and Ecology staff to initiate the project, and to discuss the data request, and identify additional source of information to be contacted.

Sub-task 11-2: Monitoring objectives meeting (Phase 1a)

LimnoTech will meet with the SRRTTF and Ecology staff to discuss the draft data collection objectives memorandum, and attain consensus on all management-oriented objectives related to monitoring.

Sub-task 11-3: Mid-project meeting (Phase 1b)

LimnoTech will meet with the SRRTTF and Ecology staff to discuss: 1) the review of existing data, 2) the identified data gaps, 3) potential modeling tools, and 4) the recommended data collection strategy (including estimated sampling and analysis costs).

Sub-task 11-4: Public meeting (Phase 1b)

LimnoTech will assist the SRRTTF with a public meeting or workshop to communicate the results of the Phase I work. This assistance will include preparation of meeting support materials (i.e. Phase 1 Fact Sheet targeted to the lay public, presentation materials), and presentation of Phase 1 findings at the

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meeting. LimnoTech will also attend an SRRTTF meeting, if one is held concurrently with the public meeting.

Sub-task 11-5: Project management and coordination (Proportionally split across Phases 1a and 1b)

This task consists of project management activities, including preparation of monthly project status reports and phone participation in up to eight SRRTTF meetings.

Budget

The total cost for Phase 1a is \$71,377. The total cost for Phase 1b is \$72,998. An itemized breakdown of costs by task and sub-task are provided in the attached spreadsheet.

Schedule

The period of performance of this scope of work is expected to be March 2013 through March 2014. The completions dates associated with each task and deliverable are tabulated below.

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Task/Deliverable	Completion Date
Technical Consultant Work Plan <ul style="list-style-type: none"> • Draft Work Plan • Final Work Plan 	March 25, 2013 Two weeks after comments received
Data Request Memo <ul style="list-style-type: none"> • Draft Memo • Final Memo 	March 18, 2013 Two weeks after comments received
Review of Standard Operating Procedures <ul style="list-style-type: none"> • Memo 	April 15, 2013
Collection of Existing Data <ul style="list-style-type: none"> • Contact log 	June 30, 2013
Data Review and Evaluation <ul style="list-style-type: none"> • Data review memo • Database 	July 31, 2013 July 31, 2013
Data Gap Identification <ul style="list-style-type: none"> • Initial conceptual model • Refined conceptual model • Technical memorandum describing data gaps 	August 15, 2013 August 31, 2013 August 31, 2013
Review of Modeling Tools <ul style="list-style-type: none"> • Draft model memorandum • Final model memorandum 	September 15, 2013 Two weeks after comments received
Data Collection Strategy <ul style="list-style-type: none"> • Draft objectives memorandum • Final objectives memorandum • Draft strategy memorandum • Final strategy memorandum 	October 15, 2013 Two weeks after comments received November 15, 2013 Two weeks after comments received
Quality Assurance Project Plan/Sampling and Analysis Plan <ul style="list-style-type: none"> • Draft QAPP/SAPP • Interim QAPP • Final QAPP/SAPP 	January 15, 2014 Two weeks after comments received Two weeks after comments received
Phase 2 Scoping <ul style="list-style-type: none"> • Draft scope • Final scope 	February 15, 2014 Two weeks after comments received
Meetings and Coordination	Ongoing

Attachment C
Per Diem Rates Schedule for 2013

Compensation and billing will be at LimnoTech per diem labor billing rates for 2013. For the key staff proposed for this work, the billing rate for David Dilks and John Wolfe are \$190/hour, Joseph Depinto is \$225/ hour, Cathy Whiting and Todd Redder are \$170/hour, and Tim Towey and Penelope Moskus are \$125/hour. Billing rates for additional staff are as follows:

<u>Category</u>	<u>Rate \$/hour</u>
Principal/Sr. Scientist	225
Principal / Officer/Sr. Scientist	190
Senior Engineer/Scientist	170
Project Engineer/Scientist III	125
Project Engineer/Scientist II	115
Project Engineer/Scientist I	110
Engineer/Scientist	85
Environmental Specialist	100
Field Supervisor	95
Clerical/Assistant to Project Mgr	70

