

**CITY OF PORTLAND
AGREEMENT FOR PROFESSIONAL, TECHNICAL, OR EXPERT SERVICES**

CONTRACT NO. 30002898

**SHORT TITLE OF WORK PROJECT:
Laboratory Services for *Cryptosporidium* and *Giardia* Water Analysis**

This contract is between the City of Portland ("City," or "Bureau") and **Tetra Tech, Inc.**, hereafter called Contractor. The City's Project Manager for this contract is **Ann Richter**.

Effective Date and Duration

This contract shall become effective on **January 1, 2013**. This contract shall expire, unless otherwise terminated or extended, on **December 31, 2017**.

Consideration

- (a) City agrees to pay Contractor a sum not to exceed **\$400,000** for accomplishment of the work.
 (b) Interim payments shall be made to Contractor according to the schedule identified in the STATEMENT OF THE WORK AND PAYMENT SCHEDULE.

CONTRACTOR DATA AND CERTIFICATION

Name (please print): Tetra Tech, Inc.
 Address: PO Box 314; 20 Mapleville Depot; St. Albans, VT 05478
 Employer Identification Number (EIN) 95-4148514
 [INDEPENDENT CONTRACTORS: DO NOT PROVIDE SOCIAL SECURITY NUMBER (SSN) - LEAVE BLANK IF NO EIN]
 City of Portland Business License # 347000
 Citizenship: na Nonresident alien ☐ Yes ☐ No na
 Business Designation (check one): ☐ Individual ☐ Sole Proprietorship ☐ Partnership ☒ Corporation
☐ Limited Liability Co (LLC) ☐ Estate/Trust ☐ Public Service Corp. ☐ Government/Nonprofit

Payment information will be reported to the IRS under the name and taxpayer I.D. number provided above. Information must be provided prior to contract approval.

TERMS AND CONDITIONS

1. Standard of Care: Contractor shall perform all services under this contract using that care, skill and diligence that would ordinarily be used by similar professionals in this community in similar circumstances.

2. Effect of Expiration

Passage of the contract expiration date shall not extinguish, prejudice, or limit either party's right to enforce this Contract with respect to any default or defect in performance that has not been corrected.

3. Order of Precedence

This contract consists of these Terms and Conditions, the Statement of Work and Payment Schedule, and any exhibits that are attached. Any apparent or alleged conflict between these items will be resolved by using the following order of precedence: a) these Terms and Conditions; b) Statement of Work and Payment Schedule; and c) any exhibits attached to the contract.

4. Early Termination of Contract

(a) The City may terminate this Contract for convenience at any time for any reason deemed appropriate in its sole discretion. Termination is effective immediately upon notice of termination given by the City.

(b) Either party may terminate this Contract in the event of a material breach by the other party that is not cured. Before termination is permitted, the party seeking termination shall give the other party written notice of the breach, its intent to terminate and fifteen (15) calendar days to cure the breach. If the breach is not cured within 15 days, the party seeking termination may terminate immediately by giving written notice that the Contract is terminated.

5. Remedies and Payment on Early Termination

- (a) If the City terminates pursuant to 4(a) above, the City shall pay the Contractor for work performed in accordance with the Contract prior to the termination date. No other costs or loss of anticipated profits shall be paid.
- (b) If the City terminates pursuant to 4(b) above, the City is entitled all remedies available at law or equity. In addition, Contractor shall pay the City all damages, costs and sums incurred by the City as a result of the breach.
- (c) If the Contractor justifiably terminates the contract pursuant to subsection 4(b), the Contractor's only remedy is payment for work prior to the termination. No other costs or loss of anticipated profits shall be paid.
- (d) If the City's termination under Section 4(b) was wrongful, the termination shall be automatically converted to one for convenience and the Contractor shall be paid as if the Contract was terminated under Section 4(a).
- (e) In the event of early termination the Contractor's work product before the date of termination becomes property of the City.

6. Assignment

Contractor shall not subcontract, assign or transfer any of the work scheduled under this agreement, without the prior written consent of the City. Notwithstanding City approval of a subcontractor, the Contractor shall remain obligated for full performance hereunder, and the City shall incur no obligation other than its obligations to the Contractor hereunder. The Contractor agrees that if subcontractors are employed in the performance of this Agreement, the Contractor and its subcontractors are subject to the requirements and sanctions of ORS Chapter 656, Workers' Compensation.

7. Compliance with Applicable Law

Contractor shall comply with all applicable federal, state and local laws and regulations. Contractor agrees it currently is in compliance with all tax laws.

8. Indemnification for Property Damage and Personal Injury

Contractor shall indemnify, defend, and hold harmless the City, its officers, agents, and employees, from all claims, losses, damages, and costs (including reasonable attorney fees) for personal injury and property damage arising out of the intentional or negligent acts or omissions of the Contractor, its Subcontractors, suppliers, employees or agents in the performance of its services. Nothing in this paragraph requires the Contractor or its insurer to indemnify the City for claims of personal injury or property damage caused by the negligence of the City. This duty shall survive the expiration or termination of this contract.

9. Insurance

During the term of this contract, Contractor shall maintain in force at its own expense, the insurance noted below:

- (a) Workers' Compensation insurance in compliance with ORS 656.017, which requires subject employers to provide Oregon workers' compensation coverage for all their subject workers (contractors with one or more employees, unless exempt under ORS 656.027).
- (b) Commercial General Liability insurance with a combined single limit of not less than \$1,000,000 per occurrence for Bodily Injury and Property Damage. It shall include contractual liability coverage for the indemnity provided under this contract, and shall provide that City of Portland, and its agents, officers, and employees are Additional Insureds, but only with respect to the Contractor's services to be provided under this Contract:

Required by operating Bureau X

Waived by operating Bureau Director or designee ____

- (c) Automobile Liability insurance with a combined single limit of not less than \$1,000,000 per occurrence for Bodily Injury and Property Damage, including coverage for owned, hired, or non-owned vehicles, as applicable:

Required by operating Bureau X

Waived by operating Bureau Director or designee ____

- (d) Professional Liability insurance with a combined single limit of not less than \$1,000,000 per claim, incident, or occurrence. If insurance is provided on a "claims made" basis the Contractor shall acquire "tail" coverage or continue the same coverage for three years after completion of the contract, provided coverage is available and economically feasible. If not feasible, contractor shall notify City immediately.

Required by operating Bureau X

Waived by operating Bureau Director or designee ____

- (e) There shall be no cancellation, material change, reduction of limits, or intent not to renew any required insurance without 30 days written notice from the Contractor or its insurer(s) to the City.

- (f) Certificates of insurance. The Contractor shall furnish acceptable insurance certificates to the City showing the required insurance coverage. The certificate will specify all of the parties who are Additional Insureds. Certificates and insurers are subject to City approval. Complete policy copies shall be provided to the City upon request. The Contractor shall be financially responsible for all pertinent deductibles, self-insured retentions, and/or self-insurance.

10. Ownership of Work Product

All work product produced by the Contractor under this contract is the exclusive property of the City. "Work Product" includes, but is not limited to: research, reports, computer programs, manuals, drawings, recordings, photographs, artwork and any data or information in any form. The Contractor and the City intend that such Work Product shall be deemed "work made for hire" of which the City shall be deemed the author. If for any reason a Work Product is deemed not to be a "work made for hire," the

Contractor hereby irrevocably assigns and transfers to the City all right, title and interest in such work product, whether arising from copyright, patent, trademark, trade secret, or any other state or federal intellectual property law or doctrines. Contractor shall obtain such interests and execute all documents necessary to fully vest such rights in the City. Contractor waives all rights relating to work product, including any rights arising under 17 USC 106A, or any other rights of authorship, identification or approval, restriction or limitation on use or subsequent modifications. If the Contractor is an architect, the Work Product is the property of the Contractor-Architect, and by execution of this contract, the Contractor-Architect grants the City an exclusive and irrevocable license to use that Work Product.

Notwithstanding the above, all pre-existing trademarks, services marks, patents, copyrights, trade secrets and other proprietary rights of Contractor are and will remain the exclusive property of Contractor.

11. EEO Certification: In the event Contractor provides in excess of \$2,500.00 for services to the City in any fiscal year, Contractor shall obtain EEO certification from the City.

12. Equal Benefits

Contractor must comply with the City's Equal Benefits program as prescribed by Chapter 3.100 of the Code of the City of Portland. The required documentation must be filed with Procurement Services, City of Portland, prior to contract execution.

13. Successors in Interest

The provisions of this contract shall be binding upon and shall inure to the benefit of the parties hereto, and their respective successors and approved assigns.

14. Severability

The parties agree that if any term or provision of this contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the contract did not contain the particular term or provision held to be invalid.

15. Waiver

The failure of the City to enforce any provision of this contract shall not constitute a waiver by the City of that or any other provision.

16. Errors

The Contractor shall promptly perform such additional services as may be necessary to correct errors in the services required by this contract without undue delays and without additional cost.

17. Governing Law/Venue

The provisions of this contract shall be interpreted, construed and enforced in accordance with, and governed by, the laws of the State of Oregon without reference to its conflict of laws provisions that might otherwise require the application of the law of any other jurisdiction. Any action or suits involving any question arising under this contract must be brought in the appropriate court in Multnomah County Oregon.

18. Amendments

All changes to this contract, including changes to the scope of work and contract amount, must be made by written amendment and approved by the Chief Procurement Officer to be valid. Any amendment that increases the original contract amount by more than 25% must be approved by the City Council to be valid.

19. Business License

The Contractor shall obtain a City of Portland business license as required by PCC 7.02 prior to beginning work under this Contract.

20. Prohibited Conduct

The Contractor shall not hire any City employee who evaluated the proposals or authorized the award of this Contract for two years after the date the contract was authorized without the express written permission of the City and provided the hiring is permitted by state law.

21. Payment to Vendors and Subcontractors

The Contractor shall timely pay all subcontractors and suppliers providing services or goods for this Contract.

22. Access to Records

The Contractor shall maintain all records relating to this Contract for three (3) years after final payment. The City may examine, audit and copy the Contractor's books, documents, papers, and records relating to this contract at any time during this period upon reasonable notice. Copies of these records shall be made available upon request. Payment for the reasonable cost of requested copies shall be made by the City.

23. Audits

(a) The City may conduct financial and performance audits of the billings and services specified in this agreement at any time in the course of the agreement and during the three (3) year period established by paragraph 22. Audits will be conducted in

accordance with generally accepted auditing standards as promulgated in Government Auditing Standards by the Comptroller General of the United States Government Accountability Office.

(b) If an audit discloses that payments to the Contractor exceed the amount to which the Contractor was entitled, the Contractor shall repay the amount of the excess to the City.

24. Electronic Signatures

The City and Contractor may conduct this transaction, including any contract amendments, by electronic means, including the use of electronic signatures.

25. Merger Clause

This Contract encompasses the entire agreement of the parties, and supersedes all previous understandings and agreements between the parties, whether verbal or written.

26. Dispute Resolution/Work regardless of disputes

The parties shall participate in mediation to resolve disputes before conducting litigation. The mediation shall occur at a reasonable time after the conclusion of the Contract with a mediator jointly selected by the parties. Notwithstanding any dispute under this Contract, the Contractor shall continue to perform its work pending resolution of a dispute, and the City shall make payments as required by the Contract for undisputed portions of the work. In the event of litigation no attorney fees are recoverable. No different dispute resolution paragraph(s) in this contract or any attachment hereto shall supersede or take precedence over this provision.

27. Progress Reports: / X / Applicable / / Not Applicable

If applicable, the Contractor shall provide monthly progress reports to the Project Manager as described in the Statement of the Work and Payment Schedule.

28. Contractor's Personnel: / X / Applicable / / Not Applicable

If applicable, the Contractor shall assign the personnel listed in the Statement of the Work and Payment Schedule for the work required by the Contract and shall not change personnel without the prior written consent of the City, which shall not be unreasonably withheld.

29. Subcontractors

The Contractor shall use the subcontractors identified in its proposals. The Contractor shall not change subcontractor assignments without the prior written consent of the Chief Procurement Officer. Failure to use the identified M/W/ESB subcontractors without prior written consent is a material breach of contract.

30. Third Party Beneficiaries

There are no third party beneficiaries to this contract. Enforcement of this contract is reserved to the parties.

STATEMENT OF THE WORK AND PAYMENT SCHEDULE

Background

On March 14, 2012, the Oregon Health Authority (OHA) issued its Final Order granting Portland Water Bureau's (PWB) request for a treatment variance under 42 USC § 300g-4(a)(1)(B). As of April 1, 2012, OHA requires PWB to conduct *Cryptosporidium* Observation Monitoring at the intake at least two days per week for a total volume of at least 100 liters (L) per week. If *Cryptosporidium* is detected during Observation Monitoring, PWB must begin one year of Demonstration Monitoring at a rate of at least four days per week for a total volume of at least 250 L per week such that a total of at least 13,334 L are analyzed within the year. After one year, if the concentration of *Cryptosporidium* is less than 0.075 oocysts per 1,000 L, PWB may resume Observation Monitoring.

For both Observation Monitoring and Demonstration Monitoring, PWB must also collect daily samples when turbidity at the intake is greater than 2.0 Nephelometric Turbidity Unit (NTU) but less than 5.5 NTU. When raw water turbidity is greater than or equal to 5.5 NTU, PWB would not be required to sample for *Cryptosporidium* because the PWB cannot serve Bull Run source water to customers when turbidity is greater than 5.49 NTU.

For all intake compliance sampling, PWB must use a laboratory that is approved or certified to analyze *Cryptosporidium* in accordance with applicable EPA regulations in 40 CFR Part 141.705(a). The laboratory must use EPA-approved Method 1623 (EPA 2005) or another EPA-approved method that applies at the time. PWB must utilize the method or approved modification that is most likely to achieve the highest recovery of *Cryptosporidium* at that time. Matrix spike recoveries must be run at least monthly.

In addition to monitoring at the intake, OHA also requires that PWB conduct *Cryptosporidium* monitoring at tributaries in the Bull Run watershed.

The scope of work for this contract has been developed to meet PWB's compliance requirements for the Bull Run Treatment Variance, as well as additional sampling and consulting work that may be needed to support the variance.

General Requirements

The Contractor shall perform the following services and shall be expected to work closely with PWB to provide any combination of the following services on an as-needed basis. The Contractor shall provide these services within the time frames needed to meet compliance deadlines or complete each project.

Task 1 – Validation of the Precoat Method 1623 Modification

PWB and an EPA-approved laboratory, Analytical Services, Inc. (ASI), developed a method modification in 2009/2010 to improve *Cryptosporidium* spiked recovery during approximately mid-July to mid-November, when an apparent seasonal matrix effect in Bull Run lowers recoveries using the standard Method 1623 as written. This modification, now referred to as the ASI/PWB Precoat method, was validated and approved for use by EPA and OHA for PWB's one-year intensive variance monitoring study. PWB anticipates using the ASI/PWB Precoat (Precoat) method seasonally, as needed, for ongoing variance monitoring in order to achieve the highest possible *Cryptosporidium* recovery. The Precoat method has been validated for 10-L samples only; therefore, when in use, five 10-L samples shall be collected at the same time such that the total volume shall be equivalent to one 50-L sample.

The Contractor shall validate the Precoat method modification according to Tier 1 of EPA's performance-based measurement system (PBMS). The validation shall consist of an Initial Precision and Recovery (IPR) test as outlined in Section 9.4 of EPA Method 1623 and a matrix spike/matrix spike duplicate (MS/MSD) test to demonstrate the performance of the modified method in the Bull Run raw water matrix. The IPR and MS/MSD tests shall meet the acceptance criteria as outlined in Table 3 of EPA Method 1623 prior to the analysis of any field samples by the Precoat method under PWB's variance monitoring program. The Contractor shall prepare results of the Precoat method validation in a report and shall provide all required documentation.

Task 2 – Sample Analysis

The Contractor shall provide routine analysis of water samples for *Cryptosporidium* and *Giardia*. The PWB Project Manager (PM) may request that samples be analyzed by EPA Method 1623, ASI/PWB Precoat Method (once this method has been validated) or EPA Method 1623.1. The PWB PM shall specify the method that is being requested for each sample that is submitted for *Cryptosporidium* and *Giardia* analysis. In order to accommodate PWB's sampling needs, the Contractor shall accept up to 50 samples per week.

Due to the interference of formalin with genotyping and DNA sequencing, the Contractor shall not use a mounting medium and/or fixing buffer that contains formalin or any other products that are known to interfere with DNA amplification to analyze PWB samples for *Cryptosporidium* and *Giardia*.

The PWB PM shall coordinate all sample collection and shipment to the Contractor and shall provide a description of the analyses to be conducted by the Contractor. Each day that a sample is shipped, a Notice of Sample Shipment (NSS) shall be emailed to the Contractor by the PWB PM or his/her designee indicating the sample(s) that have been shipped. The NSS shall include details such as Sample ID, Sample Location, Date Collected, Time Collected, Sample Type, Requested Analysis, Sample Volume, Container Type, Turn-Around Time, and Tracking Number.

PWB anticipates collecting the following types of samples at the designated frequency:

- A. Scheduled compliance samples shall be collected from the intake and four tributary locations. PWB shall provide the Contractor on a semi-annual basis with a compliance sample collection schedule indicating the calendar day and turn-around time for each field and matrix spike sample. If PWB is required to begin Demonstration monitoring, a revised sample collection schedule for the intake shall be submitted to the Contractor.
 - 1) Intake - PWB anticipates collecting 2 to 25 field samples per week (a week is Sunday to Saturday) depending on the monitoring regime (Observation or Demonstration), sample volume, and method being employed. PWB anticipates a higher weekly sampling frequency when the Bull Run matrix interferes with oocyst recovery (mid-July to mid-November) requiring the collection of five 10-L samples in lieu of one 50-L sample. Matrix spike samples shall be collected at a frequency established by PWB which shall not be less than one per month or one per every 20 field samples when more than 20 samples are scheduled for a month. To ensure that scheduled intake sample results are available in time for PWB to prepare monthly regulatory reports, the default turn-around-time shall be rush 5 business days with the exception of the last three (3) compliance samples of each month which shall have a default turn-around time of rush 1 business day. The Contractor must maintain the capacity to accommodate these default turn-around times. Rush samples will be subject to a surcharge fee as listed in the compensation section of this contract. PWB may request turn-around times different from the default, as needed. If intake samples must be rescheduled due to an unforeseen circumstance (e.g., emergency situation, PWB or Contractor error, loss in shipment, arriving out of hold

time, arriving outside the acceptable temperature range, or other unforeseen reasons), replacement samples shall be collected by PWB and shipped to the Contractor for analysis within the same sampling week.

- 2) Tributary - PWB anticipates collecting tributary samples once every four weeks at four locations. Matrix spike samples shall be collected at minimum of twice per year. If a tributary sample must be rescheduled, a replacement sample shall be collected as soon as possible.
- B. Unscheduled compliance event samples may be collected and shipped to the Contractor without prior notice. Unscheduled event samples are triggered by turbidity greater than 2.0 NTU but less than 5.5 NTU at the intake and by high stream flows at the four tributary locations. Unscheduled event sampling may result in sample collection on or prior to a weekend or holiday. If samples require analysis on a weekend or holiday, the PWB shall notify the Contractor at least one (1) day prior to the weekend or holiday. To ensure that sample results are available in time for PWB to prepare monthly regulatory reports, the default turn-around time for event samples collected at the intake shall be rush 5 business days if collected before the 20th of each month and rush 1 business day if collected on or after the 20th of each month. The Contractor must maintain the capacity to accommodate these default turn-around times. Rush samples will be subject to a surcharge fee as listed in the compensation section of this contract. PWB may request turn-around times different from the default, as needed.
- C. Surveillance samples may be collected following a *Cryptosporidium* positive sample or other water quality incident. PWB shall endeavor to notify the Contractor promptly after deciding that surveillance samples shall be collected, but surveillance samples may be collected and shipped to the Contractor without prior notice. Surveillance sampling may result in sample collection on or prior to a weekend or holiday. If samples require analysis on a weekend or holiday, the PWB shall notify the Contractor at least one (1) day prior to the weekend or holiday.
- D. Special study samples may be collected during the course of this contract to attempt to identify the cause of seasonally low *Cryptosporidium* recoveries and to support the development of modifications that improve the performance of EPA Method 1623 for Bull Run water. Special study samples may include but not be limited to experimental matrix spike samples collected at the intake to track the seasonal performance of one or more *Cryptosporidium* and *Giardia* analytical methods being employed by PWB. PWB shall endeavor to notify the Contractor as soon as possible after deciding to collect special study samples.

The Contractor shall provide at the request of the PWB PM other laboratory analyses listed below to support PWB's efforts to identify the cause of seasonally low *Cryptosporidium* recoveries and to support the development of modifications that improve the performance of EPA Method 1623 for Bull Run water.

- 1) Microscopic particulate analysis (MPA).
- 2) Heterotrophic plate count- R2A Agar (HPC-R2A) - triplicate plates at 2 dilutions with controls.
- 3) Bacterial and protozoan recovery from dead-end ultrafiltration filters (Matrix Spike Sample, DEUF) - Includes *E. coli* B6-194 culturing and enumeration prior to spiking using MF and TSA supplemented with ampicillin, enumeration of *E. coli* at time of spiking, seeding with EasySeed, and analysis of DEUF concentrate for target organism including processing using IMS.
- 4) DEUF filter backwash to isolate microbial and particulate composition of Bull Run water (DEUF Backwash).

For all of the types of samples described in Task 2, the Contractor shall adhere to the following requirements:

- A) Sample Work Flow.
The Contractor shall work with the PWB PM to establish and document a sample work flow process, including but not limited to sample shipment, sample receipt, laboratory analyses, and reporting of all results to PWB.
- B) Sample Shipping Containers.
The Contractor shall provide all necessary shipping containers that are suitable for shipping samples back to the Contractor. Shipping containers must be provided with refreezable coolant, packing to prevent sampling container damage, and any other materials necessary for properly shipping samples. PWB packing containers shall be returned within 5 business days (BD) of being received by the Contractor. A Business Day is defined as Monday through Friday. The Contractor shall ship packing containers via ground service, unless the PWB PM (or designee) requests a different service.
- C) Sample instructions.
The Contractor shall provide written instructions for sample collection and sample shipping for all analyses.
- D) Laboratory standard operating procedures.
The Contractor shall provide electronic copies of standard operating procedures (SOP) for all *Cryptosporidium* and *Giardia* methods employed by the laboratory under this Contract. The SOPs shall include reagents to be employed for each analysis. Any modifications or changes to the SOPs that are provided to PWB shall be communicated to and approved by the PWB PM prior to the Contractor implementing the change.
- E) Sample Field Sheet.
The Contractor shall provide sample field sheets. Electronic copies of field sheets shall be delivered to the PWB PM in an editable file such as MS Word or Excel.

F) Chain of Custody.

The Contractor shall provide all chain of custody manifest forms. Electronic copies of chain of custody forms shall be delivered to the PWB PM in an editable file such as MS Word or Excel.

G) Transportation.

The Contractor shall provide for timely delivery of sample containers and shipping containers to:

Portland Water Bureau
Attn: Ann Richter
1900 N. Interstate Avenue
Portland, OR 97227

H) Sample Receipt and Acceptance.

The Contractor shall be required to notify the PWB PM within the same day of scheduled arrival of all samples received and their condition upon arrival, including samples received in unacceptable condition due to hold time violations, compromised sample containers, temperature violations, or any other condition rendering the sample unacceptable for analysis. The Contractor shall also notify the PWB PM within the same day of any sample rendered unacceptable for analysis while in the possession of the laboratory. If a sample is rendered unacceptable for analysis while in the possession of the laboratory due to Contractor error, the Contractor shall bare all costs associated with replacement of the sample and shall present written corrective actions taken within 15 calendar days of the violation.

I) Laboratory Services and Analytical Requirements.

For the analysis of *Cryptosporidium* and *Giardia* in raw water, the Contractor shall use EPA Method 1623, EPA Method 1623.1, or an approved modification requested by PWB. The Contractor must be approved by USEPA for the analysis of *Cryptosporidium* under the Safe Drinking Water Act. **Failure to maintain USEPA approval status shall result in a termination of this Contract.**

The Contractor must be validated, and remain validated throughout the life of this contract, to analyze both 10-L samples and 50-L samples and accept either field filtered samples using the Envirochek HV capsule or bulk samples. For Precoat method, 10-L samples shall be sent as bulk.

J) Packed Pellet Volumes in Excess of 0.5 mL

If a sample yields a packed pellet volume in excess of 0.5 mL, the Contractor shall process subsamples. The Contractor shall analyze the entire concentrated sample, regardless of pellet size.

K) Provisions for Filter Clogging.

In cases where the filter clogs prior to field-filtration of the required sample volume, PWB shall collect and ship the remaining volume in bulk containers. The Contractor shall filter and analyze the remaining required volume. For all filtration by the Contractor, unless otherwise stated, the Contractor shall use as many filters as is necessary to process and analyze the entire sample.

L) Laboratory Capability and Capacity.

The Contractor shall be required to maintain the necessary capability and capacity to provide the specified laboratory services within the required turn-around times.

The Contractor shall be required to maintain records associated with all background checks and suitability determinations of their employees or sub-contracted laboratories that perform work for this project. The City reserves the right to inspect these records at any time.

M) Analyst Experience.

The analyst(s) responsible for microscopic examination of PWB slides prepared for the enumeration of *Cryptosporidium* shall have at least four years of microscopy experience analyzing *Cryptosporidium* in water samples.

N) Data Ownership and Reporting.

The City maintains the right of proprietary owner of all data and processes discovered through the course of this program. Dissemination of information shall require prior approval of the PWB PM.

O) Security Procedures.

Forms shall be completed in circumstances that require the Contractor's staff or their subcontracted laboratories to be on PWB property for an extended period and/or inside a secured PWB facility.

Task 3 – Follow-up work for *Cryptosporidium*-positive samples

The Contractor shall provide color digital photographs of any *Cryptosporidium*-positive slides. The Contractor shall record the location of the oocyst(s) on the slide and provide the Fluorescein Isothiocyanate (FITC), 4'-6-Diamidino-2-phenylindole (DAPI), and Differential Interface Contrast (DIC) digital photographs. PWB may request that the Contractor send the positive slide to a second laboratory of PWB's choosing for a visual confirmation. The Contractor shall prepare and ship the requested slide within 24 hours of the request. The cost of shipping of slides may be invoiced to the City without mark-up.

For any positive slides, the Contractor shall attempt to genotype oocyst(s) on the slide using the genotyping tool described in Water Research Foundation Project 4099. This multiplex hsp70 and 18S PCR protocol with high resolution melt analysis allows genotype differentiation of human-pathogenic *C. hominis*, *C. parvum*, and *C. meleagridis* from animal-associated *Cryptosporidium* genotypes. PCR products shall be confirmed by gel electrophoresis. PWB may request DNA sequencing of PCR products. DNA sequencing of PCR products shall be subcontracted to Dr. George Di Giovanni at the University of Texas School of Public Health or another subcontractor approved by PWB.

The Contractor may be asked to visually evaluate a *Cryptosporidium*-positive slide or photo that has been sent from another laboratory under contract with PWB.

The Contractor may be asked to ship products resulting from follow-up work performed by the Contractor for *Cryptosporidium*-positive samples to a laboratory of PWB's choosing for additional evaluation or testing. If PWB requests shipment to a different laboratory, the Contractor shall prepare and ship the requested products within 24 hours of the request. The Contractor shall provide the shipping date and tracking number to the PWB PM. The cost of shipping the requested products may be invoiced to PWB without mark-up. These independent laboratories will invoice the PWB, and the PWB will be responsible for all payments.

Task 4 – Reporting of Sample Results

The Contractor shall provide the PWB PM with reports and electronic data of the sample results. All reports shall be complete, accurate, formatted as required, and submitted by e-mail directly to the PWB PM.

The Contractor shall provide the following reports:

A. Individual Sample Result Reports

The Contractor shall provide reports for each field sample and matrix spike sample analyzed. These reports shall be complete, accurate, formatted as required, and be in the possession of the PWB PM within ten (10) business days of the Contractor's receipt of each sample. PWB may request rush turn-around times of five (5) or one (1) business days. Rush turn-around rates are listed in the compensation section of this Contract.

For each sample, the Contractor shall submit the following report packet by email as one PDF document directly to the PWB PM:

- One-page laboratory report;
- Scanned copy of the field sheet;
- Scanned copy of the laboratory bench sheet;
- Scanned copy of the laboratory slide examination form(s); and,
- Scanned copy of the chain of custody form.

In addition to the report packet, the Contractor shall also provide the data in the form of an electronic data deliverable (EDD) that can be downloaded directly into PWB's laboratory information management system (Labworks LIMS). The EDD shall be an MS Excel spreadsheet; PWB shall provide the required format and column headers to the Contractor.

B. Monthly Reporting of Intake Monitoring Data

As required by OHA, PWB must submit a monthly intake data report to OHA, Environmental Public Health, Drinking Water Program no later than ten (10) days after the end of the first month following the month when the intake samples are collected. The monthly raw data shall include sample collection date, sample type (field or matrix spike), sample volume filtered in liters, analysis method used and the number of oocysts counted. On a monthly basis, the Contractor shall submit a report form to PWB no later than the 5th day of each month for the compliance intake data of the previous month. PWB shall provide a report template to the Contractor.

C. Monthly Reporting of Ongoing Precision and Recovery Results

The Contractor shall generate a monthly Ongoing Precision and Recovery report for reagent water and raw surface water which shall be submitted to the PWB PM by the 15th of each month. The report shall be in the form of a Microsoft Excel spreadsheet and control charts.

D. Data Exports

Upon written request by the PWB PM, the Contractor shall export all PWB raw data to Microsoft Excel for PWB review, reconciliation, data analysis, or reporting.

E. Genotyping and DNA Sequencing Report

For each *Cryptosporidium*-positive sample that undergoes genotyping and/or any other follow-up analysis, the Contractor shall provide a detailed report of all work that was completed, including quality control. An additional 30 calendar days shall be provided for reporting results from genotyping positive slides and sequencing of DNA amplified by PCR.

F. Failure to Complete on Time

The Contractor shall be required to notify PWB PM immediately by e-mail (Ann.Richter@portlandoregon.gov) and telephone (503-823-6135) if any analysis/analyses shall not be reported within the required turn-around time. Data reports

submitted more than 3 business days past the required turn-around time or the chronic late submission of reports for any number of days past the required turn-around times may be considered grounds for termination of the contract.

Task 5 – Consulting Services

In the course of this project, PWB may require additional technical services from the Contractor. Additional technical services may include, but are not limited to, analytical method optimization, interpretation of sample results, expert opinion, PWB in-house laboratory consulting, and other technical assistance relevant to communicating the significance of sample results. The Contractor may be required to review PWB's sampling program and provide recommendations on analytical methods and approaches with the aim of meeting any new project objectives. These types of services required by PWB under this Contract shall be authorized via work orders issued by PWB's Contract Administration Branch (CAB). A sample work order form is attached as Exhibit A to this Contract.

Work shall be assigned as project needs are identified. The scope of work, schedule, deliverables and compensation for each task shall be established in writing via a work order prior to commencement of the work. Any changes must be agreed to by the Contractor and the City in writing as an amendment to the work order. Work orders require each party's approval in writing to proceed. PWB's approving authority is the Operations Group Director.

Following the Work Order Notice to Proceed issued by the PWB CAB, the PWB PM shall work directly with the Contractor for the duration of the work order unless otherwise noted in the work order. All work progress reports shall be submitted to the PWB PM.

Task 6 – Project Management

A PWB PM shall be designated and shall be responsible for coordinating all PWB work under the contract awarded to the Contractor. The currently designated PWB PM for this work is Ann Richter.

A Project Manager must be designated by the Contractor and shall be responsible for all work performed under this contract. The Contractor's Project Manager is Randi McCuin.

The Contractor shall perform the following project management activities.

A. Monthly Invoices

Upon completion of the work as required under this Contract, the Contractor shall bill the PWB on a monthly basis. Invoices shall be submitted to the PWB Accounts Payable department requesting payment of all services and analyses completed. Invoices must be in a format approved by the City and include the City's Contract Number. Additional information regarding the invoice process is in the PROGRESS PAYMENT section of this contract.

B. Subconsultant Payment and Utilization Report

Submit a Monthly Subconsultant Payment and Utilization Report by the 15th of each month. Submission instructions are on the bottom of the Report template.

DELIVERABLES

All deliverables and resulting work products from this contract shall become the property of the City of Portland. As such, the Contractor and their subcontractors grant the City the right to copy and distribute (in any and all media and formats) project deliverables for regulatory, project certification/recognition, program development, public education, and/or for any purposes at the sole discretion of the City of Portland.

CONTRACTOR PERSONNEL

The Contractor shall assign the following personnel to do the work in the capacities designated:

NAME	ROLE ON PROJECT
Randi McCuin	Project Manager/Senior Microbiologist
Shan Reynolds	Microbiologist
Theng Theng Fong	Senior Molecular Microbiologist
Jennifer Clancy	Project review
Jeffery Rose	Data Review and Statistical Analysis
Dr. Jose Sobrinho	Statistical Support
Tom Hargy	Field Operations

SUBCONTRACTORS

The Contractor shall assign the following subcontractors to perform work in the capacities designated:

NAME	ROLE ON PROJECT
George Di Giovanni - University of Texas School of Public Health	Genotyping of Cryptosporidium

The City will enforce all diversity in workforce and Minority, Women and Emerging Small Business (M/W/ESB) subcontracting commitments submitted by the Contractor in its Proposal. For contracts valued \$100,000 or more, the Contractor shall submit a Monthly Subconsultant Payment and Utilization Report (MUR), made part of this contract by reference, reporting ALL subcontractors employed in the performance of this agreement. An electronic copy of the MUR may be obtained at: <http://www.portlandonline.com/shared/cfm/image.cfm?id=119851>.

COMPENSATION

The maximum that the Contractor can be paid on this contract is \$400,000 (hereafter the "not to exceed" amount.). The "not to exceed" amount includes all payments to be made pursuant to this contract, including reimbursable expenses, if any. Nothing in this contract requires the City to pay for work that does not meet the Standard of Care or other requirements of the Contract. The actual amount to be paid to the Contractor may be less than that amount.

The Contractor is entitled to receive progress payments for its work pursuant to the Contract as provided in more detail below. The City shall pay the Contractor based on these invoices for acceptable work performed and approved until the "not to exceed" amount is reached. Thereafter, the Contractor must complete work based on the Contract without additional compensation unless there is a change to the scope of work.

Any estimate of the hours necessary to perform the work is not binding on the City. The Contractor remains responsible if the estimate proves to be incorrect. Exceeding the number of estimated hours of work does not impose any liability on the City for additional payment.

If work is completed before the "not to exceed" amount is reached, the Contractor's compensation shall be based on the Contractor's bills previously submitted for acceptable work performed and approved.

PAYMENT TERMS: Net 30 Days

REIMBURSEMENT FOR WATER SAMPLE ANALYSIS

The Contractor shall be compensated per analysis in accordance with the rates below. The unit costs listed below shall remain constant for the term of the contract. No annual inflation adjustments shall be allowed. No other additional costs shall be considered. Sample analysis costs include all internal Contractor Quality Assurance/Quality Control such as ongoing precision and recovery (OPR) samples.

The Contractor shall be compensated for sample analysis as follows:

Sample Analysis	Cost
Precoat Method Tier 1 Validation (IPR, Method Blank, and MS/MSD)	\$3,000
Field Sample, EPA Method 1623	\$182/sample
Field Sample, EPA Method 1623 – Precoat Modification	\$185/sample
Field Sample, EPA Method 1623.1	\$200/sample
Matrix Spike Sample, EPA Method 1623	\$282/sample
Matrix Spike Sample, EPA Method 1623 – Precoat Modification	\$285/sample
Matrix Spike Sample, EPA Method 1623.1	\$300/sample
<i>Cryptosporidium</i> / <i>Giardia</i> rush sample surcharge, 1 business day	\$150/sample
<i>Cryptosporidium</i> / <i>Giardia</i> rush sample surcharge, 5 business days	\$50/sample
Packed pellet sub-sample	\$75/sub-sample
Extra slide analysis	\$60/slide
Visual confirmation of a positive slide from an outside laboratory	\$60/slide
Genotyping (PCR and melt analysis):	\$250/sample
DNA sequencing	\$250/sample
HPC-R2A	\$60/sample
MPA	\$75/sample
Matrix Spike Sample, DEUF (<i>Cryptosporidium</i> , <i>Giardia</i> , and <i>E. coli</i>)	\$320/sample

Sample Analysis	Cost
DEUF Backwash	\$50/sample

The Contractor shall be compensated for supplies related to sample analysis as follows:

Supplies	Cost
Filters, Envirochek HV (each)	\$78.25/filter
Cubitainers, 10-L	\$5/cubitainer
Additional analytical testing supplies*	Cost plus 20% mark-up

Additional testing supplies shall not be purchased without first obtaining written authorization from the City of Portland Project Manager.

The Contractor shall be compensated for shipping costs related to sample analysis as follows:

Shipping	Cost
Shipment of packing container to PWB (cost per shipment)	Contractor's shipping cost + 15% mark-up

REIMBURSEMENT FOR CONSULTING SERVICES

The Contractor shall be compensated for consulting services at the rates listed below. The hourly rates listed shall remain constant for the term of the contract.

Staff shall be billed at the following rates for consulting services:

Randi McCuin	\$125/hour
Theng Theng Fong	\$105/hour
Shan Reynolds	\$81/hour
Jennifer Clancy	\$250/hour
Jeffrey Rosen	\$250/hour
Dr. Jose Sobrinho	\$125/hour
Tom Hargy	\$125/hour

The hourly rates include a multiplier of 2.967.

PWB Multiplier Policy

The multiplier applied to salaries shall not exceed 3.1. The multiplier shall include the following non-reimbursable expenses: fringe benefits, payroll bonuses, autos and other defined perquisites, telecommunications, facsimile services, overhead expenses including but not limited to local and long distance telephone, parking, delivery/courier, general business and professional liability insurance, advertising costs, postage, internal copying, lease of office equipment, mileage and other local travel costs, information technology (including computer time and CAD services and other related highly specialized equipment), all other direct costs not identified as reimbursable, other indirect costs and profit.

Standard Reimbursable Costs

The following costs shall be reimbursed without mark-up.

Out-of-Town Travel. Travel (transportation, lodging and per diem) of the Contractor, when requested in writing by the PWB PM, directly attributed to specific tasks and when to a location outside a 100 mile radius of Contractors project office. Travel costs shall be reimbursed in accordance with the City's Travel Expense Guidelines, which are based on the General Services Administration (GSA) per diem rates. All out-of-town travel shall be pre-approved by the PWB PM in writing prior to that travel.

Photocopying/Reproduction Costs. Reproduction of required drawings, reports, specifications, bidding documents, in excess of the number required as part of the contract excluding the cost of reproduction for Contractors own use.

Subconsultant Costs

Compensation for Subconsultants shall be limited to the same restrictions imposed on the Consultant. The maximum markup on Subconsultant services shall not exceed 5%.

Travel

It is the policy of the City that all travel shall be allowed only when the travel is essential to the normal discharge of the Contractor's responsibilities under the Contract. All travel must be for official City business only. All travel and lodging shall be conducted in the most efficient and cost-effective manner resulting in the best value to the City.

The travel must comply with all the requirements set forth in this section and must be for official City business only. Personal expenses shall not be authorized at any time. Travel expenses shall be reimbursed for airfare and rental vehicles only if Contractor is acting within the course and scope of his/her duties under this Contract. Alcohol is not an authorized purchase under this Contract. Receipts are required for all travel expenses. All Contractor representatives shall fly "coach class," unless Contractor personally pays the difference. All Contractor representatives shall be limited to economy or compact size rental vehicles, unless Contractor personally pays the difference.

Any Out-of-Town Travel, (transportation, lodging and per diem), for Contractor and/or experts as specified in the contract or requested by PWB to a location outside a 50 mile radius of Contractor's project office shall be reimbursed. The approved mileage rate follows the current United States General Services Administration (GSA) federal rate. Meal per diem is based on the GSA per diem rates. Per Diem Rates for Oregon may be found at the GSA website link. That website address is: <http://www.gsa.gov/perdiem>. **All travel must be pre-authorized by the City's Project Manager in writing prior to conducting that travel.**

PROGRESS PAYMENTS

Within thirty (30) days after the completion of requested analyses, the Contractor shall submit to the City's Project Manager an invoice for work performed by the Contractor. The invoice shall contain the City's Contract Number and set out all items for payment including, but not limited to: project name, tasks, type of analysis performed, staff hours for each task, and total costs for the billing period. The Contractor shall also attach photocopies of claimed reimbursable expenses, if applicable. The Contractor shall stamp and approve all subconsultant invoices and note on the subconsultant invoice what they are approving as "billable" under the contract. The billing from the prime should clearly roll up labor and reimbursable costs for the prime and subconsultants – matching the subconsultant invoices. Prior to initial billing, the Contractor shall develop a billing format for approval by the City. Invoices shall either be e-mailed to: wbaps@portlandoregon.gov.

The City shall pay all amounts to which no dispute exists within 30 days of receipt of the invoice. Payment of any bill, however, does not preclude the City from later determining that an error in payment was made and from withholding the disputed sum from the next progress payment until the dispute is resolved.

The Contractor shall make full payment to its subcontractors within 10 business days following receipt of any payment made by the City to Contractor.

INDEPENDENT CONTRACTOR CERTIFICATION STATEMENT

SECTION A

CONTRACTOR CERTIFICATION I, undersigned, am authorized to act on behalf of entity designated below, hereby certify that entity has current Workers' Compensation Insurance.

Contractor Signature

Gail Hendy

Date

10/8/12

Entity

Tetra Tech, Inc.

If entity does not have Workers' Compensation Insurance, City Project Manager and Contractor complete the remainder of this form.

SECTION B

ORS 670.600 Independent contractor standards. As used in various provisions of ORS Chapters 316, 656, 657, and 701, an individual or business entity that performs labor or services for remuneration shall be considered to perform the labor or services as an "independent contractor" if the standards of this section are met. The contracted work meets the following standards:

1. The individual or business entity providing the labor or services is free from direction and control over the means and manner of providing the labor or services, subject only to the right of the person for whom the labor or services are provided to specify the desired results;
2. The individual or business entity providing labor or services is responsible for obtaining all assumed business registrations or professional occupation licenses required by state law or local government ordinances for the individual or business entity to conduct the business;
3. The individual or business entity providing labor or services furnishes the tools or equipment necessary for performance of the contracted labor or services;
4. The individual or business entity providing labor or services has the authority to hire and fire employees to perform the labor or services;
5. Payment for the labor or services is made upon completion of the performance of specific portions of the project or is made on the basis of an annual or periodic retainer.

City Project Manager Signature

Date

SECTION C

Independent contractor certifies he/she meets the following standards:

1. The individual or business entity providing labor or services is registered under ORS Chapter 701, if the individual or business entity provides labor or services for which such registration is required;
2. Federal and state income tax returns in the name of the business or a business Schedule C or form Schedule F as part of the personal income tax return were filed for the previous year if the individual or business entity performed labor or services as an independent contractor in the previous year; and
3. The individual or business entity represents to the public that the labor or services are to be provided by an independently established business. Except when an individual or business entity files a Schedule F as part of the personal income tax returns and the individual or business entity performs farm labor or services that are reportable on Schedule C, an individual or business entity is considered to be engaged in an independently established business when four or more of the following circumstances exist. Contractor check four or more of the following:

- ☐ A. The labor or services are primarily carried out at a location that is separate from the residence of an individual who performs the labor or services, or are primarily carried out in a specific portion of the residence, which portion is set aside as the location of the business;
- ☐ B. Commercial advertising or business cards as is customary in operating similar businesses are purchased for the business, or the individual or business entity has a trade association membership;
- ☐ C. Telephone listing and service are used for the business that is separate from the personal residence listing and service used by an individual who performs the labor or services;
- ☐ D. Labor or services are performed only pursuant to written contracts;
- ☐ E. Labor or services are performed for two or more different persons within a period of one year; or
- ☐ F. The individual or business entity assumes financial responsibility for defective workmanship or for service not provided as evidenced by the ownership of performance bonds, warranties, errors and omission insurance or liability insurance relating to the labor or services to be provided.

Contractor Signature

Date

CONTRACTOR SIGNATURE:

This contract may be signed in two (2) or more counterparts, each of which shall be deemed an original, and which, when taken together, shall constitute one and the same Agreement.

The parties agree the City and Contractor may conduct this transaction, including any contract amendments, by electronic means, including the use of electronic signatures.

I, the undersigned, agree to perform work outlined in this contract in accordance to the STANDARD CONTRACT PROVISIONS, the terms and conditions, made part of this contract by reference, and the STATEMENT OF THE WORK made part of this contract by reference; hereby certify under penalty of perjury that I/my business am not/is not in violation of any Oregon tax laws; hereby certify that my business is certified as an Equal Employment Opportunity Affirmative Action Employer and is in compliance with the Equal Benefits Program as prescribed by Chapter 3.100 of Code of the City of Portland; and hereby certify I am an independent contractor as defined in ORS 670.600.

Tetra Tech, Inc.

BY: J. Clancy Date: 10/8/12

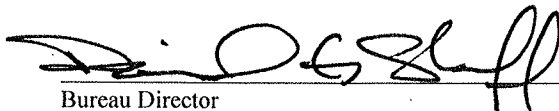
Name: Jennifer L. Clancy

Title: President

Contract No. 30002898Contract Title: Laboratory Services for *Cryptosporidium* and *Giardia* Water Analysis

CITY OF PORTLAND SIGNATURES:

By:



Bureau Director

Date:

11.02.2012

By:

Chief Procurement Officer

Date:

By:

Elected Official

Date:

Approved:

By:

Office of City Auditor

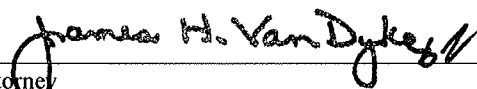
Date:

Approved as to Form:

APPROVED AS TO FORM

By:

Office of City Attorney



CITY ATTORNEY

Date:

10/22/12