

AGREEMENT FOR GROUNDWATER MONITORING AND REPORTING ACTIVITIES
FOR WHITESON LANDFILL
(Yamhill County and Hahn and Associates Inc.)

THIS AGREEMENT, effective the last date set forth adjacent to the signatures of the parties below, is between Yamhill County, a political subdivision of the State of Oregon, acting through its Planning Department and Board of Commissioners (herein, "County") and Hahn and Associates Inc., 434 NW 6th Ave., Suite 203, Portland, OR 97209, doing business as a corporation (herein, "Consultant") for Groundwater Monitoring and Reporting Activities for Whiteson Landfill, Whiteson, Oregon. (referred to in this Agreement as the "Project").

This Agreement is made to specify the obligations of County and Consultant for completion of the Project. In consideration of the covenants contained below, County and Consultant hereby agree as follows:

1. Scope of work. The Project is described in the attached April 22, 2015 "Proposal and Cost Estimate for Groundwater Monitoring and Reporting Activities, Whiteson Landfill, Whiteson, Oregon." The Proposal outlines two monitoring and assessment tasks to be performed by Consultant during the years 2015, 2016 and 2017. Unless extended by written agreement between the parties, this agreement will expire at the close of county business on December 31, 2017.
2. Compensation. As set forth in Section 4 of the attached Proposal, the total estimated cost of monitoring and assessment for the three-year period of this agreement is \$66,100. As set forth in Section 5 of the attached Proposal, an additional \$18,000 is the estimated cost of general technical assistance that may be necessary to provide to county over the same three year contract period, for a total estimated contract cost of \$84,100. The services will be billed on a time and materials basis according to the attached Schedule of Fees, but will not exceed the estimated costs listed herein without written agreement, signed by both parties.
3. Independent Contractor. Consultant is an independent contractor. Consultant will furnish all of the materials, supplies, tools, equipment, labor, and other services necessary to provide the services described in the attached Proposal.
4. Termination. County may terminate this Agreement if the Consultant fails to comply with a material term of this Agreement. If this Agreement is terminated, the County will pay for all work accepted by the Project Supervisor prior to termination.
5. Compliance with Law. Consultant shall comply with all requirements of any applicable federal, national, state or local law, rule or regulation. Consultant represents that it has all licenses and other authorizations required to enable it to perform the tasks outlined in the attached Proposal.
6. Professional Responsibility. (a) Consultant agrees to provide, in connection with performance of all services under this Agreement, the standards of care, skill and diligence normally provide by competent professionals in the performance of services similar to those

contemplated by this Agreement; and (b) Consultant represents that it has no conflicts of interest in rendering professional services to the County.

7. Incorporation of statutory provisions required for public contracts. Consultant shall comply with all applicable Public Contract Laws which may include, but are not limited to, ORS 279B.200 through 279B.240 and ORS 279C.500 through 279C.530. These Public Contract Laws are incorporated into this Agreement by reference.

8. Workers' Compensation. Consultants, its subcontractors, if any, and all employers working under this agreement are subject employers under the Oregon Workers' Compensation Law and shall comply with ORS 656.017, which requires them to provide workers' compensation coverage for all their subject workers.

9. Work Made for Hire. Services rendered by Consultant under this agreement are "work made for hire" by an independent contractor. Ownership to works covered by a copyright and all products and data produced by Consultant under this Agreement are the sole and exclusive property of the County. If for any reason the work would not be considered a work made for hire under applicable law, Consultant does hereby sell, assign, and transfer to the County the entire right, title and interest in and to the copyright in the work and any registrations and copyright applications relating thereto and any renewals and extensions thereof, and in and to all works based upon such work.

10. Status of the Project Supervisor. Mike Brandt, Yamhill County Planning Director, is the Project Supervisor (the "Supervisor"). The Supervisor or his designee shall perform technical inspections of work and shall have authority to stop the work whenever such stoppage shall be necessary to insure proper execution of the contract. The Supervisor or his designee may reject all work and materials that do not conform to the contract and shall decide questions that arise in the execution of the work. The Supervisor has authority to reject or accept the work.

11. Prohibition of Discrimination. In hiring employees for performance of work under this contract, no contractor, subcontractor or any person acting on their behalf shall, by reason of race, religion, age, color, creed, physical handicap, sex or sexual orientation, discriminate against a person who is qualified and available to perform work to which employment relates.

12. Indemnification. The Consultant shall indemnify, defend and save harmless County from and against any suits, actions, legal or administrative proceedings, demands, claims, liabilities, fines, penalties, losses, injuries, damages, expenses or costs, including interest and attorney fees, in any way connected with any injury to any person or damage to any property occasioned in any way by Consultant's or Consultant's subcontractors' prosecution of work under this agreement.

13. Nonwaiver. No waiver of any breach of this contract shall be held to be a waiver of any other or subsequent breach. All remedies afforded in this contract shall be taken and construed as cumulative, that is, in addition to every other remedy provided therein or by law. The failure of County to enforce at any time any of the terms of this contract, or to exercise any option which is provided, or to require at any time performance by Consultant of any of the provisions,

shall in no way be construed to be a waiver of such provisions, nor in any way to affect the validity of any part of this contract, or the right of County to thereafter enforce each and every provision.

14. Severability. Should any clause or section of this Contract be declared by a court of competent jurisdiction to be void or voidable, the remainder of this Contract shall remain in full force and effect.

15. Dispute resolution through mediation and arbitration. Any dispute between the parties to this Agreement shall be resolved according to the following process:

(a) The parties first shall submit to mediation of the dispute to be conducted by a mutually acceptable mediator. If the parties cannot agree on a mediator, they shall request a mediator to be appointed by the U.S. Mediation and Arbitration service in Portland, Oregon. The mediator's charges and expenses shall be borne equally by the parties. All other expenses, including attorney fees and costs, shall be borne exclusively by the party requiring the service or for which payment is to be made.

(b) If the dispute is not resolved in mediation, the parties shall then submit the dispute to binding arbitration. Arbitration shall be conducted in accordance with the rules set forth in the Oregon International Commercial Arbitration and Conciliation Act, ORS 36.450 to 36.558, 2007 replacement part. The decision of the arbitrator shall be final and binding on the parties. The party that does not prevail, as determined by the arbitrator, shall pay the arbitrator's fees and expenses in arbitration. All other expenses, including attorney fees and costs, shall be borne exclusively by the party requiring the service or for which payment is to be made.

16. Attorney fees and costs. In the event that either party to this Agreement shall take any action, judicial or otherwise, to enforce or interpret any of the terms of this contract, each party shall be wholly responsible for its own expenses which it may incur in taking such action, including costs and attorney fees, whether incurred in a suit or action or appeal from a judgment or decree therein or in connection with any non-judicial action.

17. Applicable laws. This Agreement is executed in the State of Oregon and is subject to Oregon law and jurisdiction in Yamhill County.

18. Subcontractors. The Consultant may not engage any subcontractor(s) to perform work under this Agreement without the express written consent of the County. If the County does grant consent, the Consultant covenants and agrees to bind any and all Subcontractor(s) for performance of work under this Agreement. Any reference to Consultant shall include any and all Subcontractor(s) ad infinitum.

19. Written changes required. The rights and duties under this Contract shall not be modified, delegated, transferred, or assigned, except upon written signed consent of both parties.

20. Successors bound. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

THIS AGREEMENT AND THE ATTACHED PROPOSAL CONSTITUTE THE ENTIRE AGREEMENT BETWEEN THE PARTIES. NO WAIVER, CONSENT, MODIFICATION OR CHANGE IN TERMS OF THIS CONTRACT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY BOTH PARTIES. SUCH WAIVER, CONSENT, MODIFICATION OR CHANGE, IF MADE, SHALL BE EFFECTIVE ONLY FOR THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. THERE ARE NO UNDERSTANDINGS, AGREEMENTS OR REPRESENTATIONS, ORAL OR WRITTEN NOT SPECIFIED HEREIN REGARDING THIS CONTRACT. THE CONSULTANT, BY SIGNATURE OF ITS AUTHORIZED REPRESENTATIVE, HEREBY ACKNOWLEDGES THAT IT HAS READ THIS CONTRACT, UNDERSTANDS IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed on the date indicated by their duly authorized officials, this Agreement singularly or in duplicate and if in duplicate, each of which shall be deemed an original on the date executed by all parties.

HAHN AND ASSOCIATES INC.

YAMHILL COUNTY, OREGON

By: *Gary W. Hahn*
(signature)

Allen Springer
ALLEN SPRINGER, Chair

Date: August 4, 2015

Date: 8-6-15

GARY W. HAHN
Printed name)

Mike Brandt
MIKE BRANDT

Title: President

Yamhill County Planning Director
Date: 8-5-15

Fed. Tax I.D. No: 93-0942954

FORM APPROVED BY:

Contractor
Registration No: 71414

By: *Timothy S. Sadlo*
TIMOTHY S. SADLO
Senior Assistant County Counsel

Accepted by Yamhill County
Board of Commissioners on
8.6.15 by Board Order
15-323

HAHN AND ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

April 22, 2015

Sherrle Mathison
Yamhill County Department of Planning & Development
Solid Waste Department
401 NE Evans Street
McMinnville, Oregon 97128

HAI File No. 6914

SUBJECT: Proposal and Cost Estimate for Groundwater Monitoring and Reporting Activities, Whiteson Landfill, Whiteson, Oregon

Dear Ms. Mathison:

1.0 Introduction

At the request of the Yamhill County Department of Planning & Development, Hahn and Associates, Inc. (HAI) has prepared this proposal and cost estimate to provide groundwater monitoring and related services at the Whiteson Solid Waste Landfill, located in Whiteson, Oregon. Over the past fifteen years, HAI has demonstrated that our experience and capabilities are a good match for Yamhill County's environmental monitoring and reporting needs with regard to the Whiteson Landfill.

Since acquiring management of groundwater monitoring activities at the Whiteson Landfill in 1999, HAI has demonstrated efficient completion of all aspects of the groundwater monitoring program. Since HAI has been involved with the landfill monitoring program, all HAI-prepared reports have been approved by the Oregon Department of Environmental Quality (DEQ) without the need for revision. In addition to groundwater sampling and reporting, HAI has also prepared the most current DEQ-approved Environmental Monitoring Plan (EMP) for the Whiteson Landfill, dated September 26, 2013. All work will continue to be conducted under the supervision of an Oregon Registered Geologist (R.G.).

2.0 Project Team and Relevant Experience

HAI is a Portland-based firm with approximately 85% of its projects performed in the state of Oregon. HAI employs a total of 13 individuals, of whom three have been selected, based on their expertise, to team together such that the needs of Yamhill County will be satisfied. The proposed HAI team will consist of the following personnel: 1) Mr. Rob Ede, R.G., Vice President; 2) Mr. Ben Uhl, G.I.T., Field Manager; and 3) Ms. Jane-Clair Keirn, R.G., Project Manager.

The expertise of the HAI team is very well suited to meet Yamhill County's needs and covers in-depth all of the services required at the Whiteson Solid Waste Landfill. As identified in the personnel summaries below, HAI team members have been involved with the Whiteson Landfill monitoring program and/or a number of projects that are similar in scope as that described for the Whiteson Landfill.

Mr. Robert B. Eds, R.G., Principal (M.S. Earth Resource Management), is an Oregon-Registered Professional Geologist with 24 years of experience in the fields of geology and hydrogeology. Rob is responsible for a wide range of projects, including soil and groundwater investigations, Remedial Investigations (RIs), and regulatory site closure reporting for a variety of commercial, industrial, and Brownfield properties. Rob has been lead on the Whiteson landfill monitoring project for HAI since 1999, and since that time has been involved with all aspects of the Whiteson landfill monitoring project, including field sampling, regulatory interface, report preparation, quality assurance, and overall project management (client interface, scheduling, budget tracking, and invoice review). For the 2015 through 2017 contract period, Rob would continue to serve as the primary point-of-contact, and would be overall technical lead.

Mr. Ben Uhl, GIT, Field Manger, (B.S. Geology), has approximately 13 years of experience in sampling active and closed landfills. His experience includes leachate, groundwater, landfill gas, and air sampling at numerous landfills of varying status. Ben also has 13 years of experience collecting and validating data for the preparation of soil and groundwater investigative and routine monitoring reports. Under the supervision of an R.G., Ben would perform data validation, tabulation, and field sampling support for the Whiteson project.

Ms. Jane-Claire Kerin, R.G., Project Manager (M.S. Geology), is a registered Geologist with 8 years of experience conducting environmental field sampling related to soil gas, soil, and groundwater, and providing data quality assurance activities, as well as Phase I and Phase II environmental site assessment (ESA) projects. Ms. Kerin is experienced in environmental field methods, including field sampling methods. Jane is also experienced in hydrology, soil science, remote sensing, geochemistry, igneous petrography, instrumental analysis of geologic data, site assessment and remediation, GIS, satellite image analysis, and statistical analysis of geographic data. Jane would provide report writing and field sampling support for the Whiteson project.

3.0 Scope of Work

The scoping for the Groundwater Monitoring and Reporting activities is based on information provided by Yamhill County and monitoring and reporting requirements of the Whiteson Landfill Solid Waste Disposal Site Closure Permit, Issued June 28, 2013. It is understood the necessary work activities will include groundwater monitoring related tasks over a three year period (2015-2017) including: 1) sampling; 2) laboratory analyses; and 3) reporting.

In addition, the Whiteson Landfill Closure Permit requires an assessment of ecological risk associated with the discharge to surface water of the river-bank seeps and leachate impacted groundwater.

3.1 Task 1 Groundwater Monitoring

The schedule for the next three year monitoring period as identified in the EMP, is as follows:

2015 – Winter (December 21 to March 19)

2016 – Spring (March 20 to June 20)

2017 – Summer (June 21 to September 21)

Groundwater monitoring activities at the Whiteson Landfill will involve three subtasks: 1) groundwater sampling; 2) Quality Assurance/Quality Control sampling (QA/QC); and 3) Investigative-derived waste (IDW) disposal.

All environmental sampling activities will follow the sample collection and reporting schedule as specified in Schedule B of the Yamhill County Landfill Solid Waste Disposal Permit No. 212. Sampling activities will be conducted as per the September 26, 2013 Whiteson Landfill Sampling and Analysis Plan. HAI will assist the County with regard to necessary Oregon DEQ notification of the pending groundwater monitoring events.

3.1.1 Groundwater Sampling

The seven monitoring wells at the site range in depth from approximately 15 to 52 feet below ground surface (bgs), are constructed with 2-inch diameter screen and casing, and do not contain dedicated pumps. As has been the case since HAI began monitoring activities at the landfill in 1999, this cost estimate assumes all well sampling will be conducted with peristaltic pumps and small diameter disposable plastic bailers. Such sampling protocols have been shown to reduce the suspended solid component of the groundwater samples to the point where analysis of filtered samples are not needed under typical conditions. Further, as has been the case since HAI began monitoring activities at the landfill in 1999, this cost estimate assumes all sampling activities related to each annual monitoring event may be completed within one day.

Prior to the initiation of groundwater sampling activities, the static water levels in the monitoring wells will be measured using a Solinst water level indicator (conductive probe).

A representative groundwater sample will be obtained from each of the seven monitoring wells pursuant to the approved Sampling and Analysis Plan for the landfill. Specifically, the pH, temperature, specific conductance, dissolved oxygen, oxygen reduction potential (ORP), and turbidity of the groundwater will be measured during the purging process to observe for stabilization of these parameters. Subsequently, and after a minimum of three well casing volumes of water have been purged, a representative sample of the groundwater will be carefully transferred into the appropriate sampling containers. One duplicate water sample, one trip blank water sample, and one equipment blank water sample will be collected during each sampling event. QA/QC is further described in Section 3.1.2. The parameters of pH, temperature, specific conductance, dissolved oxygen, ORP, and turbidity will also be measured at the time of sample collection. The sample bottles will be labeled and transferred to a chilled container for shipment to the analytical laboratory. Sample containers will be labeled "blind" such that the laboratory cannot identify QA/QC samples or find it possible to correlate a sample with a particular well.

Field QA/QC samples for this project will include the collection of one groundwater duplicate sample per monitoring event. The field duplicate sample will be analyzed for the same parameters as monitoring well samples. Additionally, one field blank and one trip blank sample will be analyzed for representative parameters such that the possibility of cross-contamination between, or outside influences to, the samples may be evaluated.

In addition, HAI will aid the DEQ in the collection of split samples during each sampling event, if necessary. Laboratory QA/QC for this project will involve standard U.S. Environmental Protection Agency (EPA) guidelines as described in Test Methods for Evaluating Solid Wastes – Physical/Chemical Methods (SW-846). Laboratory QC will include calibration standards, control samples, reagent blanks, matrix spikes, matrix spike duplicates, surrogate spikes, and laboratory duplicates.

Equipment decontamination water and well purge water will be discharged to the ground surface in the vicinity of each respective monitoring well.

3.1.2 *Laboratory Analyses*

All groundwater monitoring samples will be analyzed at a qualified analytical laboratory for the corresponding appropriate parameters listed in Attachment 1 of the Whiteson Solid Waste Landfill Permit. All laboratory analyses will be conducted on a normal (10-business day) turnaround basis. For this project, HAI will use Apex Laboratories, LLC located in Tigard, Oregon.

In accordance with the Yamhill County Landfill Solid Waste Disposal Permit, this cost proposal is based on the understanding that Group 1a, 1b, 2a, 2b, and 3 parameters will be analyzed during the year 2015, 2016, and 2017 sampling events. VOC analyses will include a full library search to identify unknown compounds by EPA Methods 8260. Also, as has been conducted in the past, this cost estimate assumes analytical costs will be invoiced directly to Yamhill County by the laboratory, thereby eliminating any mark-up by HAI.

3.1.3 *Groundwater Monitoring Reporting*

Upon receipt of the analytical data, a groundwater monitoring report, meeting the requirements identified within Schedule B of the Closure Permit, will be prepared under the oversight of an Oregon R.G. with experience in hydrogeological investigations and landfill monitoring activities. Each report will contain a description of the work activities, a tabular summary of the analytical results, maps depicting groundwater elevations and gradients, as well as time-series plots for those parameters specified within Schedule B of the Closure Permit. The appendix of each report will include copies of field data sheets, laboratory analytical reports, and chain of custody documentation.

The reports will be prepared such that a draft will be available for review by Yamhill County prior to submittal. Reports will be submitted to DEQ prior to September 15 and will report on the previous calendar year's monitoring period. In addition, HAI will notify Yamhill County of any analytes that are above applicable water quality regulatory standards.

3.2 Task 2 Ecological Risk Assessment

The Site Closure Permit for Whiteson Landfill (Section 11.3) includes a requirement for the assessment of ecological risk associated with discharge of the river-bank seeps and leachate impacted groundwater to the South Yamhill River.

To address this requirement, it has been assumed that Level I Scoping and Level II Screening Ecological Risk Assessments (ERAs) will be conducted in

accordance with relevant DEQ guidance (DEQ 1998 and 2001). HAI proposes to team with GeoEngineers, Inc., a firm that has the experience and ecological risk evaluation expertise necessary for completion of this task.

Scoping Document: Prior to completing the Level III ERAs, GeoEngineers will prepare a brief ERA Scoping Document for submittal to the project team and Oregon DEQ for their review and approval. The ERAs will focus on the riverbank seeps and soil and discharge of groundwater along the north end of the Whiteson Landfill.

Level I Scoping ERA: This document will be completed in accordance with the DEQ's Guidance for Ecological Risk Assessment, Level I – Scoping (DEQ, 1998). The Level I Scoping ERA consists of a conservative qualitative determination of whether there is any reason to believe that ecological receptors and/or exposure pathways are present or potentially present at or in the locality of the facility. The Level I Scoping ERA will include: 1) research U.S. Fish and Wildlife Service (USFWS), ODFW and Oregon Natural Heritage Program (ONHP) databases for threatened and endangered species in the site vicinity; 2) conduct a site visit to observe potential habitat and species; and 3) complete the Level I Scoping ERA Checklist.

Level II Screening ERA: The Level II Screening ERA will be conducted in accordance with updated DEQ guidance for Level II (DEQ, 2001) and will include the following primary tasks:

- Identification of candidate ecological assessment endpoints;
- Identification of appropriate screening criteria (DEQ SLVs or others);
- Screening and identification of contaminants of potential ecological concern (CPEC);
- Identify areas of the LOF where CPECs are detected and whether active exposure pathways are present; and
- Make an initial evaluation of the potential for site-related risk through comparison of contaminant concentrations to appropriate SLVs.

When completing the Level II screening, the 90 percent upper confidence limit (UCL) of the arithmetic mean will be used as the exposure point concentration (EPC) for terrestrial wildlife, fish and other identified aquatic species. The maximum concentration will serve as the EPC for plants, soil invertebrates, and sessile benthic invertebrates. In cases where no SLVs are available for a particular exposure assessment endpoint and contaminant, the contaminant will be retained in a separate category for assessment of whether contaminant-specific toxicity information should be obtained and used to derive an SLV.

We have assumed that the Level II Screening ERA will be initially completed using existing groundwater data, although updating the Level II ERA is also included within this scope assuming seep or porewater samples are obtained.

4.0 Estimated Costs

The estimated costs for Groundwater Monitoring services as detailed in this proposal are itemized below. The services will be billed on a time and materials basis according to the attached Schedule of Fees, but will not exceed the estimated costs listed below without prior approval of the Client.

4.1 Task 1 Groundwater Monitoring

2015 Groundwater Monitoring Event

<u>Activity</u>	<u>Estimated Costs</u>
Annual Monitoring (One Field-Day; 2 Staff)	\$4,300
Reporting/Regulatory and County Interface	\$4,900
Laboratory Analyses (Billed directly to Yamhill County by Apex Laboratories)	\$4,000
Total Estimated Costs (2015 Event)	\$13,200

2016 Groundwater Monitoring Event

<u>Activity</u>	<u>Estimated Costs</u>
Annual Groundwater Monitoring (One-Field Day; 2 Staff)	\$4,300
Reporting/Regulatory and County Interface	\$4,900
Laboratory Analyses (Billed directly to Yamhill County by Apex Laboratories)	\$4,000
Total Estimated Costs (2016 Event)	\$13,200

2017 Groundwater Monitoring Event

<u>Activity</u>	<u>Estimated Costs</u>
Annual Groundwater Monitoring (One Field-Day; 2 Staff)	\$4,300
Reporting/Regulatory and County Interface	\$4,900
Laboratory Analyses (Billed directly to Yamhill County by Apex Laboratories)	\$4,000
Total Estimated Costs (2017 Event)	\$13,200

4.2 Task 2 Ecological Risk Assessment Activities

<u>Activity</u>	<u>Estimated Costs</u>
ERA Scoping Document	\$3,000
Level I Scoping and Level II Screening ERA	\$17,500
Level II Screening ERA -- Updated for Seep Data	\$6,000
Total Estimated Costs	\$26,500

Based on the overall Permit required Tasks anticipated to occur for the three year period inclusive of 2015, 2016, and 2017, HAI is anticipating an overall budget of \$66,100.

Costs for sampling as may be deemed necessary either for collection of seep data or as otherwise may be recommended based on the outcome of the Ecological Risk Assessment, if any, are not known at this time and therefore have not been included in this estimate.

5.0 General Technical Assistance

General technical assistance can be provided for Whiteson Landfill to address various tasks such as seep sampling activities, stormwater management, permitting, or any other miscellaneous task as may be requested by Yamhill County during the contract term. The scope of any such technical assistance activities, if any, are not known. However, based on previous experience, technical assistance may include landfill seep sampling or DEQ communications and meetings, with an estimated time and materials budget of \$18,000 over the three year term (e.g., \$6,000 per year on average).

Thank you for the opportunity to present this information.

Sincerely,

Ben Uhl

Ben Uhl
Field Manager
ben@hahnenv.com

cc: Rob Ede, Hahn and Associates, Inc.

attachment (1):
Schedule of Fees

HAHN AND ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS
Assessment Investigation Remediation

Schedule of Fees

**Technical and Professional Services
and Reimbursable Expenses
(Effective 1/1/14)**

Principal	\$195/hr.
Senior Associate	\$165/hr.
Associate	\$145/hr.
Senior Project Manager	\$125/hr.
Project Manager/Field Manager	\$105/hr.
Senior Environmental Scientist	\$ 95/hr.
Environmental Scientist	\$ 85/hr.
Environmental Technician	\$ 75/hr.
Administrative/Clerical	\$ 55/hr.
Travel and Subsistence	Cost plus 15%
Outside Services and Subcontractors	Cost plus 15%
Copies	\$0.15 each
Mileage	\$0.90/mi.
Supply Vehicle	\$90/day

Schedule of Fees and Standard Equipment Rates subject to change without notice.

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503.786.0717 Telephone • 503.227.2208 Facsimile • www.hahnenv.com Website

B.O. 15-323

HAHN AND ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

Standard Equipment Rates
(Effective 02/01/10)

Air Pump (Sensidyne)	\$25/day
Data Logger	\$150/day
Field Office (Computer, Fax, and/or Printer)	\$50/day
Flow Cell	\$25/day
Generator	\$50/day
Global Position System (GPS) Unit	\$25/day
Hand Auger	\$25/day
Interface Probe	\$25/day
Meters	
Conductivity/pH/Temperature	\$25/day
Dissolved Oxygen	\$25/day
MultiProbe (5 parameter)	\$100/day
Redox	\$25/day
Turbidity	\$25/day
Organic Vapor Analyzer (PID)	\$100/day
Power Tool	\$25/day
Pressure Transducer	\$75/day
Pumps	
Bladder	\$125/day
Inertial	\$100/day
Peristaltic	\$50/day
Purge	\$25/day
Submersible	\$100/day
Sump	\$25/day
Soil Gas Sampling Manifold	
Leak Detection Gas	\$25/day
Manifold	\$100/day
Vacuum Box	\$25/day
Water Level Indicator	\$25/day

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