



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
DEP15706

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
GUY NISBET 304-558-8802

RFQ COPY
 TYPE NAME/ADDRESS HERE

ALS Environmental
1740 Union Carbide Drive
South Charleston, WV 25303

SHIP TO

ENVIRONMENTAL PROTECTION
 DEPARTMENT OF
 ENVIRONMENTAL ENFORCEMENT
 601 57TH STREET
 CHARLESTON, WV
 25304 304-926-0499

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
12/23/2011				

BID OPENING DATE: 02/02/2012 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEMNUMBER	UNIT PRICE	AMOUNT
0001	1	LS	961-48	OPEN END CONTRACT ORGANIC ANALYSIS OF WATER AND SOIL FIELD TESTING		
<p>THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, WEST VIRGINIA DEPARTMENT OF ENVIROMENTAL PROTECTION'S DEPARTMENT OF ENVIROMENTAL ENFORCEMENT DIVISION, IS SOLICITING BIDS FROM QUALIFIED VENDOR'S TO PROVIDE THE AGENCY WITH ORGANIC ANALYSIS OF WATER AND SOIL PER THE FOLLOWING SPECIFICATIONS, SCOPE OF WORK, TERMS & CONDITIONS AND BID REQUIREMENTS AS ATTACHED.</p> <p>INQUIRIES:</p> <p>WRITTEN QUESTIONS SHALL BE ACCEPTED THROUGH CLOSE OF BUSINESS ON THURSDAY, JANUARY 19, 2012. QUESTIONS MAY BE SENT VIA: USES, FAX, COURIER OR EMAIL. IN ORDER TO ASSURE NO VENDOR RECEIVES AN UNFAIR ADVANTAGE, NO SUBSTANTIVE QUESTIONS WILL BE ANSWERED ORALLY. IF POSSIBLE, EMAIL QUESTIONS ARE PREFERRED. ANY TECHNICAL QUESTIONS RECEIVED WILL BE ANSWERED BY FORMAL WRITTEN ADDENDUM TO BE ISSUED BY THE PURCHASING DIVISION AFTER THE DEADLINE HAS LAPSED.</p> <p>ADDRESSES INQUIRIES TO:</p> <p>GUY NISBET</p>						

RECEIVED
 2012 JAN 31 AM 10:11
 WV PURCHASING DIVISION

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE	TELEPHONE	DATE	
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.
5. Payment may only be made after the delivery and acceptance of goods or services.
6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.html and is hereby made part of the agreement provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as EQUAL to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).



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DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION 2019 WASHINGTON STREET, EAST CHARLESTON, WV. 25305 FAX: 304.558.4115 EMAIL: GUY.L.NISBET@WV.GOV						
EXHIBIT 3						
LIFE OF CONTRACT: THIS CONTRACT BECOMES EFFECTIVE ON AWARD..... AND EXTENDS FOR A PERIOD OF ONE (1) YEAR OR UNTIL SUCH "REASONABLE TIME" THEREAFTER AS IS NECESSARY TO OBTAIN A NEW CONTRACT OR RENEW THE ORIGINAL CONTRACT. THE "REASONABLE TIME" PERIOD SHALL NOT EXCEED TWELVE (12) MONTHS. DURING THIS "REASONABLE TIME" THE VENDOR MAY TERMINATE THIS CONTRACT FOR ANY REASON UPON GIVING THE DIRECTOR OF PURCHASING 30 DAYS WRITTEN NOTICE.						
UNLESS SPECIFIC PROVISIONS ARE STIPULATED ELSEWHERE IN THIS CONTRACT DOCUMENT, THE TERMS, CONDITIONS AND PRICING SET HEREIN ARE FIRM FOR THE LIFE OF THE CONTRACT.						
RENEWAL: THIS CONTRACT MAY BE RENEWED UPON THE MUTUAL WRITTEN CONSENT OF THE SPENDING UNIT AND VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTRACT AND SHALL BE LIMITED TO TWO (2) ONE (1) YEAR PERIODS.						
CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICE						

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<p>SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.</p> <p>OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISITION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORESEEN CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANSPORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK.)</p> <p>QUANTITIES: QUANTITIES LISTED IN THE REQUISITION ARE APPROXIMATIONS ONLY, BASED ON ESTIMATES SUPPLIED BY THE STATE SPENDING UNIT. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACT SHALL COVER THE QUANTITIES ACTUALLY ORDERED FOR DELIVERY DURING THE TERM OF THE CONTRACT, WHETHER MORE OR LESS THAN THE QUANTITIES SHOWN.</p> <p>ORDERING PROCEDURE: SPENDING UNIT(S) SHALL ISSUE A WRITTEN STATE CONTRACT ORDER (FORM NUMBER WV-39) TO THE VENDOR FOR COMMODITIES COVERED BY THIS CONTRACT. THE ORIGINAL COPY OF THE WV-39 SHALL BE MAILED TO THE VENDOR AS AUTHORIZATION FOR SHIPMENT, A SECOND COPY MAILED TO THE PURCHASING DIVISION, AND A THIRD COPY RETAINED BY THE SPENDING UNIT.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.</p> <p>THE TERMS AND CONDITIONS CONTAINED IN THIS CONTRACT SHALL SUPERSEDE ANY AND ALL SUBSEQUENT TERMS AND CONDITIONS WHICH MAY APPEAR ON ANY ATTACHED PRINTED DOCUMENTS SUCH AS PRICE LISTS, ORDER FORMS, SALES</p>						

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				AGREEMENTS OR MAINTENANCE AGREEMENTS, INCLUDING ANY ELECTRONIC MEDIUM SUCH AS CD-ROM.		
				REV. 05/26/2009		
				EXHIBIT 10		
				REQUISITION NO.: DEP15706....		
				ADDENDUM ACKNOWLEDGEMENT		
				I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.		
				ADDENDUM NO.'S:		
				NO. 1		
				NO. 2		
				NO. 3		
				NO. 4		
				NO. 5		
				I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.		
				VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.		

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<p>... <i>Guy Nisbet</i> ... SIGNATURE</p> <p>... <i>ALS Environmental</i> ... COMPANY</p> <p>... <i>1/27/2012</i> ... DATE</p>						
<p>NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.</p> <p>REV. 09/21/2009</p> <p>PURCHASING CARD ACCEPTANCE: THE STATE OF WEST VIRGINIA CURRENTLY UTILIZES A VISA PURCHASING CARD PROGRAM WHICH IS ISSUED THROUGH A BANK. THE SUCCESSFUL VENDOR MUST ACCEPT THE STATE OF WEST VIRGINIA VISA PURCHASING CARD FOR PAYMENT OF ALL ORDERS PLACED BY ANY STATE AGENCY AS A CONDITION OF AWARD.</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p>						

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<p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: -----GN-----</p> <p>RFQ. NO.: -----DEP15706-----</p> <p>BID OPENING DATE: -----02/02/2012-----</p> <p>BID OPENING TIME: -----1:30PM-----</p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:</p> <p>-----616-399-6185-----</p> <p>CONTACT PERSON (PLEASE PRINT CLEARLY):</p> <p>-----Tim Lilly-----</p> <p>-----Tim.Lilly@alsglobal.com-----</p> <p>-----304-881-0437-----</p> <p>***** THIS IS THE END OF RFQ DEP15706 ***** TOTAL: _____</p>						

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AREA OF WORK

Bids should be submitted by vendors in connection with the costs associated with collection from all Department of Environmental Protection (DEP) offices as listed herein. **DEP reserves the right to make multiple awards based on the need to have vendors located throughout the state in close proximity to the various DEP offices.** Up to five (5) vendors will be selected.

Bidding should be done for every method as a whole and for each analyte within a specific method. Prices should also be given for liquid samples and solid /tissue samples.

QUALIFICATIONS

The DEP conducts inspections of permitted and non-permitted facilities, investigates complaints, monitors ambient quality of surface water, groundwater and sediments, performs studies, and provides water quality information to the citizens of West Virginia and other government agencies. Legal action based upon analytic results is possible. Therefore, the vendor or vendors selected must have a quality control program in place and meet the following qualifications:

1. Chemist on staff experienced in organic water/soil analysis and its interpretation.
2. The laboratory must be certified by the Water Resources Quality Assurance Program. This includes any laboratories to which analyses are subcontracted.
3. Be accessible by telephone 24 hours per day, 7 days per week.
4. Capable of attending and providing expert testimony in legal proceeding, upon request.
5. Proof of certification and staff chemist(s) resume(s) must be provided at the time of bid.

SCOPE

In administering and enforcing most of the pollution control laws of the state, the importance of quality control cannot be overstated. Quality control measures must be strictly adhered to in all phases of sample collection, preservation, transportation, and analysis. The quality control and analytical work, as they relate to the contractor's responsibility, is divided into four (4) major steps:

STEP 1 - Collection of sample from specified office.

STEP 2 - Conduct specified analysis on samples in a timely and professional manner.

STEP 3 - Establishment of continuing program to ensure the reliability of analytical data.

STEP 4 - Legal Testimony

Step 1 - Collection of Samples from Specified Office

The sampling for the DEP shall be conducted by Department personnel. The vendor shall be notified of the date sampling occurs /is to occur and from which DEP office the sample can be obtained. The vendor shall be notified when the sample was taken (time/date) and the person who collected the sample. The vendor shall be responsible for obtaining the sample from the specified office and delivery of sample to the laboratory within 24 hours from the time of sampling. The vendor shall indicate the time the sample was obtained from the specified office and its condition and the time the sample was delivered to the laboratory. The vendor shall be responsible for holding times, preservation of the sample and the internal chain of custody from the time the vendor obtained the sample until the time the analysis is accepted by the Department. The vendor shall also maintain records of the results of analysis for a minimum of five (5) years. If samples are to be shipped to the vendor by mail courier, then the vendor shall supply all shipping containers, labels and shall cover all costs of shipping from the sample location or from any WV/DEP office.

Step 2 - Conduct Specified Analysis on Samples

The methods used by the laboratory for the analysis shall be either 1) Methods described in 40 CFR-136 for organic analysis and Standard Methods for the Examination of Water and Waste Water, current edition, but must be an approved method per 40 CFR Part 36 or 2) Test Methods for Evaluating Solid Waste - Physical/Chemical Methods (SW-846) Third Edition, with updates. The sampler shall be responsible for specifying either 1 or 2 above, and in the event the method is not specified, Method 1 shall be used.

In the event a compound is requested by a method which has greater than ten compounds in the compound list, any compounds detected at or above three times the PQL, in addition to the requested compound, shall be reported and invoiced as individual compounds up to a maximum of ten compounds total. If ten or more compounds are detected and reported, the total list cost will be in effect.

Analysis of samples is not deemed completed until the data has been submitted to and accepted by DEP. Should the DEP not provide notice of acceptance within four weeks of the date results were mailed, the vendor may consider the data to be acceptable by the Department. The vendor shall be responsible for maintaining preservation of the samples until the holding time is exceeded. Any samples with a sheen, discoloration or odor shall be maintained by the vendor until DEP's notification that the sample can be properly disposed of. DEP will advise the vendor which samples fall into this category. The vendor shall be responsible for the proper disposal of all samples submitted to them by the DEP unless otherwise notified. The vendor shall dispose of the sample no earlier than four weeks after DEP accepts the results. The results of the analysis shall be submitted to the DEP no more than two (2) weeks after receipt of samples.

Step 3 - Quality Control

Three programs are to be utilized to assure reliable laboratory data: (1) the use and documentation of standard analytical methods, (2) analysis of duplicate and spiked (where the concept applies) samples at regular intervals each day to check analytical precision and accuracy,

Page | 3

and (3) analysis of reference samples a 6 (six) month intervals*. Regardless of which analytical methods are used in a laboratory, the methodology must be carefully documented. Standard methods which have been modified or entirely replaced because of recent advances in the state of art may only be used when it has been given approval in the Federal Register. Documentation of procedures must be clear, honest, and adequately referenced; and the procedures shall be applied exactly as documented. The responsibility for results obtained from these procedures rests with the analyst and supervisor, both as representatives of the firm.

All testing must be conducted using approved methods; (1) 40-CFR-136, Organic test Methods for NPDES samples or 2) SW-846 Methods for all other samples. Where an NPDES method is not available, the laboratory may substitute an SW-846 method. The laboratory will be advised as to the type of sample being tested so that the proper test methods may be applied.

Further, the laboratory may substitute capillary column technology for packed column technology for NPDES test methods.

To check the laboratory analytical precision, duplicate analysis of samples shall be performed at regular intervals. Duplicate samples must be carried through the complete analytical process. For all analyses, the interval shall be every tenth (10th) sample. When less than ten (10) samples are tested in one day, at least one duplicate sample shall be analyzed, and that sample must be a DEP sample. The difference between the replicates for each analysis are to be plotted on Shewart precision quality control charts. "Out-of -Control" samples are to be repeated and appropriate steps shall be taken to locate and remedy the error.

To check the laboratory analytical accuracy, samples containing a known addition of the target analyte (spike) shall be analyzed at regular intervals. Spiked samples must be carried through the complete analytical process. For all analyses, the interval shall be every tenth (10th) sample. Where less than ten samples are tested in one day, at least one spiked sample shall be analyzed, and that sample must be a DEP sample. The percent recovery must be plotted out on Shewart accuracy quality control charts. "Out of Control" samples are to be repeated and appropriate steps taken to locate and remedy the source of error.

Periodic submission of samples with known composition will occur. No notice of this activity will be provided unless results indicate an anomaly.

*These analyses shall be conducted under the vendor's performance evaluation test number through the Analytical Products Group.

Practical Quantitation Limits

PQLs have been listed where possible and is defined as the lowest concentration of analytes that can be reliably determined within specified limits of precision and accuracy by a particular method under routine laboratory conditions. If the PQL for a particular method is higher value than the regulatory limit for that parameter, then an alternate method with a PQL lower than the regulatory limit shall be used. The laboratory shall provide DEP with one complete set of PQLs and Method Detection Limits upon being awarded the contract. If a certain PQL is desired by the sampler, the laboratory may substitute the requested method with another method that meets the necessary PQL upon approval of the sampler.

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Step 4 - Legal Testimony

The selected vendor or vendors may be requested by the DEP to testify concerning the validity of the laboratory analysis. The vendor will only be required to testify to the following areas:

1. Time of notification by Department of sampling and by whom.
2. When and where samples were collected by the firm.
3. Condition of sample.
4. How sample was preserved by the firm.
5. Date and time(s) of analysis and by whom.
6. Chain of Custody procedures within the laboratory
7. Methods used.
8. Results of analysis.

At no time will the firm respond to questions concerning interpretation of results. The Department shall reimburse the vendor for the costs of any such testimony. The vendor must provide a detailed invoice of actual costs incurred.

PRIME VENDOR RESPONSIBILITIES

A vendor who is awarded a contract, when performing work under the terms and conditions of this contract, is solely responsible for the satisfactory completion of the work. The vendor shall be responsible for ensuring that any subcontractor have all the necessary permits, certifications (including WV State Laboratory Certification) and insurance to perform the work. DEP will consider the prime vendor to be the sole point of contact with regard to authorized work under the contract.

SUBCONTRACTORS

The prime vendor shall not be allowed to subcontract any work or services under this contract to any other person, company, corporation, firm, organization or agency without prior written approval of the DEP.

CONFIDENTIALITY

The vendor agrees that any and all data, analyses, materials, reports or other information, oral or written, prepared by the vendor with respect to this requisition shall, except for information which has been made publicly available, be treated as confidential and shall not be utilized, released, published, or disclosed, by the vendor at any time for any purpose whatsoever other than to provide consultation or other service to DEP.

MISCELLANEOUS PROVISIONS

1. All analytical data submitted to DEP must be reported in MDLs, not PQLs.
2. The vendor shall provide necessary sample containers and field preservatives to the WV/DEP if requested by the Department.

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3. The DEP may, at their discretion, choose to deliver samples to the vendor's establishment rather than having them picked up by or delivered to the vendor.
4. If samples are to be shipped to the vendor by mail courier, then the vendor shall supply all shipping containers, labels and shall cover all costs of shipping from the sample location or from any WV/DEP office.
5. Upon awarding the contract, the vendor shall provide one copy of the method detection limits (MDLs) for all analytes for which the contract is awarded. Any updates to the MDLs during the life of this contract shall be provided to the DEP, in writing, within one week of the update(s) completion.
6. The vendor shall provide at no additional cost, any requested quality control/calibration information associated with a particular sample. Quality control/calibration information includes but is not limited to: values of standards used in calibration, date of last calibration, correlation coefficients of calibrations curves, instrument blank values, check standard values, spike/recovery values, duplicate values, dilution volumes, bench sheets, calculations and Shewart quality control charts.
7. Notice of any changes to the vendor's certification status with regard to any of the parameters that the vendor is certified to analyze for, must be submitted to DEP, in writing, within ten (10) days of the time of status change.
8. The laboratory will provide blank water to the DEP, at no charge, upon request.
9. Should MDLs lower than those listed on the contract be available, the Vendor shall provide these lower detection levels when conducting analyses.
10. If requested on the Chain of Custody, soil sample analytical results shall be reported on a dry-weight basis.

Quality Control Deliverables

Level I Contents

Laboratory Analysis Reports
Chain of Custody Form

Level II Contents

Laboratory Analysis reports
Case Narrative
Chain of Custody Form
Initial Calibration summaries, CLP Form 6
Continuing Calibration Verification summaries, CLP Form 7
Raw method blank data
Matrix Spike/Matrix Spike Duplicate Summary (MS/MSD), CLP form 3
Surrogate Summary, CLP Form 2
Raw Sample data

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Level III Contents, Organic

- Laboratory Analysis reports
- Chain of Custody Form
- Case Narrative
- Retention Time Summary (if applicable)
- Extraction Logs (if applicable)
- Analytical Run Logs
- MS Tuning Summary, CLP form 5 (if applicable)
- Initial Calibration Summaries, CLP Form 6
- Continuing Calibration Verification Summaries, CLP Form 7
- Method Blank Summary, CLP Form 4
- Raw method blank data
- Matrix Spike/Matrix Spike Duplicate Summary (MS/MSD), CLP form 3
- Surrogate Summary, CLP Form 2 (if applicable)
- Internal Standard Summary, CLP form 8 (if applicable)
- All associated Raw QC data, including calibrations
- Form 1 results Summaries for samples and blanks
- Raw Sample data
- MDL Statements
- Electronic Data Deliverable

Level IV (Inorganic/Metals)

- Laboratory Analysis reports
- Chain of Custody Form
- Case Narrative
- Analysis Data Sheet, CLP form 1
- Initial and continuing Calibration Verification, CLP Form II, Part 1
- CRDL Standard for AA and ICP, CLP Form II , Part 2
- Blanks, CLP Form III
- ICP Interference Check Sample, CLP Form IV
- Spike Sample Recovery, CLP Form V, Part 1
- Post Digest Spike Sample Recovery, CLP Form V, Part 2
- Duplicates, CLP Form VI
- Laboratory Control Sample, CLP Form VII
- Standard Addition Results, CLP Form VIII
- ICP Serial Dilutions, CLP Form IX
- Preparation Logs, CLP Form XIII
- Analysis Run Logs, CLP Form XIV
- All associated raw data
- MDL statements
- Electronic Data Deliverable

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Parameters detected with EPA 600 Series Organic Analyses**Method 601, Purgeable Halocarbons**

	MDLs	SOLID
Bromodichloroethane	1.0 ug/l	
Bromoform	1.0 ug/l	
Bromomethane	1.0 ug/l	
Carbon Tetrachloride	1.0 ug/l	
Chlorobenzene	1.0 ug/l	
Chloroethane	1.0 ug/l	
2-Chloroethylvinyl ether	1.0 ug/l	
Chloroform	1.0 ug/l	
Chloromethane	1.0 ug/l	
Dibromochloromethane	1.0 ug/l	
1,2-Dichlorobenzene	1.0 ug/l	
1,3-Dichlorobenzene	1.0 ug/l	
1,4-Dichlorobenzene	1.0 ug/l	
Dichlorodifluoromethane		
1,1-Dichloroethane	1.0 ug/l	
1,2-Dichloroethane	1.0 ug/l	
trans-1,2-Dichloroethene	1.0 ug/l	
1,2-Dichloropropane	1.0 ug/l	
cis-1,3-Dichloropropene	1.0 ug/l	
trans-1,3-Dichloropropene	1.0 ug/l	
Methylene chloride	1.0 ug/l	
1,1,2,2-Tetrachloroethane	1.0 ug/l	
Tetrachloroethene	1.0 ug/l	
1,1,1-Trichloroethane	1.0 ug/l	
1,1,2-Trichloroethane	1.0 ug/l	
Tetrachloroethylene	1.0 ug/l	
Trichlorofluoromethane	1.0 ug/l	
Vinyl Chloride	1.0 ug/l	
1,1-Dichloroethene	1.0 ug/l	
Full Suite		

Method 602, Purgeable Aromatics

	MDLs	SOLID
Benzene	1.0 ug/l	
Chlorobenzene	1.0 ug/l	
1,2-Dichlorobenzene	1.0 ug/l	
1,3-Dichlorobenzene	1.0 ug/l	
1,4-Dichlorobenzene	1.0 ug/l	
Ethylbenzene	1.0 ug/l	
Toluene	1.0 ug/l	

Method 603, Acrolein and Acrylonitrile

	MDLs	SOLID
Acrylonitrile		
Acrolein		

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Method 604, Phenols**MDLs****SOLID**

4-Chloro-3-methylphenol
 2-Chlorophenol
 2,4-Dichlorophenol
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2-Methyl-4,6-dinitrophenol
 2-Nitrophenol
 4-Nitrophenol
 Pentachlorophenol
 Phenol
 2,4,6-Trichlorophenol

Method 605, Benzidines**MDLs****SOLID**

Benzidines
 3,3'-Dichlorobenzidine

Method 606 Phthalate Esters**MDLs****SOLID**

Bis(2-ethylhexyl) phthalate
 Butyl benzyl phthalate
 Di-n-butyl phthalate
 Diethyl phthalate
 Dimethyl phthalate
 Di-n-octyl phthalate

Method 607, Nitrosamines**MDLs****SOLID**

N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 N-Nitrosodi-n-propylamine

Method 608, Organochlorine Pesticides and PCBs**MDLs****SOLID**

Aldrin 0.3 ug/l
 α -BHC 0.3 ug/l
 β -BHC 0.3 ug/l
 δ -BHC 0.3 ug/l
 γ -BHC 0.3 ug/l
 Chlorodane 0.5 ug/l
 4,4'-DDD 0.3 ug/l
 4,4'-DDE 0.3 ug/l
 4,4'-DDT 0.3 ug/l
 Dieldrin 0.3 ug/l
 Endosulfan I 0.3 ug/l
 Endosulfan II 0.3 ug/l

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Method 608, Organochlorine Pesticides and PCBs continued

	MDLs	SOLID
Endosulfan sulfate	0.5 ug/l	
Eldrin	0.5 ug/l	
Endrin aldehyde	0.5 ug/l	
Heptachlor	0.5 ug/l	
Heptachlor epoxide	0.3 ug/l	
Toxaphene	1.5 ug/l	
PCB-1016	0.5 ug/l	
PCB-1221	0.5 ug/l	
PCB-1232	0.5 ug/l	
PCB-1242	0.5 ug/l	
PCB-1248	0.5 ug/l	
PCB-1254	0.5 ug/l	
PCB-1260	0.5 ug/l	

Method 609, Nitroaromatics and Isophorone

	MDLs	SOLID
2,4-Dinitrotoluene		
2,6-Dinitrotoluene		
Isophorone		
Nitrobenzene		

Method 610, Polynuclear Aromatic Hydrocarbons

	MDLs	SOLID
Acenaphthene	10 ug/l	
Acenaphthylene	10 ug/l	
Anthracene	10 ug/l	
Benzo(a)anthracene	10 ug/l	
Benzo(a)pyrene	10 ug/l	
Benzo(b)fluoranthene	10 ug/l	
Benzo(ghi)perylene	10 ug/l	
Benzo(k)fluoranthene	10 ug/l	
Chrysene	10 ug/l	
Dibenzo(a,h)anthracene	10 ug/l	
Fluoranthene	10 ug/l	
Fluorene	10 ug/l	
Indeno(1,2,3-cd)pyrene	10 ug/l	
Naphthalene	10 ug/l	
Phenanthrene	10 ug/l	
Pyrene	10 ug/l	

Method 611, Haloethers

	MDLs	SOLID
Bis(2-chloroethyl) ether		
Bis(2-chloroethoxy) methane		
Bis(2-chloroisopropyl) ether		
4-Bromophenyl phenyl ether		
4-Chlorophenyl phenyl ether		

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Method 612, Chlorinated Hydrocarbons continued

MDLs

SOLID

2-Chloronaphthalene
 1,2-Dichlorobenzene
 1,3-Dichlorobenzene
 1,4-Dichlorobenzene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 1,2,4-Trichlorobenzene

Method 613 2,3,7,8-Tetrachlorodibenzo-P-dioxin

MDLs

SOLID

2,3,7,8-Tetrachlorodibenzo-P-dioxin

**Method 613 Tetra-through Octa-Chlorinated Dibenzo-P-dioxins (CDDs)
and Dibenzofurans (CDFs)****Method 624, Purgeables**

MDLs

SOLID

Benzene 10 ug/l
 Bromodichloromethane 10 ug/l
 Bromoform 10 ug/l
 Bromomethane 10 ug/l
 Carbon Tetrachloride 10 ug/l
 Chlorobenzene 10 ug/l
 Chloroethane 10 ug/l
 2-Chloroethylvinyl ether 20 ug/l
 Chloroform 10 ug/l
 Chloromethane 10 ug/l
 Dibromochloromethane 10 ug/l
 1,2-Dichlorobenzene 10 ug/l
 1,3-Dichlorobenzene 10 ug/l
 1,4-Dichlorobenzene 10 ug/l
 1,1-Dichloroethane 10 ug/l
 1,2-Dichloroethane 10 ug/l
 trans-1,2-Dichloroethene 10 ug/l
 1,2-Dichloropropane 10 ug/l
 cis-1,3-Dichloropropene 10 ug/l
 trans-1,3-Dichloropropene 10 ug/l
 Ethyl benzene 10 ug/l
 Methylene chloride 10 ug/l
 1,1,2,2-Tetrachloroethane 10 ug/l
 Tetrachloroethene 10 ug/l
 Toluene 10 ug/l
 1,1,1-Trichloroethene 10 ug/l

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Method 624, Purgeables continued

	MDLs	SOLID
1,1,2-Trichloroethene	10 ug/l	
Trichlorethane	10 ug/l	
Trichlorofluoromethane	10 ug/l	
Vinyl chloride	10 ug/l	
1,1-Dichloroethene	10 ug/l	

Method 625, Base/Neutrals Extractables

	MDLs	SOLID
Acenaphthene	10 ug/l	
Acenaphthylene	10 ug/l	
Anthracene	10 ug/l	
Aldrin	10 ug/l	
Benzo(a)anthracene		
Benzo(b)fluoranthene	10 ug/l	
Benzo(k)fluoranthene	10 ug/l	
Benzo(a)pyrene	10 ug/l	
Benzo(ghi)perylene	20 ug/l	
Benzyl butyl phthalate	10 ug/l	
3 -BHC		
δ -BHC		
Bis(2-chloroethyl) ether	10 ug/l	
Bis(2-chloroethoxy) methane	10 ug/l	
Bis(2-ethylhexyl) phthalate		
Bis(2-chloroisopropyl) ether	10 ug/l	
4-Bromophenyl phenyl ether	10 ug/l	
Chlordane		
2-chloronaphthalene	10 ug/l	
4-chlorophenyl phenyl ether		
Chrysene	10 ug/l	
4,4'-DDD		
4,4'-DDE		
4,4'-DDT		
Dibenzo(a,h) anthracene	20 ug/l	
Di-n-butylphthalate	10 ug/l	
1,2-Dichlorobenzene	10 ug/l	
1,3-Dichlorobenzene	10 ug/l	
1,4-Dichlorobenzene	10 ug/l	
3,3'-dichlorobenzidine	50 ug/l	
Dieldrin		
Diethyl phthalate	10 ug/l	
Dimethyl phthalate	10 ug/l	
2,4-dinitrotoluene	10 ug/l	
2,6-dinitrotoluene	10 ug/l	
Di-n-octylphthalate	10 ug/l	
Endosulfan sulfate		
Endrin aldehyde		

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Method 625, Base/Neutrals Extractables continued

	MDLs	SOLID
Fluoranthene	10 ug/l	
Fluorene	10 ug/l	
Heptachlor		
Heptachlor epoxide		
Hexachlorobenzene		
Hexachlorobutadiene	10 ug/l	
Hexachloroethane	10 ug/l	
Indeno(1,2,3-cd) pyrene	10 ug/l	
Isophorone		
Naphthalene	10 ug/l	
Nitrobenzene	10 ug/l	
N-nitrosodi-n-propylamine	10 ug/l	
PCB-1016		
PCB-1221		
PCB-1232		
PCB-1242		
PCB-1248		
PCB-1254		
PCB-1260		
Phenanthrene	10 ug/l	
Pyrene	10 ug/l	
Toxaphene		
1,2,4-trichlorobenzene	10 ug/l	

625 Acid Extractables

	MDLs	SOLID
4-chloro-3-methylphenol		
2-chlorophenol		
2,4-Dichlorophenol		
2,4-Dimethylphenol		
2,4-dinitrophenol		
2-methyl-4,6-dinitrophenol		
2-nitrophenol		
4-nitrophenol		
Pentachlorophenol		
Phenol		
2,4,6-trichlorophenol		

METHOD 8015B

	MDLs	SOLID
Acetone	10 ug/l	
Acetonitrile	10 ug/l	
Acrolein	10 ug/l	
Acrylonitrile	10 ug/l	
Allyl alcohol	10 ug/l	
1-Butanol (n-Butyl alcohol)	10 ug/l	

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Method 8015B continued

	MDLs	SOLID
t-Butyl alcohol	10 ug/l	
2-Chloroacetonitrile	10 ug/l	
2-Chloroethyl vinyl ether	10 ug/l	
Crotonaldehyde	10 ug/l	
Diethyl ether	10 ug/l	
1,4-Dioxane	10 ug/l	
Epichlorohydrin	10 ug/l	
Ethanol	10 ug/l	
Ethyl acetate	10 ug/l	
Ethyl glycol	10 ug/l	
Ethylene oxide	10 ug/l	
Hexafluoro-2-propanol (I.S.)	10 ug/l	
Hexafluoro-2-methyl		
2-propanol (I.S.)	10 ug/l	
Isobutyl alcohol	10 ug/l	
Isopropyl alcohol	10 ug/l	
Methanol	10 ug/l	
Methyl ethyl ketone (MEK)	10 ug/l	
Methyl isobutyl ketone (MIBK)	10 ug/l	
N-Nitroso-di-n-butylamine	10 ug/l	
Paraldehyde	10 ug/l	
2-Pentanone	10 ug/l	
2-Picoline	10 ug/l	
1-Propanol	10 ug/l	
Propionitrile	10/ug/l	
DRO	10/ug/l	
GRO	10/ug/l	
ORO	10/ug/l	

METHOD 8041 Phenols by GC

	MDLs	SOLID
4-Chloro-3-methylphenol		
2-Chlorophenol		
2-Cyclohexyl-4,6-dinitrophenol		
2,4-Dichlorophenol		
2,6-Dichlorophenol		
2,4-Dimethylphenol		
Dinoseb (DNBP)		
2,4-Dinitrophenol		
2-Methyl-4,6-dinitrophenol		
2-Methylphenol (o-Cresol)		
3-Methylphenol (m-Cresol)		
4-Methylphenol (p-Cresol)		
2-Nitrophenol		
4-Nitrophenol		
Pentachlorophenol		

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Method 8041 Phenols by GC continued

	MDLs	SOLID
Phenol		
2,3,4,5-Tetrachlorophenol		
2,3,4,6-Tetrachlorophenol		
2,3,5,6-Tetrachlorophenol		
2,4,5-Trichlorophenol		
2,4,6-Trichlorophenol		
2-Chloro-5-methylphenol		
4-chloro-2-methylphenol		
3-Chlorophenol		
4-Chlorophenol		
2,3-Dichlorophenol		
2,5-Dichlorophenol		
3,4-Dichlorophenol		
3,5-dichlorophenol		
2,3-Dimethylphenol		
2,5-Dimethylphenol		
2,6-Dimethylphenol		
3,4-Dimethylphenol		
2,5-Dinitrophenol		
3-Nitrophenol		
2,3,4-Trichlorophenol		
2,3,5-Trichlorophenol		
2,3,6-Trichlorophenol		

METHOD 8100 Polynuclear Aromatic Hydrocarbons

	MDLs	SOLID
Acenaphthene		
Acenaphthylene		
Anthracene		
Benzo(a)anthracene		
Benzo(a)pyrene		
Benzo(b)fluoranthene		
Benzo(j)fluoranthene		
Benzo(k)fluoranthene		
Benzo(ghi)perylene		
Chrysene		
Dibenz(a,h)acridine		
Dibenz(a,j)acrodome		
Dibenzo(a,h)anthracene		
7H-Dibenzo(c,g)carbazole		
Dibenzo(a,e)pyrene		
Dibenzo(a,h)pyrene		
Dibenzo(a,l)pyrene		
Fluoranthene		
Fluorene		

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Method 8100 Polynuclear Aromatic Hydrocarbons continued

	MDLs	SOLID
Indo(1,2,3-cd)pyrene		
3-Methylcholanthrene		
Naphthalene		
Phenanthrene		
Pyrene		

METHOD 8121, Chlorinated Hydrocarbons

	MDLs	SOLID
Benzal chloride	10ug/l	
Benzotrichloride	10ug/l	
Benzyl chloride	10ug/l	
2-Chloronaphthalene	10ug/l	
1,2-Dichlorobenzene	10ug/l	
1,3-Dichlorobenzene	10ug/l	
1,4-Dichlorobenzene	10ug/l	
Hexachlorobenzene	10ug/l	
Hexachlorobutadiene	10ug/l	
α -Hexachlorocyclohexane (α -BHC)	10ug/l	
β -Hexachlorocyclohexane (β -BHC)	10ug/l	
γ -Hexachlorocyclohexane (γ -BHC)	10ug/l	
δ -Hexachlorocyclohexane (δ -BHC)	10ug/l	
Hexachlorocyclopentadiene	10ug/l	
Hexachloroethane	10ug/l	
Pentachlorobenzene	10ug/l	
1,2,3,4-Tetrachlorobenzene	10ug/l	
1,2,3,5-Tetrachlorobenzene	10ug/l	
1,2,4,5-Tetrachlorobenzene	10ug/l	
1,2,4-Trichlorobenzene	10ug/l	
1,2,3-Trichlorobenzene	10ug/l	
1,3,5-Trichlorobenzene	10ug/l	

METHOD 8151A, Chlorinated Herbicides

	MDLs	SOLID
2,4-D		
2,4-DB		
2,4,5-TP(Silvex)		
2,4,5-T		
Dalapon		
Dicamba		
Dichloroprop		
Dinoseb		
MCPA		
MCPP		
4-Nitrophenol		
Pentachlorophenol		
Acifluorfen		

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Method 8151A, Chlorinated Herbicides continued

MDLs

SOLID

Bentazon
 Chloramben
 DCPA diacid
 3,5-Dichlorobenzoic Acid
 5-Hydroxydicamba
 Picloram

METHOD 8260

MDLs

SOLID

Acetone	10 ug/l
Acetonitrile	10 ug/l
Acrolein (Propenal)	10 ug/l
Acrylonitrile	10 ug/l
Allyl alcohol	10 ug/l
Allyl chloride	10 ug/l
Benzene	10 ug/l
Benzyl chloride	10 ug/l
Bis(2-chloroethyl)sulfide	10 ug/l
Bromoacetone	10 ug/l
Bromochloromethane	10 ug/l
Bromodichloromethane	10 ug/l
4-Bromofluorobenzene	10 ug/l
Bromoform	10 ug/l
Bromomethane	10 ug/l
n-Butanol	10 ug/l
2-Butanone (MEK)	10 ug/l
t-Butylalcohol	10 ug/l
Carbon disulfide	10 ug/l
Carbon tetrachloride	10 ug/l
Chloral hydrate	10 ug/l
Chlorobenzene	10 ug/l
Chlorodibromomethane	10 ug/l
Chloroethane	10 ug/l
2-Chloroethanol	10 ug/l
2-Chloroethyl vinyl ether	10 ug/l
Chloroform	10 ug/l
Chloromethane	10 ug/l
Chloroprene	10 ug/l
3-Chloropropionitrile	10 ug/l
Crotonaldehyde	10 ug/l
1,2-Dibromo-3-chloropropane	10 ug/l
1,2-Dibromoethane	10 ug/l
Dibromomethane	10 ug/l
1,2-Dichlorobenzene	10 ug/l
1,3-Dichlorobenzene	10 ug/l
1,4-Dichlorobenzene	10 ug/l

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METHOD 8260 continued

	MDLs	SOLID
cis-1,4-Dichloro-2-butene	10 ug/l	
trans-1,4-Dichloro-2-butene	10 ug/l	
Dichlorodifluoromethane	10 ug/l	
1,1-Dichloroethane	10 ug/l	
1,2-Dichloroethane	10 ug/l	
1,1-Dichloroethene	10 ug/l	
trans-1,2-Dichloroethene	10 ug/l	
1,2-Dichloropropane	10 ug/l	
1,3-Dichloro-2-propanol	10 ug/l	
cis-1,3-Dichloropropene	10 ug/l	
trans-1,3-Dichloropropene	10 ug/l	
1,2,3,4-Dipoxybutane	10 ug/l	
Diethyl ether	10 ug/l	
1,4-Difluorobenzene	10 ug/l	
1,4-Dioxane	10 ug/l	
Epichlorohydrin	10 ug/l	
Ethanol	10 ug/l	
Ethyl acetate	10 ug/l	
Ethylbenzene	10 ug/l	
Ethylene oxide	10 ug/l	
Ethyl methacrylate	10 ug/l	
Fluorobenzene	10 ug/l	
Hexachlorobutadiene	10 ug/l	
Hexachloroethane	10 ug/l	
2-Hexanone	10 ug/l	
2-Hydroxypropionitrile	10 ug/l	
Iodomethane	10 ug/l	
Isobutyl alcohol	10 ug/l	
Isopropylbenzene	10 ug/l	
Malononitrile	10 ug/l	
Methacrylonitrile	10 ug/l	
Methanol	10 ug/l	
Methylene chloride	10 ug/l	
Methyl methacrylate	10 ug/l	
4-Methyl-2-pentanone (MIBK)	10 ug/l	
Naphthalene	10 ug/l	
Nitrobenzene	10 ug/l	
2-Nitropropane	10 ug/l	
N-Nitroso-di-n-butylamine	10 ug/l	
Paraldehyde	10 ug/l	
Pentachloroethane	10 ug/l	
2-Pentanone	10 ug/l	
2-Picoline	10 ug/l	
1-Propanol	10 ug/l	
2-Propanol	10 ug/l	
Propargyl alcohol	10 ug/l	

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METHOD 8260 continued

	MDLs	SOLID
β-Propiolactone	10 ug/l	
Propionitrile (ethyl cyanide)	10 ug/l	
n-Propylamine	10 ug/l	
Pyridine	10 ug/l	
Styrene	10 ug/l	
1,1,1,2-Tetrachloroethane	10 ug/l	
1,1,2,2-Tetrachloroethane	10 ug/l	
Tetrachloroethene	10 ug/l	
Toluene	10 ug/l	
o-Touidine	10 ug/l	
1,2,4-Trichlorobenzene	10 ug/l	
1,1,1-Trichloroethane	10 ug/l	
1,1,2-Trichloroethane	10 ug/l	
Trichloroethene	10 ug/l	
Trichlorofluoromethane	10 ug/l	
1,2,3-Trichloropropane	10 ug/l	
Vinyl acetate	10 ug/l	
Vinyl Chloride	10 ug/l	
o-Xylene	10 ug/l	
m-Xylene	10 ug/l	
p-Xylene	10 ug/l	

Method 8270

	MDLs	SOLID
Acenaphthene	10	
Acenaphthylene	10	
Acetophenone	10	
2-Acetylaminofluorene	20	
1-Acetyl-2-thiourea	1000	
2-Aminoanthraquinone	20	
Aminoazobenzene	10	
4-Aminobiphenyl	20	
Anilazine	100	
Aniline		
o-Anisidine	10	
Anthracene	10	
Aramite	20	
Azinphos-methyl	100	
Benzidine		
Benzoic acid	50	
Benz(a)anthracene	10	
Benzo(b)fluoranthene	10	
Benzo(k)fluoranthene	10	
Benzo(g,h,i)perylene	10	
Benzo(a)pyrene	10	
p-Benzoquinone	10	

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METHOD 8270 continued

	MDLs	SOLID
Benzyl alcohol	20	
Bis(2-chloroethoxy)methane	10	
Bis(2-chloroethyl)ether	10	
Bis(2-chloroisopropyl) ether	10	
Bis(2-ethylhexyl)phthalate		
4-Bromophenyl phenyl ether	10	
Bromoxynil	10	
Butyl Benzyl phthalate	10	
Captafol	20	
Captan	50	
Carbaryl	10	
Carbofuran	10	
Carbophenothion	10	
Chlordane		
Cholrfenvinphos	20	
4-Choloraniline	20	
Chlorobenzilate	10	
5-Chloro-2-methylaniline	20	
4-Chloro-3-methylphenol	20	
3-(Chloromethyl)pyridine hydrochloride	100	
1-Chloronaphthalene		
2-Chloronaphthalene	10	
2-Chlorophenol	10	
4-Chloro-1,2-phenylenediamine		
4-Chloro-1,3-phenylenediamine		
4-Cholorphenyl phenyl ether	10	
Chrysene	10	
Coumaphos	40	
p-Cresidine	10	
Crotoxyphos	20	
2-Cyclohexyl-4,6-dinitro-phenol	100	
Demeton-O	10	
Demeton-S	10	
Diallate (cis or trans)	10	
2,4-Diaminotoluene	20	
Dibenz(a,j)acridine	10	
Dibenz(a,h)anthracene	10	
Dibenzofuran	10	
Dibenzo(a,e)pyrene	10	
1,2-Dibromo-3-chloropropane		
Di-n-butyl phthalate	10	
Diclone		
1,2-Dichlorobenzene	10	
1,3-Dichlorobenzene	10	
1,4-Dichlorobenzene	10	
3,3'-Dichlorobenzidine	20	

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METHOD 8270 continued

	MDLs	SOLID
2,4-Dichlorophenol	10	
2,6-Dichlorophenol	10	
Dichlorovos	10	
Dicrotophos	10	
Diethyl phthalate	10	
Diethylstilbestrol	20	
Dimethoate	20	
3,3'-Dimethoxybenzidine	100	
Dimethylaminoazobenzene	10	
7,12-Dimethylbenz(a)anthracene	10	
3,3'-Dimethylbenzidine	10	
2,4-Dimethylphenol	10	
Dimethyl phthalate	10	
1,2-Dinitrobenzene	40	
1,3-Dinitrobenzene	20	
1,4-Dinitrobenzene	40	
4,6-Dinitro-2-methylphenol	50	
2,4-Dinitrophenol	50	
2,4-Dinitrotoluene	10	
2,6-Dinitrotoluene	10	
5,5-Diphenylhydantoin	20	
1,2-Diphenylhydrazine		
Di-n-octyl phthalate	10	
Disulfoton	10	
EPN	10	
Ethion	10	
Ethyl carbamate	50	
Ethyl methanesulfonate	20	
Famphur	20	
Fensulfothion	40	
Fenthion	10	
Fluchloralin	20	
Fluoranthene	10	
Fluorene	10	
2-Fluorobiphenyl		
2-Fluorophenol		
Hexachlorobenzene	10	
Hexachlorobutadiene	10	
Hexachlorocyclopentadiene	10	
Hexachloroethane	10	
Hexachlorophene	50	
Hexamethylphosphoramide	20	
Hydroquinone		
Indeno(1,2,3-cd)pyrene	10	
Isodrin	20	
Isophorone	10	

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METHOD 8270 continued

	MDLs	SOLID
Isosafrole	10	
Kepone	20	
Leptophos	10	
Mestranol	20	
Methapyrilene	100	
3-Methylcholanthrene	10	
Methyl methanesulfonate	10	
2-Methylnaphthalene	10	
2-Methylphenol	10	
3-Methylphenol	10	
4-Methylphenol	10	
Monocrotophos	40	
Naphthalene	10	
1,4-Naphthoquinone	10	
1-Naphthylamine	10	
2-Naphthylamine	10	
Nicotine	20	
5-Nitroacenaphthene	10	
2-Nitroaniline	50	
3-Nitroaniline	50	
4-Nitroaniline	20	
5-Nitro-o-toluidine	10	
4-Nitroquinoline-1-oxide	40	
N-Nitrosodi-n-butylamine	10	
N-Nitrosodiethylamine	20	
N-Nitrosodimethylamine		
N-Nitrosodiphenylamine	10	
N-Nitrosodi-n-propylamine	10	
N-Nitrosomorpholine		
N-Nitrosopiperidine	20	
N-Nitrosopyrrolidine	40	
Octamethyl pyrophosphoramidate	200	
4-4'-Oxydianiline	20	
Pentachlorobenzene	10	
Pentachloronitrobenzene	20	
Pentachlorophenol	50	
Phenacetin	20	
Phenanthrene	10	
Phenobarbital	10	
Phenol	10	
1,4-Phenylenediamine	10	
Phorate	10	
Phosalone	100	
Phosmet	40	
Phosphamidon	100	

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METHOD 8270 continued

	MDLs	SOLID
Phthalic anhydride	100	
2-Picoline (2-Methylpyridine)		
Piperonyl sulfoxide	100	
Pronamide	10	
Propylthiouracil	100	
Pyrene	10	
Pyridine		
Resorcinol	100	
Safrole	10	
Strychnine	40	
Sulfallate	10	
Terbufos	20	
1,2,4,5-Tetrachlorobenzene	10	
2,3,4,6-Tetrachlorophenol	10	
Tetrachlorvinphos	20	
Tetraethyl pyrophosphate	40	
Thionazine	20	
Thiophenol (Benzenethiol)	20	
Toulene diisocyanate		
o-Toulidine	10	
Toxaphene		
2,4,6-Tribromophenol		
1,2,4-Trichlorobenzene	10	
2,4,5-Trichlorophenol	10	
2,4,6-Trichlorophenol	10	
Trifluralin	10	
2,4,5-Trimethylaniline	10	
Trimethyl phosphate	10	
1,3,5-Trinitrobenzene	10	
Tris(2,3-dibromopropyl) phosphate	200	
Tri-p-tolyl phosphate	10	
O,O,O-Triethyl phosphorothioate		

METHOD 8310 Polynuclear Aromatic Hydrocarbons by HPLC

	MDLs	SOLID
Acenaphthene		
Acenaphthylene		
Anthracene		
Benzo(a)anthracene		
Benzo(a)pyrene		
Benzo(b)fluoranthene		
Benzo(k)fluoranthene		
Benzo(ghi)perylene		
Chrysene		

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METHOD 8310 Polynuclear Aromatic Hydrocarbons by HPLC continued
MDLs SOLID

Dibenzo(a,h)anthracene
 Fluoranthene
 Fluorene
 Indo(1,2,3-cd)pyrene
 Naphthalene
 Phenanthrene
 Pyrene

TCLP RCRA Pesticides and Herbicides	PQL µg/l	SOLID
EPA 1311/SW846		
Chlordane	2.0	
Endrin	20.0	
Heptachlor (and its epoxide)	2.0	
Lindane	20.0	
Methoxychlor	20.0	
toxaphene	2.0	
2,4-D	50.0	
2,4,5-TP(silvex)	10.0	

TCLP RCRA METALS	PQL µg/l	SOLID
EPA 1311/SW846		
Arsenic	20.0	
Barium	500.0	
Cadmium	25.0	
Chromium	250.0	
Lead	500.0	
Mercury	2.0	
Selenium	20.0	
Silver	50.0	

TCLP Volatile Organics	MDLs	SOLID
8260 with 1311 extraction		
Benzene	50.0	
Carbon Tetrachloride	50.0	
Chlorobenzene	50.0	
Chloroform	50.0	
1,2-dichloroethane	50.0	
1,1-dichloroethane	50.0	
methyl ethyl ketone	1000.0	
tetrachloroethylene	50.0	
trichloroethylene	50.0	
vinyl chloride	50.0	

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**TCLP Semi-Volatile Organics
8270 with 1311 extraction**
MDLs SOLID

o-cresol	20.0
m,p-cresol	40.0
2,4-dinitrotoluene	10.0
hexachlorobenzene	10.0
hexachloro-1,3-butadiene	10.0
hexachloroethane	10.0
nitrobenzene	10.0
pentachlorophenol	20.0
pyridiene	10.0
2,4,5-trichlorophenol	20.0
2,4,6-trichlorophenol	20.0
1,4-dichlorobenzene	10.0

RCRA General Chemistry
MDLs SOLID

Ignitability	Corrosivity
Total Releasable Sulfide as H ₂ S	5.0
Total Releasable Cyanide as HCN	1.0

Metals/Cyanide Target Analyte List (TAL)-low level option

EPA 200.7/SW 7470/7471

MDL

Water/solid

Aluminum	200 µg/l /40 mg/Kg
Antimony	60 µg/l /12 mg/Kg
Arsenic	10 µg/l /2 mg/Kg
Barium	200 µg/l /40 mg/Kg
Beryllium	5 µg/l /1 mg/Kg
Cadmium	5 µg/l /1 mg/Kg
Calcium	5000 µg/l /1000 mg/Kg
Chromium	10 µg/l /2 mg/Kg
Cobalt	50 µg/l /10 mg/Kg
Copper	25 µg/l /5 mg/Kg
Iron	100 µg/l /20 mg/Kg
Lead	3 µg/l /1 mg/Kg
Magnesium	5000 µg/l /1000 mg/Kg
Manganese	15 µg/l /3 mg/Kg
Molybdenum	20 µg/l /8 mg/Kg
Nickel	40 µg/l /8 mg/Kg
Potassium	5000 µg/l /1000 mg/Kg
Selenium	5 µg/l /1 mg/Kg mg/Kg
Silica	100 µg/l /20 mg/Kg
Silver	10 µg/l /2 mg/Kg

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Metals/Cyanide Target Analyte List (TAL)-low level option continued

	MDL
Sodium	5000 µg/l /1000 mg/Kg
Thallium	10 µg/l /2 mg/Kg
Vanadium	20 µg/l /4 mg/Kg
Zinc	10 µg/l /2 mg/Kg

Priority Pollutant Metals-(Low Level option)Water

EPA 245.1	MDL
Mercury	0.2 ng/l

Priority Pollutant Metals (low level option)-soil

EPA 245.5	MDL
Mercury	0.1 mg/kg

Soild Waste Phase 1 Organics (Title 33 Series 1) Cost (Groundwater only) per set:

PARAMETER	METHOD	MDLs	SOLID
Acetone	8260	10	
Acrylonitrile	8260	10	
Benzene	8260	1.0	
Bromochloromethane	8260	1.0	
Bromodichloromethane	8260	1.0	
Bromoform	8260	1.0	
Carbon disulfide	8260	10	
Carbon tetrachloride	8260	1.0	
Chlorobenzene	8260	1.0	
Chloroethane	8260	1.0	
Chloroform	8260	1.0	
Dibromochloromethane	8260	1.0	
1,2-Dibromo-3-chloropropane (DBCP)	8011	0.2	
1,2,-Dibromoethane (EDB)	8011	.05	
o-Dichlorobenzene	8260	1.0	
p-Dichlorobenzene	8260	1.0	
trans-1,4-Dichloro-2-butene	8260	1.0	
1,1-Dichloroethane	8260	1.0	
1,2-Dichloroethane	8260	1.0	
1,1-Dichloroethylene	8260	1.0	
cis-1,2-Dichloroethylene	8260	1.0	
trans-1,2-Dichloroethylene	8260	1.0	
1,2-Dichloropropane	8260	1.0	
cis-1,3-Dichloropropene	8260	1.0	
trans-1,3-Dichloropropene	8260	1.0	

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Soild Waste Phase 1 Organics (Title 33 Series 1 continued

	METHOD	MDLs	SOLID
Ethylbenzene	8260	1.0	
2-Hexanone	8260	10	
Methyl bromide	8260	1.0	
Methyl chloride	8260	1.0	
Methylene bromide	8260	1.0	
Methylene chloride	8260	1.0	
Methyl ethyl ketone	8260	10	
Methyl iodide	8260	10	
4-Methyl-2-pentanone	8260	10	
Styrene	8260	1.0	
1,1,1,2-Tetrachloroethane	8260	1.0	
1,1,2,2-Tetrachloroethane	8260	1.0	
Toulene	8260	1.0	
1,1,1-Trichloroethane	8260	1.0	
1,1,2-Trichloroethane	8260	1.0	
Trichloroethylene	8260	1.0	
Trichlorofluoromethane	8260	1.0	
1,2,3-Trichloropropane	8260	1.0	
Vinyl acetate	8260	10	
Vinyl chloride	8260	1.0	
Xylenes	8260	1.0	

ORGANIC ANALYSIS OF WATER AND SOIL

DEP15706

Bid Schedule

Vendors Name: ALS Environmental

The DEP reserves the right to request additional information and supporting documentation regarding unit prices when the unit price appears to be unreasonable.

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION	UNIT PRICE	
				AMOUNT
1.0		Method 601, Purgeable Halocarbons - See page 7		
1.1	12	Single compound analysis cost		\$
1.2	12	Up to 10 compounds then complete list cost applies		\$
1.3	12	Complete list cost		\$
2.0		Method 602, Purgeable Aromatics - See page 7		
2.1	15	Single compound analysis cost	60	\$ 900.00
2.2	15	Complete list cost	60	\$ 900.00
3.0		Method 603, Acrolein & Acrylonitrile - See page 7		
3.1	15	Single compound analysis cost	60	\$ 900.00
3.2	15	Complete list cost	60	\$ 900.00
4.0		Method 604, Phenols - See page 8		
4.1	20	Single compound analysis cost	70	\$ 1400.00
4.2	20	Up to 10 compounds then complete list cost applies	75	\$ 1500.00
4.3	20	Complete list cost	80	\$ 1600.00
5.0		Method 605, Benzidines - See page 8		
5.1	12	Single compound analysis cost		\$
5.2	12	Complete list cost		\$
6.0		Method 606, Phthalate Esters - See page 8		
6.1	12	Single compound analysis cost		\$
6.2	12	Complete list cost		\$
7.0		Method 607, Nitrosamines - See page 8		
7.1	12	Single compound analysis cost		\$
7.2	12	Complete list cost		\$
8.0		Method 608, Organochlorine Pesticides & PCBs - See page 8-9		
8.1	15	Single compound analysis cost	75	\$ 1125.00
8.2	15	Up to 10 compounds then complete list cost applies	80	\$ 1200.00
8.3	15	Complete list cost	85	\$ 1275.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION		AMOUNT
9.0		Method 609, Nitroaromatics & Isophorone - See page 9		
9.1	12	Single compound analysis cost		\$
9.2	12	Complete list cost		\$
10.0		Method 610, Polynuclear Aromatic Hydrocarbons - See page 9		
10.1	20	Single compound analysis cost	60	\$ 1200.00
10.2	20	Up to 10 compounds then complete list cost applies	65	\$ 1300.00
10.3	20	Complete list cost	75	\$ 1500.00
11.0		Method 611, Haloethers - See page 9		
11.1	12	Single compound analysis cost		\$
11.2	12	Complete list cost		\$
12.0		Method 612, Chlorinated hydrocarbons - See page 10		
12.1	12	Single compound analysis cost		\$
12.2	12	Complete list cost		\$
13.0		Method 613, 2,3,7,8 Tetrachlorodibenzo-P-dioxin - See page 10		
13.1	12	Single compound analysis cost	325	\$ 3900.00
14.0		Method 613, Tetra-through Octa-Chlorinated Dibenzo-P-dioxins (CDDs) & Dibenzofurans (CDFs) - See page 10		
14.1	12	Complete list cost	545	\$ 6540.00
15.0		Method 624, Purgeables - See page 10-11		
15.1	20	Single compound analysis cost	60	\$ 1200.00
15.2	20	Up to 10 compounds then complete list cost applies	65	\$ 1300.00
15.3	20	Complete list cost	70	\$ 1400.00
16.0		Method 625, Base/Neutrals Extractables - See page 11-12		
16.1	12	Single compound analysis cost	90	\$ 1080
16.2	12	Up to 10 compounds then complete list cost applies	100	\$ 1200.00
16.3	12	Complete list cost	125	\$ 1500.00
17.0		Method 625, Acid Extractables - See page 12		
17.1	12	Single compound analysis cost	90	\$ 1080.00
17.2	12	Up to 10 compounds then complete list cost applies	100	\$ 1200.00
17.3	12	Complete list cost	110	\$ 1320.00
18.0		Method 8015B - See page 12-13		
18.1	20	Single compound analysis cost	60	\$ 1200.00
18.2	20	Up to 10 compounds then complete list cost applies	125	\$ 2500.00
18.3	20	Complete list cost	225	\$ 4500.00
19.0		Method 8041, Phenols by GC - See page 13		
19.1	12	Single compound analysis cost	75	\$ 900.00
19.2	12	Up to 10 compounds then complete list cost applies	100	\$ 1200.00
19.3	12	Complete list cost	150	\$ 1800.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION		AMOUNT
20.0		Method 8100, Polynuclear Aromatic Hydrocarbons - See page 14-15		
20.1	20	Single compound analysis cost	70	\$ 1400.00
20.2	20	Up to 10 compounds then complete list cost applies	75	\$ 1500.00
20.3	20	Complete list cost	100	\$ 2000.00
21.0		Method 8121, Chlorinated Hydrocarbons - See page 15		
21.1	12	Single compound analysis cost	80	\$ 960.00
21.2	12	Up to 10 compounds then complete list cost applies	85	\$ 1020.00
21.3	12	Complete list cost	120	\$ 1440.00
22.0		Method 8151A, Chlorinated Herbicides - See page 15-16		
22.1	12	Single compound analysis cost	85	\$ 1020.00
22.2	12	Up to 10 compounds then complete list cost applies	90	\$ 1080.00
22.3	12	Complete list cost	150	\$ 1800.00
23.0		Method 8260, - See page 16-18		
23.1	15	Search for additional tentatively identified compounds	10	\$ 150.00
23.2	15	Single compound analysis cost	65	\$ 975.00
23.3	15	Up to 10 compounds then complete list cost applies	70	\$ 1050.00
23.4	15	Complete list cost	100	\$ 1500.00
23.5	15	GC-MS Scan per TIC, report TICS that are detected at 10% of the area of the nearest internal standard	10	\$ 100.00
24.0		Method 8270, - See page 18-22		
24.1	15	Search for additional tentatively identified compounds	20	\$ 300.00
24.2	15	Single compound analysis cost	90	\$ 1350.00
24.3	15	Up to 10 compounds then complete list cost applies	125	\$ 1875.00
24.4	15	Complete list cost	225	\$ 3375.00
24.5	15	GC-MS Scan per TIC, report TICS that are detected at 10% of the area of the nearest internal standard	20	\$ 300.00
25.0		Method 8310, Polynuclear Aromatic Hydrocarbons by HPLC - See page 22-23		
25.1	15	Single compound analysis cost	75	\$ 1125.00
25.2	15	Up to 10 compounds then complete list cost applies	80	\$ 1200.00
25.3	15	Complete list cost	110	\$ 1650.00
26.0		TCLP RCRA Pesticides & Herbicides EPA 1311/SW846 - See page 23		
26.1	12	Single compound analysis cost	125	\$ 1500.00
26.2	12	Complete list cost	150	\$ 1800.00
27.0		TCLP RCRA Metals EPA 1311/SW846 - See page 23		
27.1	24	Single compound analysis cost	75	\$ 1800.00
27.2	24	Complete list cost	150	\$ 3600.00
28.0		TCLP Volatile Organics 8260 with 1311 extraction - See page 23		
28.1	20	Single compound analysis cost	125	\$ 2500.00
28.2	20	Up to 10 compounds then complete list cost applies	135	\$ 2700.00
28.3	20	Complete list cost	150	\$ 3000.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION		AMOUNT
29.0		TCLP Semi-Volatile Organics 8720 with 1311 extraction - See page 24		
29.1	12	Single compound analysis cost	125	\$ 1500.00
29.2	12	Up to 10 compounds then complete list cost applies	175	\$ 2100.00
29.3	12	Complete list cost	225	\$ 2700.00
30.0		RCRA General Chemistry - See page 24		
30.1	12	Single compound analysis cost	25	\$ 300.00
30.2	12	Complete list cost	75	\$ 900.00
31.0		Metals/Cyanide Target Analyte List (TAL)-Low level option EPA 200.7/SW 7470/7471 - See page 24-25		\$
31.1	12	Single compound analysis cost		\$
31.2	12	Complete list cost	225	\$ 2700.00
32.0	10	Priority Pollutant Metals-(low level option-Mercury) Water	150	\$ 1500.00
33.0	10	Priority Pollutant Metals-(low level option-Mercury) Soil	160	\$ 1600.00
34.0	10	8081A Organochlorine Pesticides GC	80	\$ 800.00
35.0	10	8280 PCBs by GC	70	\$ 700.00
36.0	10	8061A Phthalate Esters by GC/EDC	120	\$ 1200.00
37.0	20	8270 PAH by GC/MS	80	\$ 1600.00
38.0	20	8260B Semivolatile Organics by GC/MS	125	\$ 2500.00
39.0	20	8270C Semivolatile Organics by GC/MS	225	\$ 4500.00
40.0	30	BTEX (8021B/8260B)	40	\$ 1200.00
41.0	30	BTEX (8021B)/MTBE (8021B)	42	\$ 1260.00
42.0	30	BTEX (8021B)/GRO (8015B)	45	1350.00
43.0	30	BTEX (8021B)/DRO/GRO (8015B)	85	\$ 2550.00
44.0	30	BTEX (8021B)/GRO (8015B)/MTBE (8021B)	47	1410.00
45.0	30	BTEX (8021B)/DRO/GRO (8015B)/MTBE (8021B)	87	\$ 2610.00
46.0	30	BTEX/MTBE/TBA/EDB/EDC by 8260B (SIM)	75	\$ 2250.00
47.0	10	TPH-ORO (8015B)	40	\$ 400.00
48.0	10	TPH-GRO (8015B)	40	\$ 400.00
49.0	10	TPH-DRO (8015B)	40	\$ 400.00
50.0	10	TPH-DRO/ORO (8015)	50	\$ 500.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION		AMOUNT
51.0	10	TPH-GRO/DRO (8015B)	70	\$ 700.00
52.0	20	TPH-GRO/DRO/ORO (8015B)	80	\$ 1600.00
53.0		Solid Waste Phase 1 Organics (Title 33 Series1) Cost (Groundwater only) per set: - See page 25-26		
53.1	12	Search for additional tentatively identified compounds	10	\$ 120.00
53.2	12	Single compound analysis cost	60	\$ 720.00
53.3	12	Up to 10 compounds then complete list cost applies	65	\$ 780.00
53.4	12	Total cost Phase I 8260 complete list	125	\$ 1500.00
54.0		Priority Pollutants by SW-846 Protocol Analysis		
54.1	12	Priority Pollutant Volatiles	100	\$ 1200.00
54.2	12	Priority Pollutant Semi-Volatiles	200	\$ 2400.00
54.3	12	Priority Pollutant Pesticides/PCBs	100	\$ 1200.00
54.4	12	Priority Pollutant Inorganics	150	\$ 1800.00
54.5	12	Total Package Cost (less dioxins) Dioxin (2,3,7,8-Tetrachlorodibenzo-p-Dioxin) quoted at time of analysis	550	\$ 6600.00
55.0		Total Toxic Organics (TTO) by SW-846 Protocol Analysis		
55.1	12	TTO Volatiles	100	\$ 1200.00
55.2	12	TTO Semi-Volatiles	200	\$ 2400.00
55.3	12	TTO Pesticides/PCBs	100	\$ 1200.00
55.4	12	TTO Inorganics	—	\$ —
55.5	12	Total Package Cost (less dioxins) Dioxin (2,3,7,8-Tetrachlorodibenzo-p-Dioxin) quoted at time of analysis	400	\$ 4800.00
56.0		Target Compounds List (TCL) Analysis		
56.1	12	TCL Volatiles	100	\$ 1200.00
56.2	12	TCL Semi-Volatiles	200	\$ 2400.00
56.3	12	TCL Pesticides/PCBs	100	\$ 1200.00
56.4	12	TCL Inorganics	200	\$ 2400.00
56.5	12	Total Package Cost (less dioxins) Dioxin (2,3,7,8-Tetrachlorodibenzo-p-Dioxin) quoted at time of analysis	600	\$ 7200.00
57.0		Hazardous Waste Characterizations Analysis		
57.1	12	Reactivity	70	\$ 840.00
57.2	12	Ignitability	25	\$ 300.00
57.3	12	Corrosivity (pH)	6	\$ 72.00
57.4	12	Corrosivity (NACE)	60	\$ 720.00
57.5	12	BTU	35	\$ 420.00
57.6	12	TCLP	600	\$ 7200.00
57.7	12	Total Package Cost	796	\$ 9552.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION		AMOUNT
58.0		TCLP Extractions Analysis		
58.1	15	Percent Solids (metals, semi-volatiles, volatiles, pesticides, herbicides)	10	\$ 150.00
58.2	15	Characterization Extraction (metals, semi-volatiles, pesticides, herbicides)	40	\$ 600.00
58.3	15	Zero Headspace Extraction (volatiles)	40	\$ 600.00
59.0		TCLP Analysis - Analysis		
59.1	20	TCLP Metals quantified to 10% of TCLP levels	150	\$ 3000.00
59.2	20	TCLP-Mercury	75	\$ 1500.00
59.3	20	TCLP-Individual Metal	70	\$ 1400.00
59.4	20	Additional Metals (Flame, Furnace, ICP, ICP-MS)	10	\$ 200.00
59.5	20	Analysis by Standard Method of Addition (per metal)	25	\$ 500.00
59.6	20	TCLP Pb characterization (includes extraction fees)	75	\$ 1500.00
59.7	20	TCLP Volatile Organics	150	\$ 3000.00
59.8	20	TCLP Semi-Volatile Organics	250	\$ 5000.00
59.9	20	TCLP Pesticides/Herbicides	200	\$ 4000.00
59.10	20	TCLP Pesticides	150	\$ 3000.00
59.11	20	TCLP Herbicides	150	\$ 3000.00
59.12	20	Full TCLP	600	\$ 12000.00
		NOTE: Multiphasic samples will be subject to additional extraction and analytical fee		
60.0	12	Phase II Groundwater Parameters	750	\$ 9000.00
51.0	12	Volatiles by Method 8260 - Groundwater II	125	\$ 1500.00
62.0	12	Volatiles by Method 8270 - Groundwater II	225	\$ 2700.00
63.0	12	Encore Sampling Kits	30	\$ 360.00
64.0	12	Terra Core Sampling Kits	10	\$ 120.00
Collection of Samples-Cost associated with samples from DEP Offices				
65.0	24	*Charleston Office, 601 57th St., SE, Charleston, WV 25304	N/C	\$ N/C
66.0	24	*Teays Office, P.O. Box 662, Teays, WV 25596	N/C	\$ N/C
67.0	24	*Fairmont Office, 2031 Pleasant Valley Rd., Fairmont, WV 26554	100	\$ 2400.00
68.0	24	*Romney Office, HC 63, Box 2545, Romney, WV 26757	150	\$ 3600.00
69.0	24	*French Creek Office, P.O. Box 38, French Creek, WV 26218	150	\$ 3600.00
70.0	24	*Wheeling Office, 131A Peninsula St., Wheeling, WV 26003	150	\$ 3600.00
71.0	24	*Parkersburg Office, 2311 Ohio Ave., Parkersburg, WV 26010	100	\$ 2400.00
72.0	24	*Oak Hill Office, 116 Industrial Dr., Oak Hill, WV 25901	50	\$ 1200.00

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION	AMOUNT
73.0	10	24 Hour Turn-Around Rush Orders**	X 2.00 \$
74.0	10	48 Hour Turn-Around Rush Orders**	X 1.50 \$
75.0	10	72 Hour Turn Around Rush Orders**	X 1.25 \$
		TOTAL	\$
All unit pricing quoted should be based on standard (not to exceed two weeks) turn-around time.			
**During emergency situations samples may be requested on a quicker turn-around basis.			

State of West Virginia VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
 Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
 Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
2. **Application is made for 2.5% resident vendor preference for the reason checked:**
Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
3. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
4. **Application is made for 5% resident vendor preference for the reason checked:**
 Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
5. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,
6. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (*West Virginia Code*, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: AVS Environmental

Signed: [Signature]

Date: 1/27/2012

Title: Technical Sales Representative

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

RFQ No. DEP 15 706

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code* §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: ALS Environmental

Authorized Signature: [Signature] Date: 1/27/2012

State of Michigan

County of Ottawa, to-wit:

Taken, subscribed, and sworn to before me this 27th day of JANUARY, 2012.

My Commission expires 01/05, 2012.

AFFIX SEAL HERE

NOTARY PUBLIC [Signature]



January 27, 2012

Mr. Guy Nisbet
State of West Virginia
Department of Administration
Purchasing Division
Building 15
2019 Washington Street East
Charleston, WV 25305 - 0130

SUBJECT: RFQ DEP15706, Organic Analysis of Water and Soil Field Testing

Dear Mr. Nisbet:

ALS Environmental is happy to submit this proposal for analysis of water and soil, as specified in the RFQ. ALS Environmental as an organization has performed the requested services for countless private and public sector clients. We would look forward to the opportunity to do the same for the State of West Virginia. All subcontracted work would be performed within our network of laboratories. Attached to this letter are the Professional Biographies for key staff, copies of all DEP certifications, an executed Vendor Preference Certificate, and an executed, notarized Purchasing Affidavit.

Yours sincerely

Alex J. Csaszar

Technical Sales Representative

Attachment I

WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT

List of Certified Parameters
for

**ALS ENVIRONMENTAL- SOUTH
CHARLESTON
SOUTH CHARLESTON, WEST VIRGINIA**

PARAMETERS CERTIFIED

HAZARDOUS WASTE CHARACTERISTICS

<u>PROCEDURE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Corrosivity	SW9045D	Electrode
Extraction Procedure Toxicity-Metals	SW1310A	Extraction
Flashpoint	ASTM D93-02(a)	Closed Cup
Ignitability	SW1010	Closed Cup
Paint Filter Test	SW9095B	Gravimetric
Toxicity Characteristic Leaching Procedure-Metals	SW1311	Extraction

NONPOTABLE WATER EXTRACTABLE AND SEMI-VOLATILE ORGANIC CHEMICALS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Acrolein & Acrylonitrile	EPA603	GC
Base/Neutrals & Acids	EPA625	GC/MS
Chlorinated Hydrocarbons	EPA612	GC
Liquid-Liquid Extraction	SW3510	Separatory Funnel
Organochlorine Pesticides & PCBs	EPA608	GC
Organohalide Pesticides	SM20th6630 B	GC
Phthalate Esters	EPA606	GC
Polychlorinated Biphenyls	SW8082	GC
Purgeable Aromatics	EPA602	GC
Purgeables	EPA624	GC/MS
Semivolatile Organic Compounds	SW8270D	GC/MS
Total Petroleum Hydrocarbons (DRO)	SW8015B	GC/FID

NONPOTABLE WATER INORGANIC NONMETALS

<u>ANALYTE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Acidity	SM19th2310 B(4a)	Titrimetric
Alkalinity	SM19th2320 B	Titrimetric
Ammonia	SM20th4500-NH3 B	Distillation
Ammonia	SM20th4500-NH3 C	Titrimetric
Bromide	ASTM D1246	Titrimetric
Carbon, Total Organic (TOC)	SM20th5310 C	Oxidation
Chloride	SM19th4500-Cl-B	Titrimetric
Chlorine, Residual	SM19th4500-Cl B	Iodometric
Chlorine, Residual	SM20th4500-Cl G	Spectrophotometric
Chromium, Hexavalent	EPA218.6 Rev 3.3-1994	IC
Chromium, Trivalent	EPA200.7 minus EPA 218.6	Calculation
Color	SM20th2120 B	Visual Comparison
Conductance, Specific	EPA120.1 Rev 1982	Probe
Cyanide	SM20th4500-CN C	Distillation
Cyanide, Amenable to Chlorination	SM20th4500-CN G	Distillation
Cyanide, Free	SM20th4500-CN I	Distillation
Cyanide, Total	SM20th4500-CN E	Colorimetric
Cyanide, Total & Amenable	SW9010B	Distillation
Fluoride	SM20th4500-F B	Distillation
Fluoride	SM20th4500-F C	ISE
Hardness, Total	SM19th2340 C	Titrimetric
Hardness, Total	SM19th2340 B	Calculation
Nitrate	SM20th4500-NO3 E minus	Calculation
	SM20th4500-NO2 B	
Nitrate-Nitrite	SM20th4500-NO3 E	Spectrophotometric
Nitrite	SM20th4500-NO2 B	Spectrophotometric
Nitrogen, Total Kjeldahl (TKN)	SM20th4500-Norg B	Digestion
Nitrogen, Total Kjeldahl (TKN)	SM20th4500-NH3 B	Distillation
Nitrogen, Total Kjeldahl (TKN)	SM20th4500-NH3 C	Titrimetric
Oil & Grease	EPA1664 A	Gravimetric
Oxygen Demand, Biochemical (BOD)	SM19th5210 B	Probe
Oxygen Demand, Chemical (COD)	HACH 8000	Spectrophotometric
Oxygen, Dissolved	SM20th4500-O G	Probe
pH (Hydrogen Ion)	SM20th4500-H B	Electrode
Phenolics, Total	EPA420.1 Rev 1978	Colorimetric
Phosphorus, Ortho	EPA365.3 Rev 1978	Spectrophotometric
Phosphorus, Total	SM20th4500-P B.5	Digestion
Phosphorus, Total	EPA365.3 Rev 1978	Spectrophotometric
Solids, Dissolved	SM19th2540 C	Gravimetric
Solids, Settleable	SM19th2540 F	Imhoff
Solids, Suspended	SM19th2540 D	Gravimetric
Solids, Total	SM19th2540 B	Gravimetric
Sulfate	SM15th426 C	Turbidimetric
Sulfide	SM20th4500-S F	Titrimetric
Surfactants (MBAS)	SM20th5540 C	Spectrophotometric
Temperature	SM19th2550 B	Thermometric
Turbidity	EPA180.1 Rev 2.0-1993	Turbidimetric

NONPOTABLE WATER MICROBIOLOGY

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Coliform, Fecal (MF)	SM20th9222 D	Membrane Filter
Coliform, Fecal (MPN)	SM20th9221 E	Multiple Tube
Coliform, Total (MF)	SM20th9222 B	Membrane Filter
Coliform, Total (MPN)	SM20th9221 B	Multiple Tube

NONPOTABLE WATER TRACE METALS

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Aluminum	EPA200.7 Rev 4.4-1994	ICP
Aluminum	SW6010B	ICP
Aluminum	EPA200.8 Rev 5.4-1994	ICP-MS
Antimony	EPA200.7 Rev 4.4-1994	ICP
Antimony	SW6010B	ICP
Antimony	EPA200.8 Rev 5.4-1994	ICP-MS
Arsenic	EPA200.7 Rev 4.4-1994	ICP
Arsenic	SW6010B	ICP
Arsenic	EPA200.8 Rev 5.4-1994	ICP-MS
Barium	EPA200.7 Rev 4.4-1994	ICP
Barium	SW6010B	ICP
Barium	EPA200.8 Rev 5.4-1994	ICP-MS
Beryllium	EPA200.7 Rev 4.4-1994	ICP
Beryllium	SW6010B	ICP
Beryllium	EPA200.8 Rev 5.4-1994	ICP-MS
Boron	EPA200.7 Rev 4.4-1994	ICP
Boron	SW6010B	ICP
Cadmium	EPA200.7 Rev 4.4-1994	ICP
Cadmium	SW6010B	ICP
Cadmium	EPA200.8 Rev 5.4-1994	ICP-MS
Calcium	EPA200.7 Rev 4.4-1994	ICP
Calcium	SW6010B	ICP
Chromium	EPA200.7 Rev 4.4-1994	ICP
Chromium	SW6010B	ICP
Chromium	EPA200.8 Rev 5.4-1994	ICP-MS
Cobalt	EPA200.7 Rev 4.4-1994	ICP
Cobalt	SW6010B	ICP
Cobalt	EPA200.8 Rev 5.4-1994	ICP-MS
Copper	EPA200.7 Rev 4.4-1994	ICP
Copper	SW6010B	ICP
Copper	EPA200.8 Rev 5.4-1994	ICP-MS
Iron	EPA200.7 Rev 4.4-1994	ICP
Iron	SW6010B	ICP
Lead	EPA200.7 Rev 4.4-1994	ICP
Lead	SW6010B	ICP
Lead	EPA200.8 Rev 5.4-1994	ICP-MS
Magnesium	EPA200.7 Rev 4.4-1994	ICP
Magnesium	SW6010B	ICP
Manganese	EPA200.7 Rev 4.4-1994	ICP
Manganese	SW6010B	ICP
Manganese	EPA200.8 Rev 5.4-1994	ICP-MS

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Mercury	EPA1631E	CVAA
Mercury	EPA245.1 Rev 3.0-1994	CVAA
Mercury	SW7470A	CVAA
Metals, Dissolved	EPA200.7 Rev 4.4-1994	Filtration
Metals, Dissolved	EPA200.8 Rev 5.4-1994	Filtration
Metals, Total	EPA200.7 Rev 4.4-1994	Digestion
Metals, Total	EPA200.8 Rev 5.4-1994	Digestion
Metals, Total	SW3010A	Digestion
Molybdenum	EPA200.7 Rev 4.4-1994	ICP
Molybdenum	SW6010B	ICP
Molybdenum	EPA200.8 Rev 5.4-1994	ICP-MS
Nickel	EPA200.7 Rev 4.4-1994	ICP
Nickel	SW6010B	ICP
Nickel	EPA200.8 Rev 5.4-1994	ICP-MS
Potassium	EPA200.7 Rev 4.4-1994	ICP
Potassium	SW6010B	ICP
Selenium	EPA200.7 Rev 4.4-1994	ICP
Selenium	SW6010B	ICP
Selenium	EPA200.8 Rev 5.4-1994	ICP-MS
Silver	EPA200.7 Rev 4.4-1994	ICP
Silver	SW6010B	ICP
Silver	EPA200.8 Rev 5.4-1994	ICP-MS
Sodium	EPA200.7 Rev 4.4-1994	ICP
Sodium	SW6010B	ICP
Strontium	EPA200.7 Rev 4.4-1994	ICP
Strontium	SW6010B	ICP
Thallium	EPA200.7 Rev 4.4-1994	ICP
Thallium	SW6010B	ICP
Thallium	EPA200.8 Rev 5.4-1994	ICP-MS
Tin	EPA200.7 Rev 4.4-1994	ICP
Tin	SW6010B	ICP
Titanium	EPA200.7 Rev 4.4-1994	ICP
Titanium	SW6010B	ICP
Vanadium	EPA200.7 Rev 4.4-1994	ICP
Vanadium	SW6010B	ICP
Vanadium	EPA200.8 Rev 5.4-1994	ICP-MS
Zinc	EPA200.7 Rev 4.4-1994	ICP
Zinc	SW6010B	ICP
Zinc	EPA200.8 Rev 5.4-1994	ICP-MS

NONPOTABLE WATER VOLATILE ORGANIC CHEMICALS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Closed System Purge & Trap	SW5035	Extraction
Halogenated & Aromatic Volatiles	SW8021B	GC
Purge & Trap For Aqueous Samples	SW5030B	Extraction
Total Petroleum Hydrocarbons (GRO)	SW8015B	GC/FID
Volatile Organic Compounds	SW8260B	GC/MS

SOLID AND CHEMICAL EXTRACTABLE AND SEMI-VOLATILE ORGANIC CHEMICALS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Polychlorinated Biphenyls	SW8082	GC
Semivolatile Organic Compounds	SW8270D	GC/MS
Total Petroleum Hydrocarbons (DRO)	SW8015B	GC/FID
Ultrasonic	SW3550C	Extraction

SOLID AND CHEMICAL INORGANIC NONMETALS

<u>ANALYTE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Ammonia	SM20th4500-NH3 B	Distillation
Ammonia	SM20th4500-NH3 C	Titrimetric
Carbon, Total Organic (TOC)	Walkley-Black	
Chromium, Hexavalent	ASTM D1687(A)	Colorimetric
Chromium, Hexavalent	SW3060A	Digestion
Cyanide, Total	SW9013	Extraction
Cyanide, Total	SW9014	Titrimetric
Cyanide, Total & Amenable	SW9010B	Distillation
Nitrogen, Total Kjeldahl (TKN)	SM20th4500-Norg B	Digestion
Nitrogen, Total Kjeldahl (TKN)	SM20th4500-NH3 B	Distillation
Nitrogen, Total Kjeldahl (TKN)	SM20th4500-NH3 C	Titrimetric
Oil & Grease	SW9071B	Gravimetric
pH (Hydrogen Ion)	SW9040C	Electrode
pH (Hydrogen Ion)	SW9045D	Electrode
Phosphorus, Total	SM20th4500-P B.5	Digestion
Phosphorus, Total	SM20th4500-P E	Spectrophotometric
Solids, Total, Fixed, & Volatile	SM20th2540 G	Gravimetric
Solids, Volatile	EPA160.4	Gravimetric

SOLID AND CHEMICAL MICROBIOLOGY

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Coliform, Fecal (MPN)	SM20th9221 E	Multiple Tube

SOLID AND CHEMICAL TRACE METALS

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Aluminum	SW6010B	ICP
Antimony	SW6010B	ICP
Arsenic	SW6010B	ICP
Barium	SW6010B	ICP
Beryllium	SW6010B	ICP
Cadmium	SW6010B	ICP
Calcium	SW6010B	ICP
Chromium	SW6010B	ICP
Cobalt	SW6010B	ICP
Copper	SW6010B	ICP
Iron	SW6010B	ICP
Lead	SW6010B	ICP

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Magnesium	SW6010B	ICP
Manganese	SW6010B	ICP
Mercury	SW7471A	CVAA
Metals, Total	SW3050B	Digestion
Molybdenum	SW6010B	ICP
Nickel	SW6010B	ICP
Potassium	SW6010B	ICP
Selenium	SW6010B	ICP
Silver	SW6010B	ICP
Sodium	SW6010B	ICP
Strontium	SW6010B	ICP
Thallium	SW6010B	ICP
Tin	SW6010B	ICP
Titanium	SW6010B	ICP
Vanadium	SW6010B	ICP
Zinc	SW6010B	ICP

SOLID AND CHEMICAL VOLATILE ORGANIC CHEMICALS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Closed System Purge & Trap	SW5035	Extraction
Halogenated & Aromatic Volatiles	SW8021B	GC
Total Petroleum Hydrocarbons (GRO)	SW8015B	GC/FID

WHOLE EFFLUENT TOXICITY

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Acute- Invertebrate	EPA821-R-02-012 2002.0	Acute
Acute- Invertebrate	EPA821-R-02-012 2021.0	Acute
Acute- Vertebrate	EPA821-R-02-012 2000.0	Acute
Chronic- Invertebrate	EPA821-R-02-013 1002.0	Chronic
Chronic- Vertebrate	EPA821-R-02-013 1000.0	Chronic

This laboratory may test **ONLY** for those environmental parameters listed above for compliance reporting purposes. All testing must be by the test method cited in the current application for certification.

This Certification Expires May 31, 2012.

Certificate No 006

 Issued on January 01, 2012

Tommy W. Smith II
Quality Assurance Officer

Attachment I

WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT

Annual Certified Parameter List

for

ALS LABORATORY GROUP, ENVIRONMENTAL DIVISION - HOLLAND MICHIGAN
HOLLAND, MICHIGAN

PARAMETERS CERTIFIED

NONPOTABLE WATER INORGANIC NONMETALS

<u>ANALYTE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Acidity	SM18th2310 B (4a)	Titrimetric
Alkalinity	SM18th2320 B	Titrimetric
Conductance, Specific	EPA120.1	Probe
Demand, Biochemical(BOD)	SM18th5210 B	Probe
Demand, Chemical Oxygen (COD)	EPA410.4	Spectrophotometric
Oil & Grease	EPA1664A	Gravimetric
Solids, Suspended	SM18th2540 D	Gravimetric
Sulfate	EPA300.0	IC
pH (Field Test)	SM18th4500-H ⁺ B	Probe

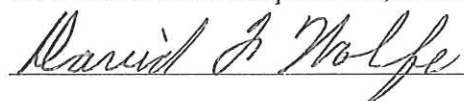
NONPOTABLE WATER TRACE METALS

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Aluminum	EPA200.8 Rev 5.4-1994	ICP-MS
Iron	EPA200.8 Rev 5.4-1994	ICP-MS
Manganese	EPA200.8 Rev 5.4-1994	ICP-MS

This laboratory may test **ONLY** for those environmental parameters listed above for compliance reporting purposes. All testing must be by the test method cited in the current application for certification.

This Certification Expires On, **31 August 2012**.

Certificate No. **355**.

 Issued On, 30 June 2011.

David F Wolfe, PhD
Quality Assurance Officer

Attachment I

WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT

Annual Certified Parameter List

for

ALS LABORATORY GROUP, ENVIRONMENTAL DIVISION - HOLLAND MICHIGAN
HOLLAND, MICHIGAN

PARAMETERS CERTIFIED

NONPOTABLE WATER INORGANIC NONMETALS

<u>ANALYTE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Chloride	EPA300.0	IC
Hardness	SM19th2340 C	Titrimetric
Solids, Dissolved	SM19th2540 C	Gravimetric
Surfactants	SM19th5540 C	Spectrometric

NONPOTABLE WATER TRACE METALS

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Arsenic	EPA200.8 Rev 5.4-1994	ICP-MS
Barium	EPA200.8 Rev 5.4-1994	ICP-MS
Calcium	EPA200.8 Rev 5.4-1994	ICP-MS
Lead	EPA200.8 Rev 5.4-1994	ICP-MS
Magnesium	EPA200.8 Rev 5.4-1994	ICP-MS
Sodium	EPA200.8 Rev 5.4-1994	ICP-MS
Strontium	EPA200.8 Rev 5.4-1994	ICP-MS

NONPOTABLE WATER VOLATILES

<u>METHOD</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
BTEX	SW8260B	GC/MS
Methane	RSK-175	GC

SOLID INORGANIC NONMETALS

<u>ANALYTE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Chloride	EPA300.0	IC

SOLID TRACE METALS

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Arsenic	SW6020A	ICP-MS
Barium	SW6020A	ICP-MS
Calcium	SW6020A	ICP-MS
Lead	SW6020A	ICP-MS
Magnesium	SW6020A	ICP-MS
Manganese	SW6020A	ICP-MS
Sodium	SW6020A	ICP-MS
Strontium	SW6020A	ICP-MS

SOLID VOLATILES

<u>METHOD</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
BTEX	SW8260B	GC/MS
Methane	RSK-175	GC
Ethane	RSK-175	GC
Ethene	RSK-175	GC

EXTRACTION VOLATILES

<u>METHOD</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Volatiles	SW5030	Purge & Trap
Volatiles	RSK-175	Purge & Trap

This laboratory may test **ONLY** for those environmental parameters listed above for compliance reporting purposes. All testing must be by the test method cited in the current application for certification.

This Certification Expires On, **31 August 2012**.

Certificate No. **355**.



Issued On, 30 June 2011.

Addendum 1, Issued On, 12 December 2011.

David F Wolfe, PhD
Quality Assurance Officer

Attachment I

WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT

Annual Certified Parameter List

for

COLUMBIA ANALYTICAL SERVICES, INCORPORATED
HOUSTON, TEXAS

PARAMETERS CERTIFIED

NONPOTABLE WATER EXTRACTABLE & SEMI-VOLATILE ORGANICS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
PCB Congeners	EPA1668A	HRGC/HRMS

NONPOTABLE WATER DIOXIN & DIBENZOFURAN

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Dioxins & Furans (PCDD/F)	EPA1613B	HRGC/HRMS
Dioxins & Furans (PCDD/F)	SW8290	HRGC/HRMS

SOLID & CHEMICAL EXTRACTABLE & SEMI-VOLATILE ORGANICS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
PCB Congeners	EPA1668A	HRGC/HRMS


SOLID & CHEMICAL DIOXIN & DIBENZOFURAN

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Dioxins & Furans (PCDD/F)	EPA1613B	HRGC/HRMS
Dioxins & Furans (PCDD/F)	SW8290	HRGC/HRMS

This laboratory may test **ONLY** for those environmental parameters listed above for compliance reporting purposes. All testing must be by the test method cited in the current application for certification.

This Certification Expires On, **30 June 2012**.

Certificate No. **347**.

 Issued On, 30 April 2011.

David F Wolfe, PhD
Quality Assurance Officer

**WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT**

Annual Certified Parameter List

for

**ALS ENVIRONMENTAL – (FORMERLY - ALSI MIDDLETOWN, PA)
MIDDLETOWN, PENNSYLVANIA**

PARAMETERS CERTIFIED

NONPOTABLE WATER INORGANIC NONMETALS

<u>ANALYTE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Acidity	SM20th2310 B	Titrimetric
Alkalinity	SM20th2320 B	Titrimetric
Ammonia	ASTM D6919-03	IC
Bromide	EPA300.0	IC
Bromide	SW9056 A	IC
Chloride	EPA300.0	IC
Chloride	SW9056 A	IC
Chromium, Hexavalent	SM21th3500-Cr ⁶⁺ B	Spectrometric
Conductance, Specific	EPA120.1	Probe
Conductance, Specific	SM20th2510 B	Probe
Conductance, Specific	SW9050A	Probe
Cyanide, Weak Acid Dissociable	SM20th4500-CN ⁻ I	Spectrometric
Cyanide, Free	EPA335.4	Spectrometric
Fluoride	EPA300.0	IC
Fluoride	SW9056 A	IC
Kjeldahl, Total Nitrogen	SM20th4500-N _{org} B	Titrimetric
Nitrate	EPA300.0	IC
Nitrate	SW9056 A	IC
Nitrate-Nitrite	EPA300.0	IC
Nitrite	EPA300.0	IC
Oil & Grease	EPA1664A	Gravimetric
Organic Carbon, Total	SM21th5310 B	Oxidation
pH(Field Test)	SM20th4500-H B	Probe
Solids, Dissolved	SM21th2540 C	Gravimetric
Solids, Settleable	SM21th2540 F	Gravimetric
Solids, Suspended	SM21th2540 D	Gravimetric
Sulfate	EPA300.0	IC
Sulfate	SW9056 A	IC
Temperature(Field Test)	SM21st2550 B	Probe

NONPOTABLE WATER TRACE METALS

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Aluminum	EPA200.7 Rev 4.4-1994	ICP
Antimony	EPA200.7 Rev 4.4-1994	ICP
Arsenic	EPA200.7 Rev 4.4-1994	ICP
Barium	EPA200.7 Rev 4.4-1994	ICP
Beryllium	EPA200.7 Rev 4.4-1994	ICP
Boron	EPA200.7 Rev 4.4-1994	ICP
Cadmium	EPA200.7 Rev 4.4-1994	ICP
Calcium	EPA200.7 Rev 4.4-1994	ICP
Cesium	EPA200.7 Rev 4.4-1994	ICP
Chromium	EPA200.7 Rev 4.4-1994	ICP
Cobalt	EPA200.7 Rev 4.4-1994	ICP
Copper	EPA200.7 Rev 4.4-1994	ICP
Iron	EPA200.7 Rev 4.4-1994	ICP
Lead	EPA200.7 Rev 4.4-1994	ICP
Lithium	EPA200.7 Rev 4.4-1994	ICP
Magnesium	EPA200.7 Rev 4.4-1994	ICP
Manganese	EPA200.7 Rev 4.4-1994	ICP
Molybdenum	EPA200.7 Rev 4.4-1994	ICP
Nickel	EPA200.7 Rev 4.4-1994	ICP
Potassium	EPA200.7 Rev 4.4-1994	ICP
Selenium	EPA200.7 Rev 4.4-1994	ICP
Silver	EPA200.7 Rev 4.4-1994	ICP
Sodium	EPA200.7 Rev 4.4-1994	ICP
Strontium	EPA200.7 Rev 4.4-1994	ICP
Thallium	EPA200.7 Rev 4.4-1994	ICP
Tin	EPA200.7 Rev 4.4-1994	ICP
Titanium	EPA200.7 Rev 4.4-1994	ICP
Vanadium	EPA200.7 Rev 4.4-1994	ICP
Zinc	EPA200.7 Rev 4.4-1994	ICP
Aluminum	EPA200.8 Rev 5.4-1994	ICP-MS
Antimony	EPA200.8 Rev 5.4-1994	ICP-MS
Arsenic	EPA200.8 Rev 5.4-1994	ICP-MS
Barium	EPA200.8 Rev 5.4-1994	ICP-MS
Beryllium	EPA200.8 Rev 5.4-1994	ICP-MS
Cadmium	EPA200.8 Rev 5.4-1994	ICP-MS
Chromium	EPA200.8 Rev 5.4-1994	ICP-MS
Cobalt	EPA200.8 Rev 5.4-1994	ICP-MS
Copper	EPA200.8 Rev 5.4-1994	ICP-MS
Lead	EPA200.8 Rev 5.4-1994	ICP-MS
Manganese	EPA200.8 Rev 5.4-1994	ICP-MS
Mercury	EPA200.8 Rev 5.4-1994	ICP-MS
Molybdenum	EPA200.8 Rev 5.4-1994	ICP-MS
Nickel	EPA200.8 Rev 5.4-1994	ICP-MS
Selenium	EPA200.8 Rev 5.4-1994	ICP-MS
Silver	EPA200.8 Rev 5.4-1994	ICP-MS
Thallium	EPA200.8 Rev 5.4-1994	ICP-MS
Vanadium	EPA200.8 Rev 5.4-1994	ICP-MS
Zinc	EPA200.8 Rev 5.4-1994	ICP-MS
Mercury	EPA245.1	CVAA
Mercury	EPA1631	CVAA/Low Level
Mercury	SW7470A	CVAA

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Aluminum	SW6010	ICP
Antimony	SW6010	ICP
Arsenic	SW6010	ICP
Barium	SW6010	ICP
Beryllium	SW6010	ICP
Boron	SW6010	ICP
Cadmium	SW6010	ICP
Calcium	SW6010	ICP
Chromium	SW6010	ICP
Cobalt	SW6010	ICP
Copper	SW6010	ICP
Iron	SW6010	ICP
Lead	SW6010	ICP
Magnesium	SW6010	ICP
Manganese	SW6010	ICP
Molybdenum	SW6010	ICP
Nickel	SW6010	ICP
Potassium	SW6010	ICP
Selenium	SW6010	ICP
Silver	SW6010	ICP
Sodium	SW6010	ICP
Strontium	SW6010	ICP
Thallium	SW6010	ICP
Tin	SW6010	ICP
Titanium	SW6010	ICP
Vanadium	SW6010	ICP
Zinc	SW6010	ICP
Aluminum	SW6020	ICP/MS
Antimony	SW6020	ICP/MS
Arsenic	SW6020	ICP/MS
Barium	SW6020	ICP/MS
Beryllium	SW6020	ICP/MS
Cadmium	SW6020	ICP/MS
Calcium	SW6020	ICP/MS
Cesium	SW6020	ICP/MS
Chromium	SW6020	ICP/MS
Cobalt	SW6020	ICP/MS
Copper	SW6020	ICP/MS
Iron	SW6020	ICP/MS
Lead	SW6020	ICP/MS
Lithium	SW6020	ICP/MS
Magnesium	SW6020	ICP/MS
Manganese	SW6020	ICP/MS
Molybdenum	SW6020	ICP/MS
Nickel	SW6020	ICP/MS
Potassium	SW6020	ICP/MS
Selenium	SW6020	ICP/MS
Silicon	SW6020	ICP/MS
Silver	SW6020	ICP/MS
Sodium	SW6020	ICP/MS
Strontium	SW6020	ICP/MS
Thallium	SW6020	ICP/MS
Tin	SW6020	ICP/MS
Titanium	SW6020	ICP/MS
Vanadium	SW6020	ICP/MS
Zinc	SW6020	ICP/MS

NONPOTABLE WATER VOLATILE ORGANICS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Purgeables	EPA624	GC/MS
Total Petroleum Hydrocarbons (GRO)	SW8015B	GC/FID
Volatile Organics	SW8260	GC/MS

NONPOTABLE WATER EXTRACTABLE & SEMI-VOLATILE ORGANICS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Pesticides & PCBs	EPA608	GC/ECD
Base/Neutrals & Acids	EPA625	GC/MS
Total Petroleum Hydrocarbons (DRO)	SW8015	GC/FID
Organochlorine Pesticides	SW8081	GC/ECD
Polychlorinated Biphenyls	SW8082	GC/ECD
Chlorinated Herbicides	SW8151A	GC/ECD
Semi-Volatile Organics	SW8270	GC/MS

SOLID & CHEMICAL INORGANICS

<u>ANALYTE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Chloride	SW9056A	IC
Sulfate	SW9056A	IC

SOLID & CHEMICAL TRACE METALS

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Aluminum	SW6010C	ICP
Antimony	SW6010C	ICP
Arsenic	SW6010C	ICP
Barium	SW6010C	ICP
Beryllium	SW6010C	ICP
Boron	SW6010C	ICP
Cadmium	SW6010C	ICP
Calcium	SW6010C	ICP
Chromium	SW6010C	ICP
Cobalt	SW6010C	ICP
Copper	SW6010C	ICP
Iron	SW6010C	ICP
Lead	SW6010C	ICP
Magnesium	SW6010C	ICP
Manganese	SW6010C	ICP
Molybdenum	SW6010C	ICP
Nickel	SW6010C	ICP
Potassium	SW6010C	ICP
Selenium	SW6010C	ICP
Silver	SW6010C	ICP
Sodium	SW6010C	ICP
Strontium	SW6010C	ICP
Thallium	SW6010C	ICP
Tin	SW6010C	ICP
Titanium	SW6010C	ICP
Vanadium	SW6010C	ICP
Zinc	SW6010C	ICP

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Aluminum	SW6020A	ICP-MS
Antimony	SW6020A	ICP-MS
Arsenic	SW6020A	ICP-MS
Barium	SW6020A	ICP-MS
Beryllium	SW6020A	ICP-MS
Cadmium	SW6020A	ICP-MS
Calcium	SW6020A	ICP-MS
Chromium	SW6020A	ICP-MS
Cobalt	SW6020A	ICP-MS
Copper	SW6020A	ICP-MS
Iron	SW6020A	ICP-MS
Lead	SW6020A	ICP-MS
Magnesium	SW6020A	ICP-MS
Manganese	SW6020A	ICP-MS
Mercury	SW6020A	ICP-MS
Molybdenum	SW6020A	ICP-MS
Nickel	SW6020A	ICP-MS
Potassium	SW6020A	ICP-MS
Selenium	SW6020A	ICP-MS
Silver	SW6020A	ICP-MS
Sodium	SW6020A	ICP-MS
Strontium	SW6020A	ICP-MS
Thallium	SW6020A	ICP-MS
Tin	SW6020A	ICP-MS
Titanium	SW6020A	ICP-MS
Vanadium	SW6020A	ICP-MS
Zinc	SW6020A	ICP-MS
Mercury	SW7471B	CVAA

SOLID & CHEMICAL VOLATILE ORGANICS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Total Petroleum Hydrocarbons (GRO)	SW8015B	GC/FID
Volatile Organic Compounds	SW8260B	GC/MS

SOLID & CHEMICAL EXTRACTABLE & SEMI-VOLATILE ORGANICS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Total Petroleum Hydrocarbons (DRO)	SW8015B	GC/FID
Organochlorine Pesticides	SW8081B	GC/ECD
Polychlorinated Biphenyls	SW8082A	GC/ECD
Chlorinated Herbicides	SW8151A	GC/ECD
Semivolatile Organic Compounds	SW8270D	GC/MS

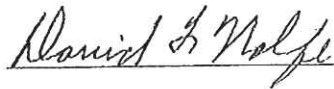
EXTRACTION, DIGESTION, CLEANUP, & PREPARATORY METHODS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Metals digestion	SW3015	Microwave
Metals digestion	SW3050B	Acid
Metals digestion	SW3051A	Microwave
Extraction	SW3510C	Separatory Funnel (LL)
Extraction	SW3545	Pressurized Fluid (PFE)
Extraction	SW3550B	Ultrasonic (UE)
Cleanup	SW3620C	Florisil
Cleanup	SW3660B	Sulfur
Cleanup	SW3665A	Acid/Permanganate

This laboratory may test **ONLY** for those environmental parameters listed above for compliance reporting purposes. All testing must be by the test method cited in the current application for certification.

This Certification Expires On, **31 July 2012**.

Certificate No. **343**.



Issued On, 25 May 2011.

Revision 1, Issued On, 9 June 2011.

David F Wolfe, PhD
Quality Assurance Officer



Professional Biography

Rebecca Kiser
Laboratory Manager

Education

B.S. - Biology
West Virginia State College, 1996

Professional Summary

Over 16 years of environmental laboratory experience, including over 10 years of laboratory supervision and management experience. Current responsibilities include employee and workload management, technical requirements and requests, communicates client needs to the laboratory and advises clients of work status, and reviews all final reports.

Work Experience

ALS Environmental, South Charleston, WV
Laboratory Manager
01/01/12 to present

Standard Laboratories, Inc., South Charleston, WV
Environmental Supervisor
2010-2011

AC&S, Inc., Nitro, WV
Assistant Laboratory Manager
2001- 2010
Organic Analyst
1996 - 2001

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Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Professional Biography

Jeff Glaser
Laboratory Director

Education

B.S. - Biochemistry
Michigan State University, 1987

Professional Summary

Over 22 years of environmental laboratory experience, including over 17 years of laboratory management experience. In-depth knowledge of analytical laboratory functions at all levels: operations management, fiscal management, HR support, project management, and sales & marketing. Driven, results-oriented, and client-focused leader with demonstrated success in exceeding client expectations for both data quality and service in a demanding and fast-paced industry. Proven track record of enhancement of laboratory performance achieved by implementing state-of-the-art analytical instrumentation, new technology developments, strategic planning, and problem solving. Business-savvy professional experienced in P&L statements, business development, benefit administration, customer service and purchasing functions.

Work Experience

ALS Environmental, Holland, MI
Laboratory Director
10/25/11 to present
Technical Director
11/17/10 - 10/25/11

TriMatrix Laboratories, Inc. Grand Rapids, MI
Operations Manager
1998 - 2010
Organics Manager
1996 - 1998
Laboratory Manager - Muskegon, MI Laboratory
1994-1996

Great Lakes Environmental Laboratories, Muskegon, MI
Laboratory Supervisor
1992 - 1994

Anatech Analytical Laboratories, Ludington, MI
1989 - 1992
Organic Chemist

Additional Achievements, Awards, Honors, and Skills

Restek Capillary Column Chromatography Seminar
ACS Short Course, Introduction to Mass Spectral Interpretation
Dunn and Bradstreet Workshop, Supervisory Solutions
Not So Basic Training Workshops, Supervisory Training/ Customer Service
DoD Quality Systems Manual Training 2006, 2009, and 2010
DoD UFP QAPP Preparation 2010

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ALS GROUP USA, CORP. Part of the ALS Laboratory Group A Campbell Brothers Limited Company



Professional Biography

Dan Delinger
Quality Assurance Manager

Education

B.S. - Chemistry
Purdue University, 1985

Professional Summary

36 years of experience in laboratory operations including: sample preparation, sample analysis, method development, method validation, project management, sales, quality assurance, and laboratory management. Strong background in isotopic dilution techniques utilizing tandem, low-resolution, and high-resolution mass spectrometers. Current responsibilities include management of the quality control program, document archive system, and laboratory accreditations. Able to effectively communicate with all levels of personnel including client, laboratory, and regulatory staff.

Work Experience

ALS Environmental, Holland, MI
Quality Assurance Manager
2002 to present

North Creek Analytical - Seattle, WA
Technical Director
1999 - 2002

Core Laboratories - Indianapolis, IN
Analyst, Analytical Supervisor, Client Services, Operations, & Laboratory Manager
1986 - 1999

RCA - Indianapolis, IN
Associate Engineer
1980 - 1986

Additional Achievements, Awards, Honors, and Skills

Continuing Education

Dale Carnegie - Effective Communication and Human Relations
Mass Spectral Interpretation
Accounting for Non-Accountants
Selling Laboratory Services
Project Management for Scientists



Professional Biography

Joe Ribar
Operations Manager

Education

B.S. – Biology
Purdue University, 2002

Professional Summary

10 years of laboratory experience that includes wastewater/groundwater monitoring, bench analysis, and project management. Current responsibilities include management of greater than \$1 million in projects annually, interacting with clients and lab personnel through effective communication, and working with sales staff to develop new and existing clients. Duties also include overseeing our laboratory and field staff of 35+ people, ensuring the work gets completed in a timely manner, and client expectations are met/exceeded.

Work Experience

ALS Environmental, Holland, MI
Operations Manager/Project Manager
October 2011 – present

ALS Environmental, Holland, MI
Project Manager, Field Services Technician
2004 – October 2011

Severn Trent Laboratories, Valparaiso, IN
Analytical Chemist
2002 – 2004

Additional Achievements, Awards, Honors, Skills and Training

Baker Communications – Exceptional Management Skills/Customer Service/ Time Management/Team Building Skills

40 Hour OSHA HAZWOPER Training



Professional Biography

Bill Carey
IT/HSE/Project Manager

Education

B.S. - Marine Science/Biology
University of Tampa, 1989

Professional Summary

19 years of environmental laboratory experience including analysis (GC and GCMS), project management, IT and safety. Client focused and detail oriented.

Current responsibilities include PC, network and LIMS management. Also includes some project management of client activities, technical requirements and requests, quotations, and project needs as projects progress through the laboratory - reviews all project requirements, support documentation, and final reports. Communicates client needs to the laboratory and advises clients of work status. Responsibilities also include safety policy implementation and monitoring safety of the facility, including training.

Work Experience

ALS Environmental, Holland, MI
IT, Project Manager, Health & Safety, Analyst
1992 to present

Additional Achievements, Awards, Honors, Skills and Training

Continuing Education

Graduate Certificate, Hazardous Waste Management, Wayne State University
40-Hour OSHA HAZWOPER Certified
Red Cross First Aid and CPR Certified



Professional Biography

Chad E. Stoike
Metals Supervisor

Education

B.S. - Chemistry
Grand Valley State University, 2001

Professional Summary

10 years of professional laboratory experience including data management, quality assurance, bench analysis, method development, and technical troubleshooting. Current responsibilities include employee and workload management, acquisition, processing and validation of legally defensible data, ICPMS, CVAA and CVAF analysis and maintenance, and promoting strict adherence to prescribed methodologies within a safety conscious environment.

Work Experience

ALS Environmental, Holland, MI
Metals Department Supervisor / Senior ICPMS Analyst
2007 to present

Quality Assurance Assistant
2006 - 2007

Inorganic Chemist
2002 - 2006

Organic Prep Chemist
2001 - 2002

Additional Achievements, Awards, Honors, Skills and Training

Analytical Techniques

Organic extractions including: Soxhlet, Soxtec, separatory funnel
Wet chemistry techniques including: titrations, gravimetric analysis, distillations, solid phase extraction
TCLP/SPLP extraction protocol
Metals digestions: Microwave, ultra-trace, and hotblock techniques.
Lead Fractionation (Fine & Coarse)

Instrumentation Experience

Agilent 7500CE ICPMS
Cetac M6000 and M6100 Cold Vapor Atomic Absorption
Cetac M8000 Cold Vapor Atomic Fluorescence (1631 Low-Level Mercury)
Dionex ICS-2000 Ion Chromatograph
Lachat QuickChem 8100

Continuing Education

ALS Environmental Career Quest management training
Dale Carnegie Effective Communication and Human Relations

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Professional Biography

Jennifer Jones-Grzan
Wet Chemistry Department Supervisor

Education

B.S. - Geology
Hope College, 2001

Professional Summary

Over 9 years of professional laboratory experience that includes analysis of environmental samples utilizing various wet chemistry techniques, method development, implementation of instrumentation, and daily management of the wet chemistry operations area. Current responsibilities include analysis of environmental samples, daily oversight of the wet chemistry operations area, scheduling staff according to work load requirements, method development and implementation, and interfacing with internal and external clients when needed.

Work Experience

ALS Environmental, Holland, MI
Wet Chemistry Supervisor
2004 to present

Inorganic Analyst
2002 - 2004

Additional Achievements, Awards, Honors, Skills and Training

Instrumentation Experience

Lachat Quickchem 8500
O.I. Analytical TOC 1010
Dionex ICS-2000
O.I. Analytical Available CN Analyzer
Thermo Euroglas AOX/TOX Analyzer

Continuing Education

ALS CareerQuest Training Program for professional development

Columbia Analytical Resumes for Key Personnel

ERIC A. BAUCH


YEAR 2010 TO PRESENT

Columbia Analytical Services, Inc., 19408 Park Row, Ste. 320, Houston, TX 77084 800.434.6946
CURRENT POSITION
Scientist I – 2010 to Present
RESPONSIBILITIES

Group Leader, Extraction Laboratory, Columbia Analytical Services, Inc., Houston, Texas, 2011. Oversee operations in Extraction Laboratory and SMO. Primary responsibilities include sample login, extraction, cleanup, and final concentration. Schedule daily tasks for extraction analysts. Run Methods 1668A, 1613B, 8280, 8290, TO-9A and 23. Aid in continuous improvement of existing methods and development of new methods. Perform non-routine and complex technical assignments.

Documentation of Demonstration of Capabilities is available for review.

EXPERIENCE

Extractions Analyst III, Columbia Analytical Services, Houston, Texas, 2010 – 2011. Performed organic extractions, extract clean-up and concentration for methods 1668A, 1613B, 8280, 8290, TO-9A and 23. Performed sample management duties including receipt, log-in and bottle order preparation.

Graduate Assistant, Baylor University, Chemistry Department, Waco, Texas, 2006-2009. Designed and prepared novel bis-pyridylhydrazones for usage in conversion to bis-pyridylindazoles. Developed an alkylation procedure of the modification of a series of substituted dibenzoylmethanes. General instrument maintenance (primarily GC/GC-MS.) Maintained a clean, organized working environment and laboratory notebook.

Teaching Assistant, Baylor University, Chemistry Department, Waco, Texas, 2006-2009. Developed a system involving normally-scheduled meetings to ensure graduate/undergraduate teaching assistants were well-prepared and given valid information for pre-laboratory lectures. Designed and implemented a system using PowerPoint presentations for pre-laboratory lecture; additionally designed novel experiments to enrich student experience with a focus on proper instrument usage (primarily IR and GC.) Collaborated in introducing writing assignments with emphasis on conveyance of concepts learned.

Research Assistant, Texas Lutheran University, Seguin, Texas, 2005. Carried out synthesis of polyurethane elastomers using dry box (air/water free) techniques. Characterized polymer physical properties via tensile and swell-testing analysis. Designed and prepared a series of novel organo-ammonium salts for modification of polyurethane blends.

Education

BS, Chemistry, Texas Lutheran University, 2006.

Post Graduate Studies, Chemistry, Baylor University, 2009

Columbia Analytical Resumes for Key Personnel (cont.)

MICHAEL COSSON

2007 TO PRESENT


Columbia Analytical Services, Inc., 19408 Park Row, Ste. 320, Houston, TX 77084 800.434.6946

CURRENT POSITION	Project Manager, Data Reporting Supervisor – 2010 to Present
RESPONSIBILITIES	Responsible for technical project management, ensuring overall data quality and compliance with customer requirements, and serving as liaison between clients and laboratory departments. Also responsible for the oversight of the processing and reporting of HRMS data (See description for Data Reporting Supervisor, below)
EXPERIENCE	<p style="text-align: center;">Documentation of Demonstration of Capabilities is available for review</p> <p>Data Reporting Supervisor- <i>Columbia Analytical Services, Inc., Houston, TX, 2009-Present</i></p> <p>Responsible for oversight of the processing and reporting of HRMS data. Troubleshoot data reporting issues, schedule daily tasks, and meet reporting production schedules. Train new staff in the reviewing and reporting criteria for HRGC/HRMS data production, LIMS and OpusQuan. Review and process HRMS chromatographic data for method and reporting compliance, assemble data packages according to project data quality objectives, assure data quality criteria meet project specifications, archive calibration data, prepare reports and case narratives, upload data into LIMS and prepare electronic data deliverables (EDDs).</p> <p>Scientist I, <i>Columbia Analytical Services, Inc., Houston, TX, 2007 – 2009.</i> Review and process HRMS data for method and reporting compliance, assemble data packages according to project data quality objectives, assure data quality criteria meet project specifications, archive calibration data, prepare reports and case narratives, upload data into LIMS and prepare electronic data deliverables (EDDs).</p> <p>Analyst III, <i>Columbia Analytical Services, Inc., Houston, TX, 2007.</i> Responsible for reviewing reports and meeting production goals, assembling data packages, uploading data into LIMS, reviewing and archiving data calibration folders and preparing project-specific forms or data summaries. Also responsible for training new staff in the review and reporting criteria for HRMS data production.</p> <p>Laboratory Analyst, <i>Philip Reclamation Services, Houston, TX, 2006-2007.</i> Responsible for interpreting manifests, checking in samples, and performing chemical analysis of samples. Also responsible for updating waste management systems and checking for discrepancies. Served as laboratory safety committee representative.</p>
EDUCATION	<p>BS, Biochemistry, Florida State University. Tallahassee, Florida, 2007</p> <p>MS, Environmental Engineering, Southern Methodist University. Dallas, Texas (In Progress)</p>

Columbia Analytical Resumes for Key Personnel (cont.)

ARTHI KODUR

2008 TO PRESENT

Columbia Analytical Services, Inc., 19408 Park Row, Ste. 320, Houston, TX 77084 800.434.6946

CURRENT POSITION
Project Chemist – 2011 to Present

RESPONSIBILITIES

Assure project details are understood by technical and administrative staff and that analytical reports and EDDs comply with established project requirements. Manage GC/HRMS projects requiring a wide-range of requirements including US EPA CLP, AFCEE, ACOE, NFESC, RCRA, CWA, SDWA, EU and CAA.

Documentation of Demonstration of Capabilities is available for review.

EXPERIENCE

Group Leader, Extraction Laboratory, Columbia Analytical Services, Inc., Houston, Texas, 2008 - 2011. Oversee operations in Extraction Laboratory and SMO. Primary responsibilities include sample login, extraction, cleanup, and final concentration. Schedule daily tasks for extraction analysts. Run Methods 1668A, 1613B, 8280, 8290, TO-9A and 23. Aid in continuous improvement of existing methods and development of new methods. Perform non-routine and complex technical assignments.

EH&S Coordinator, Columbia Analytical Services, Houston, Texas 2010-2011. Conduct Monthly meetings of safety related issues.

Safety Committee Member, Columbia Analytical Services, Houston Texas 2008-Present. Facilitate safety awareness through out the lab and office area.

Analyst III, Columbia Analytical Services, Inc., Houston, Texas, 2007-08. Run Methods 1668A, 1613B, 8280, 8290, TO-9A and 23. Perform extractions, sulfuric acid clean up, silica gel column clean up, and blow downs/transfers. Receive and log arriving samples into CAS LIMS. Prepare and ship client bottle kit orders.

Science Instructor, Yancy Life, Stafford, TX, 2008. Educate children from pre K-5th grade on basic science.

Lab Technician, Genetic Profiles Corporation, San Diego, CA, 2005-2006. Acce specimens, extraction, PCR, gel electrophoresis and gel analysis.

Education

MFS, Forensic Science, National University, San Diego, California, 2007.

BS, Genetics, Texas A & M University, College Station, Texas, 2005.

Columbia Analytical Resumes for Key Personnel (cont.)

LAN LE


 2008 TO PRESENT

Columbia Analytical Services, Inc., 19408 Park Row, Ste. 320, Houston, TX 77084 800.434.6946

CURRENT POSITION
Laboratory Technical Director – 2011 to Present

RESPONSIBILITIES

Manages and coordinates sample/data production, quality, staff development and training in the HRGC/HRMS laboratory. Oversees method development and provides technical oversight to the entire operation. Ensures overall performance of the laboratory for quality and profitability.

Documentation of Demonstration of Capabilities is available for review.

EXPERIENCE

Technical Manager II, Columbia Analytical Services, Inc., Texas 2008 – 2011. Managed and coordinated sample/data production, data quality, staff development and training in the HRGC/HRMS laboratory. Oversaw method development and provided technical oversight to the entire operation. Monitored adherence to corporate and local policies and procedures.

GC/MS Supervisor, Southern Petroleum Labs, Houston, Texas, 1993-2008. Supervise staff of 13 scientist and technicians, oversee data collection and validation, manage calibration and maintenance of analytical instrument systems, method development, perform training, and interface with project management personnel in support of technical solutions for clients.

Organic Supervisor, Core Laboratories, Houston, Texas, 1991-1993. Responsible for the Organics Laboratory including both GC/MS and GC analyses. Method interpretation and implementation. Supervised and performed both volatile and semivolatiles organics determinations. Used HP-RTE data systems for data interpretation, quantitation, and reporting. Performed instrument maintenance and troubleshooting on HP 5970 GC/MS systems, autosamplers, integrators, and related analytical equipment.

GC/MS Analyst, MBA Laboratories, Houston, Texas, 1988-1990. Performed environmental GC/MS analyses samples in accordance with EPA protocols using an HP 5970 GC/MS with an HP-1000 RTE data system.

Contract Chemist, Shell Development Company, Houston, Texas, 1987-1988. Performed research in a group that developed an expert system for analyzing spectra obtained from a variety of samples, including polymers and heavy oils, which had undergone neutron irradiation.

Contract Chemist, Exxon Research & Engineering Company, Baytown, Texas, 1989-1987. Worked in a research group that developed and expert system for data interpretation for GC/MS hydrocarbon analyses, including naphthas and kerosene.

Chemistry Researcher, University of Houston, Chemistry Department, Houston, Texas, 1983-1987. Developed and authored a Reversed Phase-HPLC method on neutral surfactants. Studied varying HPLC gradients and performance factors.

Water Chemist, City of New Orleans, New Orleans, Louisiana, 1981-1982. Performed a variety of wet bench and GC analyses on water and wastewater samples.

EDUCATION

PhD, Chemistry, University of Houston, Houston, Texas, 1987.

BS, Chemical Engineering, Kansas State University, Manhattan, Kansas, 1981.

PUBLICATIONS

Expert Systems for the Analytical Laboratory, Demonchy, A.R.; Aretteig, J.R.; Le, L., and Deming, S.N., Analytical Chemistry, 60, 1355A, 1988.

Columbia Analytical Resumes for Key Personnel (cont.)

REBECCA PIERROT
 2011 TO PRESENT


Columbia Analytical Services, Inc., 19408 Park Row, Ste. 320, Houston, TX 77084 800.434.6946

CURRENT POSITION	Quality Assurance Program Manager – 2011 to Present
RESPONSIBILITIES	As quality Assurance Program Manager, lead CAS/Houston's Quality Assurance/Quality Control Program. Responsible for reviewing, approving and controlling the quality systems of Columbia Analytical Services' HRMS laboratory. Facilitate the review and changes to laboratory SOPs and the QA Manual. Document training through DoCs and attestations. Manage PE samples and document adherence to standard operating procedures. Review analytical data, perform internal audits and assure compliance with external audit findings. Maintain state and federal certifications. Facilitate Quality Assurance and Ethics training. Prepare quarterly and annual quality reports to senior management. Facilitate managerial review of the Houston laboratory's Quality Assurance Program.
EXPERIENCE	<p style="text-align: center;">Documentation of Demonstration of Capabilities is available for review.</p> <p>Quality Assurance Manager, ALS Laboratory Group, Houston Texas, 2009-2010. Responsible for the management and implementation of a NELAC-Accredited quality system for an international environmental laboratory. This encompasses the areas of document control, employee training and certification, review of routine QC studies, and internal auditing.</p> <p>QA Assistant, ALS Laboratory Group (previously e-Lab Analytical), 2005-2009. Assisted in the development and implementation of a NELAC-Accredited quality system for an international environmental laboratory. Additional duties included level IV data package preparation and review, root cause analysis, employee training and method development.</p> <p>GC Analyst, Southern Petroleum Laboratories, Houston, Texas, 2004-2005. Responsible for the preparation, analysis, and reporting, of purgeable aromatics and gas range organics using GC-PID, -FID (dual column/detector). Maintained and troubleshot HP GC Instruments, including calibration, column and trap replacement, and auto-sampler calibration/maintenance. Relevant software includes TurboChrom for data acquisition and processing and a MS Access-based LIMS for reporting results.</p> <p>Power Plant Chemist – Intern, Austin Energy, Austin, Texas, 2001-2003. Responsible for sample collection and analysis (pH, conductivity, and spectrophotometry), water treatment and purification (reverse osmosis and ion-exchange), environmental sample collection (routine and outfall), and various laboratory management duties including calibrations, monthly environmental reporting, chemical inventory and purchasing. Organized various training sessions focused on safety practices in the plant.</p>
EDUCATION	<p>BS, Chemistry, University of Texas, Austin, Texas, 2003.</p> <p>TNI Mentoring Session: Determination of Detection and Quantitation Limits.</p> <p>Seminar: The New TNI Laboratory Accreditation Standards, TNI, January 2010.</p> <p>Seminar: How to Use Qualified Data, TNI, August 2009.</p> <p>Seminar: Standard Methods: Theory and Application, TNI, August 2008.</p> <p>Continuing Education: Management Skills for First Time Supervisors, Rockhurst University Continuing Education Center, September 2008.</p> <p>Continuing Education: Advanced Microsoft Excel, Rockhurst University Continuing Education Center, January 2007.</p> <p>Continuing Education: ISO/IEC 17025 and Accreditation Course, A2LA, June 2006.</p>
AFFILIATIONS	<p>The NELAC Institute (TNI) – Member, 2008 – Present</p> <p>TNI Accreditation Body Committee Member, 2009 - Present</p> <p>Texas Association of Environmental Professionals, 2010 - Present</p> <p>Laboratory Accreditation Bureau Technical Advisory Group, 2010 – Present</p>

EDUCATION

B.S. Chemistry, 1986 (graduated summa cum laude), Slippery Rock University, Pennsylvania

POSITION OVERVIEW

Ms. Milliken is responsible for directing and coordinating the activities of the laboratory departments including management of all personnel and capital resources available to successfully meet client and laboratory turnaround times (TAT). Ms. Milliken maintains a basic knowledge of all technical areas of the laboratory, laboratory processes, and Horizon LIMS in order to manage laboratory production of all laboratory analytical departments. Ms. Milliken has the final authority and responsibility regarding all analytical and reporting activities for all the departments including GC/MS, GC, Metals, Inorganic Prep, Organic Prep, Water Quality, and Microbiology. Ms. Milliken manages and provides daily guidance for all laboratory activities including but not limited to: serving as a liaison between analytical and other departments; monitoring turnaround time and resources; implementing QA directives and corrective actions; addressing suggestions and concerns of clients and external auditors; and approving the purchase of equipment, Ms. Milliken works hand-in-hand with the V.P. Corporate Operations, QA Manager, and IT Director.

Ms. Milliken is responsible for ensuring commitment to compliance with the standards as stated in ISO17025. She supports the activities of the production laboratory by providing technical guidance and client support in relation to troubleshooting instrument problems, methods development, results interpretation and compliance with NELAP, DoD, and other QA Program requirements; ensures the efficient operations of all laboratory instrumentation by providing the departmental supervisors technical guidance with relation to method compliance and method development; develops and maintains laboratory systems, working with the QA Manager to ensure ALSI compliance with the DoD QSM, NELAP, and other QA Program requirements.

In addition Ms. Milliken assists the IT Director in the understanding and development of automated data deliverables for ALSI clientele including direct interface with the IT Group, software vendors, and laboratory staff which are required to accomplish this task; assists analytical staff in the timely development of new methods in a cost-effective manner; responds to client inquiries as a direct response to their analytical results; contributes to the Senior Management Team by assisting and advising on policies and creating a strategy for directing growth of the laboratory and provides assistance to the Sales and Marketing team on technical presentations to be presented to potential and existing customer base. Ms. Milliken also provides technical review of QAPPs and SOWs submitted for request for proposals. She provides oversight to the Sample Management group following a demonstration of proficiency in all aspects of Horizon LIMS and Field Scheduling activities.

Ms. Milliken supports the laboratory by maintaining the knowledge of and responsible for investigating all regulations and technical requirements for both Federal and State environmental programs and communicating updates and revisions to all personnel affected by these changes.

PROFESSIONAL EXPERIENCE

Analytical Laboratory Services, Inc, Middletown, PA**Wet Chemistry Group Leader (1999 – 2005)**

Ms. Milliken supervised the water quality/wet chemistry department which operates on three (3) shifts, five (5) days a week. Ms. Milliken maintained a general working knowledge of all test methods performed in these sections including the TOC/TOX and asbestos sections where she was responsible for departmental data review and interpretation and implementation of EPA analytical methods for analysis of soils, solid waste, drinking water and wastewater. Ms. Milliken was also responsible for following the QA/QC program, which included the development of standard operating procedures (SOPs) and the analysis of MDLs for all analytical procedures. Ms. Milliken also provided orientation and training of new employees on new methods, instrumentation training, cross training, etc.

***Gannett Fleming Environmental Laboratory, Camp Hill, PA
Wet Chemistry Supervisor (1997 – 1999)***

Ms. Milliken was responsible for supervising the wet chemistry department. She was responsible for the training and supervision of chemists and technicians. She was responsible for analytical testing on various matrices using SW-846, EPA, and Standard Method protocols. She was responsible for the scheduling, analysis, and completion of all samples received for the wet chemistry department.

***Wright Laboratory Services, Inc., Middletown, PA
1993 – 1995; Quality Assurance Coordinator***

Ms. Milliken was responsible for maintaining the laboratory's Quality Assurance Plan and ensured all protocol set forth in the plan was followed. Ms. Milliken was responsible for maintaining current certifications/accreditations and pursuing interest in other programs. Ms. Milliken assisted in preparing data validation packages including USACE and CLP-type data deliverables. During this time, Ms. Milliken acted as a client contact and technical representative for several government and landfill clients.

1988 – 1993; Water Quality Supervisor

Ms. Milliken was responsible for supervising and training all employees in the Water Quality, Microbiology, and TOC/TOX departments. She was also responsible for approving all data produced in these departments. During this time, Ms. Milliken was significant in the expansion of the Water Quality Department from two (2) employees working one (1) shift to eight (8) employees working three (3) shifts. Ms. Milliken researched and developed new methodologies and assisted in the purchasing of new instrumentation. She also successfully completed the Water Supply and Water Pollution Performance Evaluation Studies, and implemented a radon testing program.

1986 – 1988; Water Quality Chemist

Ms. Milliken acted as a Water Quality Chemist performing various wet chemistry methods using EPA, SW-846, and APHA methodologies.

TRAINING, CERTIFICATIONS, ACCREDITATIONS

- Pennsylvania Department of Environmental Protection, Certification for Analysis of Radon Using Charcoal Canisters
- ALSI Flammables and Explosives Safety Training (2001)
- ALSI Hazard Communications Training (2001)
- ALSI Safe Handling and Storage of Compressed Gases (2002)
- ALSI Chemical Hygiene Plan (2002)
- ALSI Horizon LIMS Training (2003)
- Advanced Systems Inc. – Course 011 – Root Cause Analysis (2007)
- ALSI Fire Extinguisher Training (2008)
- EHD Group – Pennsylvania Labor & Industry Annual Safety Committee Training (2008)
- ALSI Ethics Training Session (2009)
- ALSI Safety Training Session (2009)
- ALSI Ethics and Data Integrity Training (2010)
- ALS Ethics and Data Integrity Training (2011)
- ALS Hazcom Training (2011)

EDUCATION

B.A. Chemistry (Mathematics), 1980, Cheyney University,
Teaching Certificate in Secondary Science, 1984, Cheyney University/Immaculate College

POSITION OVERVIEW

As Quality Assurance Manager, Ms. MacMinn is responsible for maintaining current laboratory certifications and accreditations obtained from the American Association for Laboratory Accreditation Program, National Environmental Laboratory Accreditation Program, and various state agencies including the Pennsylvania Department of Environmental Protection, the State of Maryland Department of the Environment, the State of Connecticut Department of Public Health, Delaware Health and Social Services, the Commonwealth of Virginia Department of General Services, the State of New York Department of Health, the State of New Jersey Department of Environmental Protection, the State of Georgia Department of Natural Resources, and the State of West Virginia. Ms. MacMinn was a key player in obtaining primary NELAP accreditation in Pennsylvania for the SDWA, CWA, RCRA programs and secondary NELAP accreditation in the states of New Jersey and New York. The NELAP program is based on ISO/IEC Guide 25 – 1990, "General Requirements for the Competence of Calibration and Testing Laboratories" and ISO/IEC Guide 58, "Calibration and Testing Laboratory Accreditation Systems—General Requirements for Operation and Recognition". Ms. MacMinn also received validation from the Navy Facilities Engineering Services Center (Department of the Navy) to perform analytical testing for the Navy program and transitioned laboratory from the original USACE HTRW validation program to ALSI's compliance to the latest DOD QSM and NELAC participation. In order to maintain these certifications and accreditations, Ms. MacMinn continually interacts with regulatory personnel and participates in numerous audits which not only tests the technical abilities in the laboratories but also the overall operation and service of the laboratory.

As manager of the laboratory's quality system, responsibilities include overseeing quality assurance aspects of the data, conducts internal performance and system audits on the entire technical operation annually, approves and modifies the laboratories' Standard Operating Procedures, maintains document control, and updates the laboratory Quality Assurance Manual as required. Ms. MacMinn also orchestrates the PT Program which includes proficiency evaluation samples for wastewater, drinking water, solid and hazardous waste samples, and soil samples; and runs a single blind PE sample program.

Some other tasks include conducting an annual quality review with upper management; initiates and maintains employee training records; maintains a subcontractor approval program; organizes and performs orientation for new employees detailing laboratory QA/QC requirements; and assists the marketing group with required quality control documentation for proposal and bid submissions.

PROFESSIONAL EXPERIENCE

Phillip Analytical Services, Reading, PA (FKA/SSM/Laboratories, Inc.)

Technical Director/Quality Assurance Manager (1995 – 2000)

As Technical Director/Quality Assurance Manager, Ms. MacMinn served as a major source of technical information and expertise on analytical methods in the laboratory. Ms. MacMinn was responsible for assisting clients and the Client Services Department in the interpretations of regulatory and analytical requirements to meet required protocols. She provided experience in the implementation of methodologies for the analytical staff of the laboratory. Ms. MacMinn developed and implemented the laboratory's Quality Assurance Program, coordinated the laboratory's certifications, accreditations, internal audits, analytical performance evaluations, employee training and safety programs. In addition, Ms. MacMinn initiated and maintained the quality assurance manual, qualification manual and standard operating procedures for the laboratory. During her tenure at Phillip's, Ms. MacMinn instituted a data validation program for evaluating all environmental analyses according to criteria set forth in USEPA CLP (Contract Laboratory Program), SW-846,

Helen M. MacMinn

Quality Assurance Manager

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40 CFR, NIOSH, OSHA, and NELAC for the analysis of drinking water, wastewater, solid and hazardous waste and air emissions. Ms. MacMinn became familiar with GLP and ISO Guide 25 and 17025 for Environmental Laboratory Services.

Thermo Analytical, Pottstown, PA

Quality Assurance/Quality Control Manager/Senior Analytical Chemist (1988-1995)

Ms. MacMinn was responsible for quality assurance/quality control including managing the Quality Assurance Program, the validation of analytical chemistry data, certification and accreditation programs, internal audits, maintenance of control charts, upgrading the QA/QC Manual and personnel training.

Roy F. Weston, Inc., Lionville, PA

Associate Project Scientist (1987-1988)

Ms. MacMinn was responsible for QA/QC involving data validation, certifications, accreditations, performance evaluation studies, internal audits and maintenance of control charts.

Foote Mineral, Exton, PA

Chemist/Quality Assurance (1986-1987)

Ms. MacMinn was responsible for the quality control testing of chemical and mineral products by wet chemistry analysis including atomic absorption determinations. Ms. MacMinn also engaged in environmental analysis of wastewater including dissolved oxygen, suspended solids, nitrogen and phosphate analysis.

Hernderson Senior High School, West Chester, PA

Teacher (1984-1986)

Ms. MacMinn taught Advanced Seminar Chemistry and Introduction to Physical Chemistry.

Scott Paper Company, Chester, PA

Chemist/Packaging Engineer (1980-1983)

Ms. MacMinn was responsible for quality standards and compliance related to corrugated cases, poly/paper wrappers and adhesives materials. Ms. MacMinn developed specifications changes and ensured test and equipment reliability and validation; initiated waste monitoring programs and served as technical consultant to production personnel on problems related to packaging/adhesive issues as they applied to high-speed equipment. Ms. MacMinn supervised a modern adhesive batch make-up facility and coordinated vendor activities with production including developmental work on new projects.

TRAINING

- Problem Solving
- Troubleshooting
- Technical Writing
- Time Management
- Multiple Project Management
- Good Laboratory Practices (GLP)
- USEPA Contract Laboratory Program Organic Validation Certification (1994)
- American Red Cross Adult CPR/Standard First Aid (2001) (2008)
- ALSI Hazard Communications Training (2001)
- Advanced Systems, Inc. – *Measurement Uncertainty for Testing Laboratories* – 8 hours (2001)
- ALSI Fire Extinguisher Training (2002)
- SkillPath *Managers and Supervisors Conference* (2002)
- Red Cross Adult CPR Refresher (2002)
- NYAAEL *“Environmental Laboratory Data Issues”* (2002)
- ASQ *“Certified Quality Management Refresher”* – 30 hours (2003)



Helen M. MacMinn

Quality Assurance Manager

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- INELA "Internal Audits, Management Reviews, and Corrective Actions" (2004)
- The NELAC Institute – Recognition of Outstanding Contribution to the *Establishment of a NELAP* (2004)
- American Red Cross – First Aid Basics, Adult/Infant/Child CPR, Preventing Disease Transmission, AED Essentials (2005)
- NY/PAAEL Certificate of Attendance – 5 hours – *Water Security* (2005)
- NY/PAAEL Certificate of Attendance – 3 hours – *EPA Quality Update* (2005)
- Advanced Systems, Inc. – *Preventing Improper Laboratory Practice* (2005)
- NY/PAAEL – 3 hours – *MUR Updates Microbiology* (2006)
- American Red Cross – CPR/AED Adult (2006)
- ALSI *SOP Validation Training* Participation (2006)
- NJWEA Recognition of Participation at the May 2007 NJWEA Annual Conference (2007)
- CareerTrack – *Managing Emotions Under Pressure* – 0.6 CEUs (2007)
- The NELAC Institute – *Data Review and Validation* (2007)
- Advanced Systems Inc. – Root Cause Analysis (2007)
- Engle-Hambright & Davies, Inc. – PA Labor & Industry Annual Safety Committee Training (2008)
- PA Rural Water Association – General Update to Ch. 109 Water Supplier Training PADEP #5062 (Sep. 2010)
- NY/PAAEL – The New TNI Lab Accreditation Standards (Jul 2010)
- NY/PAAEL – Monday Session II – Data Validation Inside the Black Box (Jul 2010)
- ALS Ethics and Data Integrity Training (2011)
- ALS Hazcom Training (2011)

PUBLICATIONS

Helen MacMinn and B. Chris Weathington, "Double Blind/Single Blind Performance Evaluation Samples and Their Treatment,"—presented at the American Chemical Society/Quality Assurance Symposium, 1990.

EDUCATION

B.S. Biology 1999, Clarion University of Pennsylvania, Clarion, PA

POSITION OVERVIEW

Mr. Hall was appointed as the GC Group Leader where he is responsible for providing technical and operational support to the GC section. Mr. Hall is responsible for the training and supervision of the GC chemists/technicians to maximize productivity and ensure appropriate testing procedures are used in compliance with testing methods and SOP requirements. The GC Section currently performs the analytical determination of organo-phosphorus pesticides, PCBs, herbicides, carbamates, and diesel range organics. His responsibilities include validation, interpretation and implementation of methods used in the analysis of various matrices; i.e., solids, soil, surface water, groundwater, and wastewater. Methods performed in the GC section are drinking water methods in support of the SDWA such as 504, 505, 507, 508A, 515, 547, 549 using the GC/ECD, GC/FID, GC/NPD. These methods are run according to the guidelines referenced in *Methods for the Determination of Organic Compounds in Drinking Water*; SW-846 methods 8015, 8081, 8082, 8141, 8151; and 40 CFR methods 600, 601, 602, 606, and 608. Mr. Hall was key to researching and developing the procedures to perform SW-846 Method 8330 on waters and soils to support DOD requirements on specific sites. Mr. Hall also recently researched and developed the new NJ EPH method required by the NJDEP for specific remediation sites in NJ.

Specific duties in relation to the operations of the GC lab include instrument maintenance, data validation, and maintaining sample throughput. He schedules samples for analysis, oversees data accuracy, and is responsible for the departmental approval of results. Mr. Hall coordinates the GC analytical schedules with the Prep Supervisor regarding the required sample preparations previous to analysis in meeting stipulated turnaround times. Mr. Hall will coordinate with Project Managers to effectively communicate, plan, and prioritize workload to meet client requirements and deadlines. He will also communicate department issues and provide status reports to the Laboratory Operations Manager.

PROFESSIONAL EXPERIENCE

Analytical Laboratory Services, Inc., Middletown, PA

GC Chemist (2002 – 2005)

Mr. Hall was responsible for analytical testing on various matrices using the various GCs. Mr. Hall completed Demonstration of Capability (DOCs) on various methods and matrices including: SW-846 8082 PCBs; Organic Acids by GC; EPA 608 Pesticides; EPA 547 Glyphosate Prep; EPA 600 PCBs in Oil; SW-846 8015 DRO; EPA 552 Haloacetic Acids Prep; EPA 505 Pesticides; SW-846 8081 Pesticides; EPA 507 Pesticides; EPA 525 SVOCs Prep; EPA 504 EDB DBCP; SW-846 8141 Pesticides; EPA 622; EPA 508A Pesticides; SW-846 8330 Explosives Extraction; EPA 515.3 Herbicides; EPA 549 Endothall; and EPA 552.2 HAAs. He was responsible for the scheduling, analysis and completion of all samples received for these instruments and prep extractions. He interpreted test results and entered test results into the Laboratory Information Management System (LIMS) database for approval.

Sample Prep Technician (2000 – 2002)

Mr. Hall began his career at ALSI working in the Sample Prep Group where he made sample preparations of solid samples, drinking waters and wastewaters through distillations, digestions, extractions and concentrations according to the established SOPs provided. In each batch preparation he used a variety of matrices for quality control, depending on the protocol of each individual project submitted to the laboratory. Mr. Hall was responsible for processing the sample prep and forwarding the samples to the specified laboratory for testing.

TRAINING

- ALSI Flammables and Explosives, Safety Training (2001)
- ALSI Methylene Chloride Informational Meeting (2001)



- ALSI Fire Extinguisher Training (2001)
- American Red Cross Adult CPR/Standard First Aid (2001)
- ALSI Respirator Fit Training (2001)
- ALSI Hazardous Communications Training (2001)
- ALSI Safe Handling and Storage of Compressed Gas (2002)
- ALSI Chemical Hygiene Plan (2002)
- American Red Cross Adult CPR Refresher (2002)
- ALSI Fire Extinguisher Training (2002)
- ALSI Horizon LIMS Training Certification (2003)
- ALSI NELAC "Standards and Traceability" and "Control of Records" Training (2004)
- Advanced Systems Inc. – Preventing Improper Laboratory Practice (2005)
- Advanced Systems Inc. – Root Cause Analysis Course 011 (2007)
- US Army ERDC-CRREL – Method 8330B and Multi-Increment Sampling Workshop (Aug 2007)
- Dionex – HPLC: Ultimate 3000/Summit Operation, M & T (2008)
- ALSI Ethics and Data Integrity Training Summary (2010)
- ALS Ethics and Data Integrity Training (2011)
- ALS Hazcom Training (2011)



Christopher P. Kahler

GC/MS Volatiles Supervisor

Rev. 08/2011

EDUCATION

Earned 90 Credits towards B.S., Chemistry, Lebanon Valley College, Lebanon, PA

POSITION OVERVIEW

Mr. Kahler has been a professional chemist for 13 years. In March 2007, Mr. Kahler was appointed GC/MS Group Leader for the GC/MS Volatiles Laboratory at ALSI. Mr. Kahler is responsible for the performance of environmental testing of water, soils, solids for volatiles organic compounds using Gas Chromatography/Mass Spectrometry instrumentation according to the criteria set forth in various EPA and SW-846 methods. In assuring high quality data, Mr. Kahler reviews all technical information originating from his department. He trains his analysts and maintains all documentation to assure proper training and competency. Mr. Kahler is responsible for maintaining the HP ChemServer Administrator for the GC, GC/MS and HPLC departments which includes full knowledge of the HP DOS ChemStation, HP ChemServer, and PC stations. In conjunction with his computer responsibilities, Mr. Kahler maintains and runs the ThruPut Envision Software which produces CLP forms which are required for data deliverables packages. As part of mass spectral interpretation, Mr. Kahler is responsible for data review of QC and samples. He performs compound identification which is done by comparing retention times and mass spectra for each analyte found in the samples to those found through the analysis of a known standard. Mr. Kahler reviews nonstandard analytes in the samples by utilizing the NBS library search capabilities in the Target3 Software.

As a chemist, Mr. Kahler is responsible for analyzing a variety of samples to determine volatile and semivolatile organic compounds using direct injection and purge/trap methods of GC/MS and analyzing solids, soil, surface water, groundwater, and wastewater using EPA methods such as 524, 525, 624, 625, and SW-846 methods such as 8260 and 8270. Mr. Kahler uses the HP ChemServer software to conduct GC/MS data validation and enter results into the Horizon LIMS. As part of the QA/QC practices in this department, Mr. Kahler maintains quality control reports and logbooks on a daily, monthly, and yearly basis. Mr. Kahler also took the lead in developing EPA Methods 527 and 529 for the upcoming EPA UCMR2 regulations for PWSs across the nation.

PROFESSIONAL EXPERIENCE

Analytical Laboratory Services, Inc., Middletown, PA

GC/MS Chemist (1998-2007)

Mr. Kahler became a GC/MS Chemist in 1998 where he was responsible for analytical testing of GC/MS volatiles and prompt turnaround time of client's samples. Mr. Kahler traced samples from the time the sample was entered into the LIMS to when it was analyzed, reviewed, and approved. In addition, Mr. Kahler was responsible for ordering and preparing the standards used by the GC/MS volatiles group; backing up data from the Chemserver to archive tapes for future reference; ran samples of various matrices such as liquid, soil, solids (low-level and medium (MeOH-preserved) using methods 8260B, 624, 524.2, and 5035. Use of software included Target Chemserver, Enviroquant; HP-RTE, Word, Excel, Write, WordPerfect. Mr. Kahler was also responsible for developing methods for 525.2 – Semivolatiles by GC/MS in drinking water and method 527 and 529 for the new UCMR2 List 1 contaminant regulations for PWSs.

Analytical Laboratory Services, Inc., Middletown, PA

GC Chemist (1996-1998)

Mr. Kahler became a GC Chemist in 1996 where he was responsible for running GC and HPLC instrumentation and tests. Some of the tests he was responsible for included 8021, 502.2, 601,602, GRO and HPLC 531.1.

Analytical Laboratory Services, Inc., Middletown, PA

Prep Technician (1994-1996)

Mr. Kahler began his career at ALSI as a prep technician performing organic and inorganic prep methods to support the GC/MS, GC, and Metals laboratories.



TRAINING

- ALSI Standards of Business Ethics and Conduct (2000)
- ALSI Hazard Communications Training (2001)
- ALSI Fire Extinguisher Training (2002)
- ALSI Safe Handling and Storage of Compressed Gas (2002)
- Red Cross Adult CPR Refresher (2002)
- ALSI Chemical Hygiene Plan (2002)
- PaAAEL, "Optimizing GC/MS Parameters" (2002)
- ALSI Horizon LIMS Training (2003)
- Advanced Systems Inc - Preventing Improper Laboratory Practice, (2005)
- Thermo Xcaliber Training (2005)
- Excelling as a First-Time Manager or Supervisor, (.5 CEUs), SkillPath Seminars (2007)
- ALSI Hazcom, Lab Standards, Ventilation, Flammable and Combustible Liquids, Eye Protection, PPE, Compressed Gases Training (2007)
- MDL Systems – One-Day GC/MS Volatiles Training Course (2007)
- Advanced Systems Inc. – Root Cause Analysis (2007)
- Entech Air Academy—Air Analysis Training (2008)
- ALSI Ethics and Data Integrity Training Summary (2010)
- ALS Ethics and Data Integrity Training (2011)
- ALS Hazcom Training (2011)

EDUCATION

B.S. Ed. Biology; Teaching Certificate for Chemistry/Biology, 1989
Shippensburg University of Pennsylvania
B.S. Chemistry, 1997
Shippensburg University of Pennsylvania

POSITION OVERVIEW

Mr. Lopez has 18 years of laboratory experience in the areas of water quality chemistry, GC and GC-MS organic chemistry. Alan currently serves as the Group Leader for Semivolatiles by Gas Chromatography/Mass Spectrometry and supervises three (3) chemists. Mr. Lopez reports to the Laboratory Operations Manager and also acts as the backup to the Laboratory Operations Manager. Mr. Lopez is responsible for instituting new analytical methods, maintaining current standard operating procedures (SOPs), instrument maintenance and calibration, training of chemists, preparation of standards, extractions, preparing samples for analysis, GC/MS data interpretation, validation and reporting of results into the Horizon LIMS.

Alan has full knowledge of the HP DOS ChemStation, HP ChemServer, and PC stations and maintains and runs the ThruPut Envision Software which produces CLP forms which are required for data deliverables packages. Alan serves as ALSI's Mass Spectral Interpretation Specialist where he is responsible for data review of QC and samples. He performs compound identification, which is done by comparing retention times and mass spectra for each analyte found in the samples to those found through the analysis of a known standard. Alan reviews nonstandard analytes in the samples by utilizing the NBS library search capabilities in the Target3 Software. As part of the QA/QC practices performed in this department, Mr. Lopez is responsible for maintaining quality control reports and logbooks on a daily, monthly, and yearly basis.

PROFESSIONAL EXPERIENCE

Analytical Laboratory Services, Inc., Middletown, PA

GC Group Leader (1997 – 2005)

Mr. Lopez was responsible for the training and supervision of the chemists/technicians that work in the GC Section, which included the analytical determination of volatile organics, pesticides, PCBs, herbicides, petroleum hydrocarbons, and various other semivolatile organic compounds by gas chromatographic and HPLC metals. His responsibilities included validation, interpretation and implementation of methods used in the analysis of various matrices; i.e., solids, soil, surface water, groundwater, and wastewater. Specific duties in relation to the operations of the GC lab included instrument maintenance, data validation, and maintaining sample throughput. He scheduled samples for analysis, oversees data accuracy, and is responsible for the departmental approval of results. Mr. Lopez coordinated the GC analytical schedules with the Prep Supervisor regarding the required sample preparations previous to analysis in meeting stipulated turnaround times. Mr. Lopez was responsible for the implementation of numerous new methods, i.e. EPA 552 (Haloacetic Acids), SW-846 8141 (Organophosphate Compounds).

GC Chemist (1995 – 1997)

Prior to his current leadership position in the GC laboratory, Mr. Lopez performed as a Chemist in GC for approximately two (2) years. He was responsible for running the following tests: 502.2, 504.1, 505, 506, 507, 508, 515.1, 531.1, 8015 (DRO), 8021, 8061, 8081, 8082, 8151, 601/602, 606, and 608. During this time, Mr. Lopez learned specific method requirements, developing in-house standard operating procedures, and instrument maintenance.

Water Quality Chemist (1993 – 1995)

Before moving to the GC Section, Mr. Lopez was a Water Quality Technician using the Lachat to perform tests on water, wastewater, and liquids; such as phenols, cyanide, nitrate-nitrogen, and phosphate. He also performed titrations and performed ISE methods.

*Aqua Treatment Services, Mechanicsburg, PA**Lab Technician (1991 – 1993)*

Before coming to Analytical Laboratory Services, Inc. (ALSI), Mr. Lopez acted as Lab Technician for a water quality lab performing tests such as microbiology, nitrates, fluorides, titrations, and ISE methods. He also gained experience in the field of science using his teaching certificate to teach high school students biology and chemistry courses for approximately two (2) years.

TRAINING

- Envision Training, Thru-Put Systems, Inc. (1995)
- ALSI Emergency Response Training (1996)
- ALSI Accident Procedure Training (1996)
- ALSI Hazardous Communications Training (1997, 2001)
- ALSI Hazardous Waste Disposal Training (1997)
- ALSI Personal Protective Equipment Training (1997)
- ALSI Chemical Hygiene Program (1997)
- ALSI Flammables and Explosives, Safety Training (2001)
- ALSI Fire Extinguisher Training (2001)
- ALSI Hazardous Communications Training (2001)
- ALSI Fire Extinguisher Training (2002)
- ALSI Horizon LIMS Training Certification (2003)
- ALSI Ethics Protocol (2009)
- ALSI Safety Training (2009)
- ALSI Ethics and Data Integrity Training (2010)
- ALS Ethics and Data Integrity Training (2011)
- ALS Hazcom Training (2011)

EDUCATION

B.S. Chemistry 1993, University of Pittsburgh, Pittsburgh, PA
B.S. Business Communications 1988, Clarion University, Clarion, PA
A.S. High Tech Communications 1986, Community College of Beaver County, Monaca, PA

POSITION OVERVIEW

Ms. Miller joined ALS in 2007 as the Group Leader for the Metals laboratory and brings 11 years of environmental experience with 8 years of supervisory experience. Ms. Miller is supervisor for metal analyses performed utilizing inductively coupled plasma (ICP), inductively coupled plasma/mass spectroscopy (ICP-MS), and cold vapor technique on various environmental matrices including soil, solid waste, water, drinking water, air, etc. Instrumentation used in the metals laboratory include the Spectro-D Inductively Coupled Plasma (ICP); TJA IRIS with 300-place Autosampler ; Varian VGA-76 Mercury Analyzer; PS 200 Leeman Labs Automated Mercury Analyzer; and the Perkin Elmer ELAN 6000 ICP-MS.

Ms. Miller determines the daily activities and analyses to be performed in the metals department in meeting turnaround times related to analytical results and data package requirements. Ms. Miller reviews all technical information generated by the department and updates standard operating procedures (SOPs) as well as ensures that analysts perform analyses according to the proper quality control requirements including documentation of blanks, spikes, and duplicate analyses to ensure precision and accuracy. Ms. Miller is responsible for orientation and training of new employees on new methods, instrumentation training, cross training, and assures running Method Detection Limit (MDL) Studies on an annual basis.

Ms. Miller was responsible for learning how to use the Perkin Elmer 6000 ICP-MS, generate the standard operating procedures, and produce analytical results using methods 6020/200.8. Ms. Miller is also responsible for analyzing proficiency samples for water supply, wastewater studies, state certifications, and accreditation programs. Ms. Miller was also responsible for researching and developing the low-level methods for Mercury using SW-846 1631 and EPA 245.7 which are requirements of NPDES WW permits.

PROFESSIONAL EXPERIENCE

Phase Separation Science, Inc., Baltimore, MD
Senior Metals Coordinator (1998-2007)

As Senior Metals Coordinator, Ms. Miller's responsibilities included operating, troubleshooting and maintaining two ICP-MS instruments simultaneously. She worked in a very fast paced environment where the standard turnaround time was five business days and much of the work involved rush and emergency turnaround times. In addition to operating the instruments, Ms. Miller was responsible for ensuring adherence to appropriate methods and for ensuring all quality control requirements are met. Ms. Miller managed all audits for the metals department and prepared the department for the NELAP certification. Other duties included writing SOPs, department ordering/inventory, and budgeting.

Safety Manager (1998-2007)

Ms. Miller was also the Safety Manager which included establishing and implementing training protocol for PSS's laboratory safety requirements. Monthly meetings were held to reinforce safety standards and to address any employee concerns.

Prism Laboratories, Inc., Charlotte, NC
Metals Analyst (1995-1998)

As Metals Analyst, Ms. Miller was responsible for operating, troubleshooting and maintain several different instruments. She was responsible for adhering to appropriate methods and for writing SOPs for several methods and instruments.

TRAINING

- ALSI Hazard Communications Training (2007)
- ALSI Occupational Exposure to Hazardous Chemicals 29 CFR 1910.1450 (2007)
- Agilent Technologies – On-Site ICP-MS Training Course – 3 days (2007)
- ALSI Fire Extinguisher Training (2007)
- ALSI New Safety Orientation and Training (2007)
- ALSI CHP Orientation Training (2007)
- ALSI Chemical Hygiene Plan Training (2007)
- ALSI Horizon LIMS Training (2007)
- Advanced Systems Inc. – Root Cause Analysis (2007)
- ALSI Fire Extinguisher Training (2008)
- ALSI SOP Training (2009)
- ALSI Ethics Protocol (2009)
- ALSI Safety Training (2009)
- ALSI Ethics and Data Integrity Training (2010)
- ALS Ethics and Data Integrity Training (2011)
- ALS Hazcom Training (2011)

EDUCATION

B.S. Biology 1998, Lebanon Valley College, Annville, PA

POSITION OVERVIEW

Mr. Badman is appointed as Wet Chemistry Group Leader which operates on three (3) shifts, five (5) days a week. Mr. Badman has worked in the Wet Chemistry Department since 2003 and from 2000-2003 worked in the Sample Receiving Department as sample custodian and group leader. Mr. Badman maintains a general working knowledge of all test methods performed in the wet chemistry section which performs classical water quality analyses such as colorimetric, titrimetric and gravimetric analyses. He is responsible for processing samples and scheduling work through the department, resource leveling to meet production requirements, and managing the sample backlog towards a goal of 100% on-time delivery. He is responsible for departmental data review and interpretation and implementation of EPA analytical methods for analysis of soils, solid waste, drinking water and wastewater according to methodology requirements. Mr. Badman is responsible to ensure that his department is in compliance with the health, safety, and QA/QC programs. He is responsible for the development of new standard operating procedures (SOPs), revising current SOPs, and the maintenance and analysis of MDLs for all analytical procedures. Mr. Badman provides orientation and training of new employees on new methods, demonstration of capability (DOCs), instrumentation training, cross training, etc. Mr. Badman directly reports to the Laboratory Manager and Technical Manager for overall operations of the Wet Chemistry Department and works closely with the Prep Supervisor in scheduling analyses dependent upon the prep section in order to meet client-required turnaround times.

PROFESSIONAL EXPERIENCE

Analytical Laboratory Services, Inc., Middletown, PA
Wet Chemistry Chemist (2003 – 2005)

Mr. Badman was responsible for analytical testing on various matrices using the ion chromatograph. Methods performed include: EPA 300/9056 for anions, nitrate/nitrite, bromide, chloride, sulfate, fluoride; EPA 300.1 for bromate, chlorite, bromide; and EPA 314 for Perchlorate. He was responsible for the scheduling, analysis and completion of all samples received for this instrument. He interpreted test results and entered test results into the Laboratory Information Management System (LIMS) database for approval.

Sample Receiving Custodian (1999-2003)

As Sample Receiving Supervisor, Mr. Badman was responsible for learning and training his employees on the standard operating procedures associated with the Sample Receiving Department such as turbidity use in sample receiving, trip and field blank preparations, sample receipt/sample handling, chain-of-custody procedures, subcontracting procedures, and bottle preparation protocol, etc. Mr. Badman was responsible for verification all incoming samples with their chain-of-custody and bottle label, checks the pH of aqueous samples for proper preservation, and places samples in the proper storage areas. If there are discrepancies, Mr. Badman reported them directly to the Project Coordinator related to the client account. If there are no discrepancies, Mr. Badman entered all COC information into the Laboratory Information Management System (LIMS) with special care given to the tests that require a short holding time.

Mr. Badman also coordinated bottle preparation which included specific bottles with the proper preservation, sampling supplies, such as COC, coolers, ice requirements, trip and field blank preparation, for sampling projects. Mr. Badman maintained a chemical and supply log-in book where the sample custodians will log-in all chemicals and supplies received for the individual laboratory sections; maintained the samples disposal list; i.e., properly disposing of samples after analysis. Mr. Badman was also responsible for preparing samples for subcontracting to other laboratories designated by a proposal, client request, upon approval from a lab manager or project coordinator.

Jason W. Badman

Wet Chemistry Supervisor

Rev 08/2011

Lebanon Valley College Biology Department

Laboratory Assistant (1998)

Mr. Badman was responsible for aiding the professors in preparing classes with laboratory materials. Mr. Badman also aided the professor in laboratory teaching. Mr. Badman learned to use various instruments and equipment ranging from simple titration to devices such as a NMR. During his four (4) college years, Mr. Badman also worked as a Circulation and Interlibrary Loan Assistant where he would assist patrons in finding materials and information and performed the daily functions associated with the Interlibrary Loan Department.

TRAINING

- ALSI Flammables and Explosives Safety Training (2001)
- American Red Cross Adult CPR/Standard First Aid (2001)
- ALSI Hazard Communications Training (2001)
- ALSI Fire Extinguisher Training (2002)
- ALSI Horizon LIMS Training (2003)
- Advanced Systems Inc. – Preventing Improper Laboratory Practice (2005)
- ALSI SOP Validation Training (2006)
- PaAAEL – Wet Chemistry Hands-on Workshop – 5.5 hours (2006)
- Advanced Systems Inc. Root Cause Analysis (2007)
- ALSI Fire Extinguisher Training (2008)
- Alloway Lab Support Services – Basic Laboratory Calculations (2009)
- ALSI SOP Training (2009)
- ALSI Ethics Protocol (2009)
- ALSI Safety Training (2009)
- ALSI Ethics and Data Integrity Training (2010)
- ALS Ethics and Data Integrity Training (2011)
- ALS Hazcom Training (2011)

EDUCATION

B.S., Biology, 1988, Indiana University of Pennsylvania, Indiana, PA
M.B.A., 2002, Lebanon Valley College, Lebanon, PA

POSITION OVERVIEW

Mr. Wewer supervises the sample prep personnel covering three (3) shifts, six (6) days a week, to insure the timely and accurate completion of sample preparations. His duties include interpretation and bench level implementation of EPA analytical methods appropriate for the analysis of solid waste, drinking water, and wastewater. He provides input on the feasibility and the data deliverables schedule for various projects as proposed in statements of work and quality assurance plans. Mr. Wewer has a working knowledge of inorganic sample preparations which include digestions of liquids and solids by hot plate and microwave methods for the determination of metals content and organic sample preparations which include solids, wastewater, and drinking water by soxhlet, continuous liquid-liquid, sonic disruption, solid phase extraction, and separatory funnel techniques. Mr. Wewer increased sample throughput by modifying solvent concentrating and leachate filtering techniques. He is responsible for various other preps including distillations for phenol, cyanide, and ammonia; TPH analyses; and leachate analyses such as SPLP, TCLP, ASTM, and EP toxicity. Mr. Wewer has written many of the SOPs for the preps performed in his laboratories and is responsible for revising and updating them, as required. He invests his time in training of personnel in safety, prep procedures, prep methods, new method development, and documentation to insure the quality of work performed within the organic and inorganic prep laboratories. Mr. Wewer developed and implemented an interdepartmental cross-training program and assisted in developing a computer-generated QC blank system.

PROFESSIONAL EXPERIENCE

Analytical Laboratory Services, Inc., Middletown, PA**Lab Technician (1991 – 1995)**

Upon employment at ALSI, Mr. Wewer worked exclusively in the prep lab as a Technician learning both inorganic and organic extractions. After gaining a thorough knowledge of the procedures performed in this section, he was promoted to Sample Prep Supervisor. Mr. Wewer maintains a rigorous schedule because many of the analytical methods performed throughout the laboratory are dependent upon the prep procedures performed in the Prep Section. Many of the procedures demand a timely turnaround for the projects accomplished.

Other Experience

Prior to ALSI, Mr. Wewer served as a Biological Manufacturing Technician performing various techniques involved in the isolation and purification of influenza virus, formulation of vaccine by filtration, dialysis, liquid chromatography, and resin exchanges. He also served as a Wildlife Technician monitoring small mammal and bird species for mortality and blood concentration of diazinon, a known and used pesticide.

TRAINING

- Biometry, Shippensburg University, (1992)
- Solid Phase Extraction Seminar (1993)
- ERTCO, Calibration and Verification of Temperature Indicating Instruments (1995)
- AOAC International, Supercritical Fluid Extraction Workshop (1995)
- SkillPath Seminars, Coaching and Teambuilding Skills for Managers and Supervisors (1995)
- ALSI Accident Procedure Training (1996)
- ALSI Chemical Hygiene Program (1997)
- ALSI Hazardous Waste Disposal Training (1997)
- ALSI Hazardous Communications Training (1997)

- Management Problems of the Technical Person in a Leadership Role (1998)
- ALSI Hazard Communications Training (2001)
- ALSI Flammables and Explosives Training (2001)
- ALSI Fire Extinguisher Training (2001, 2002)
- ALSI Methylene Chloride Informational Meeting (2001)
- ALSI Qualitative Respirator Fit Test (2002)
- ALSI Safe Handling and Storage of Compressed Gases (2002)
- American Society for Quality (ASQ), Certified Quality Manager (2003)
- ASQ, QCE 116, Certified Quality Manager Refresher (2003)
- Horizon LIMS Training (2003)
- Advanced Systems Inc. – Preventing Improper Laboratory Practice (2005)
- ALSI SOP Validation Training (2006)
- Advanced Systems Inc. – Root Cause Analysis (2007)
- ALSI ES Response to Audit Deficiency Training (2008)
- ALSI SOP Training (2009)
- ALSI Ethics Protocol (2009)
- ALSI Safety Training (2009)
- ALSI Ethics and Data Integrity Training (2010)
- ALS Ethics and Data Integrity Training (2011)
- ALS Hazcom Training (2011)