

# **Proposal**

Response to:

Request for Proposal (RFP) No. DEP15729 General Analysis of Water and Soil

Prepared For:

# State of West Virginia

Attention: Mr. Guy Nisbet 2019 Washington Street, East Charleston, West Virginia 25305

Prepared By:

TestAmerica Laboratories, Inc.

301 Alpha Drive, RIDC Park Pittsburgh, PA 15238

TestAmerica Proposal No. 99900082

Point of Contact: Ryan Hall

Phone: 412-963-7058

Date: 1/31/2012

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State of West Virginia Department of Administration Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25306-0130

# Request for Quotation DEP15729

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GUY NISBET 304-558-8802

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ENVIRONMENTAL PROTECTION, DEPARTMENT OF DIV OF WATER AND WASTE MGT 601 57TH STREET SE CHARLESTON, WV 304-926-0499 25304

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GENERAL ANALYSIS OF WATER AND SOIL FIELD TESTING	
	D SOIL FIELD TESTING
THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING QUOTATIONS FROM QUALIFIED VENDORS TO PROVIDE THE AGENCY WITH GENERAL ANALYSIS OF WATER AND SOIL PER THE FOLLOWING SPECIFICATIONS, SCOPE OF WORK, TERMS & CONDITIONS, BID REQUIREMENTS, AND THE ATTACHED BID SCHEDULE.	OF ENVIRONMENTAL PROTECTIONS FROM QUALIFIED VENDORS ENERAL ANALYSIS OF WATER PECIFICATIONS, SCOPE
WRITTEN QUESTIONS SHALL BE ACCEPTED THROUGH THE CLOSE OF BUSINESS ON TUESDAY, 01/17/2012. QUESTIONS MAY BE SENT VIA: USPS, FAX, COURIER OR EMAIL. IN ORDER TO ASSURE NO VENDOR RECEIVES AN UNFAIR ADVANTAGE, NO SUBSTANTIVE QUESTIONS WILL BE ANSWERED DRALLY. 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 Q&A DEADLINE HAS LAPSED.	7/2012. QUESTIONS MAY BE R OR EMAIL. IN ORDER TO N UNFAIR ADVANTAGE, NO BE ANSWERED ORALLY. IF RE PREFERRED. ANY TECHNICAL ANSWERED BY FORMAL WRITTEN E PURCHASING DIVISION
ADDRESS INQUIRES TO:  GUY NISBET DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION 2019 WASHINGTON STREET, EAST CHARLESTON, WV. 25305 FAX: 304.558.4115 EMAIL: GUY.L.NISBETOWV.GOV	T
SIGNATURE Com 1-27-12	1-27-12
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DATE PRINTED TERMS OF SACE SHIP VIA 01/05/2012 BID OPENING DATE: BID OPENING TIME 01:30PM 01/31/2012 AMOUNT. UNIT PAIGE UÓP CUANTITY EXHIBIT 3 THIS CONTRACT BECOMES EFFECTIVE LIFE OF CONTRACT: UPON 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 THE "REASONABLE TIME" PERIOD SHALL 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 FURCHASING 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 SERVICES SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN. OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISTION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR SIGNATURE SEC REVERSE SIDE FOR TERMS AND CONDITIONS 1-27-12

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# Quotation

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ENVIRONMENTAL PROTECTION, DEPARTMENT OF DIV OF WATER AND WASTE MGT 601 57TH STREET SE CHARLESTON, WV 304-926-0499 25304

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DATE PRINTIO TERMS OF SALE SHIP.VIA F.O.B 01/05/2012 BID OPENING TIME BID OPENING DATE: 01/31/2012 QUANTITY UOP IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORESEEN CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANS-PORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK.) 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. 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. 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 AGREEMENTS OR MAINTENANCE AGREEMENTS, INCLUDING ANY ELECTRONIC MEDIUM SUCH AS CD-ROM. REV. 05/26/2009 EXHIBIT 10 REQUISITION NO.: DEP15729 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. SEE REVENSE SIDE FOR TERMS AND CONDITIONS A EW MS 1-22-12

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

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

# Request for Quotation DEP15729

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

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GUY NISBET

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ENVIRONMENTAL PROTECTION, DEPARTMENT OF DIV OF WATER AND WASTE MGT 601 57TH STREET SE CHARLESTON, WV 304-926-0499 25304

F O Bi 01/05/2012 BID OPENING DATE: 01:30PM BID OPENING TIME SAING 25 QUANTITY UOP, NOTICE A SIGNED BID MUST BE SUBMITTED TO: DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130 THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED: SEALED BID GN-23. BUYERI DEP15729 RFQ. NO. : 01/31/2012 BID OPENING DATE: BID OPENING TIME: 1:30 PM PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID: RYAN HAGE PRINT CLEARLY): CONTACT PERSON (PLEASE TELEPHONE 412.963.7058 SIGNATURE 1/27/2012 ADDRESS CHANGES TO BE NOTED ABOVE

L Manager 23-2919996 WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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GUY NISBET 304-558-8802

ENVIRONMENTAL PROTECTION, DEPARTMENT OF DIV OF WATER AND WASTE MGT

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601 57TH STREET SE CHARLESTON, WV 25304 304-926-0499 DATE PRINTED 01/05/2012 01:30PM OPENING TIME BID BID OPENING DATE: 01/31/2012 QUANTITY

ANY INDIVIDUAL SIGNING THIS BID IS CERTIFYING THAT: (1) HE OR SHE IS AUTHORIZED BY THE BIDDER TO EXECUTE THE BID OR ANY DOCUMENTS RELATED THERE TO ON BEHALF OF THE BIDDER, (2) THAT HE OR SHE IS AUTHORIZED TO BIND THE BIDDER IN A CONTRACTUAL RELATIONSHIP, AND (3) THAT THE BIDDER HAS PROPERLY REGISTERED WITH ANY STATE AGENCIES THAT MAY REQUIRE REGISTRATION. DEP15729 \*\*\*\*\* TOTAL: THIS IS THE END OF REQ \*\*\*\*\* verse side for terms and conditions 1/27/2012

TECEPHONE 412.963.7058 FEIN 23-2919996 General Manaer

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## Appendix A

# Constituents for Phase I Detection Monitoring GROUP A: Inorganic Constituents

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Turbidity (Total)	
Vanadium (Total)	
Zinc (Total)	

In addition to the above, the following parameters should be analyzed: Temperature, (BOD-5-day), flouride and calcium.

# GROUP B: Organic Constituents 1

GROUP B: Organic Constituents	
COMMON NAME <sup>2</sup>	CAS RN <sup>3</sup>
Acetone	67-64-1
Acrylonitrile	107-13-1
Benzene	71-43-2
Bromochloromethane	74-97-5
Bromodichloromethanc	75-27-4
Bromoform; Tribromomethane	75-25-2
Carbon disulfide	75-15-0
Carbon tetrachloride	56-23-5
Chlorobenzene	108-90-7
Chloroethane; Ethyl chloride	75-00-3
Chloroform; Trichloromethane	67-66-3
Dibromochloromethane; Chlorodibromomethane	124-48-1
1,2-Dibromo-3-chloropropane;DBCP	96-12-8
1,2,-Dibromoethane; Ethylene dibromide; EDB	106-93-4
o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1
p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7
trans-1,4-Dichloro-2-butene	110-57-6
1,1-Dichloroethane; Ethylidene chloride	75-34-3
	107-06-2
1,1-Dichloroethylene; 1,1-Dichloroethene;Vinyl	ic 75-35-4
	156-59-2
	t 156-60-5
	78-87-5
	10061-01-3
	10061-02-0
# (#)	100-41-4
\$50 mm and an analysis and an an analysis and	591-78-6
Methyl bromide; Bromomethane	74-83-9
	74-87-3
1/07-201003-P0 TH-07-2014-0-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	74-95-3
	75-09-2
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	108-10-1
	100-42-5
3-50 P 110 - 15-0	630-20-6
(C. 60 (1.05))	
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trans-1,4-Dichloro-2-butene  1,1-Dichloroethane; Ethylidene chloride 1,2-Dichlorethylene; 1,1-Dichloroethene; Vinylicis-1,2-Dichloroethylene; cis-1,2-Dichloroethene trans-1,2-Dichloroethylene; trans-1,2-Dichloroet 1,2-Dichloropropane; Propylene dichloride cis-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone; Methyl butyl ketone Methyl bromide; Bromomethane Methyl chloride; Chloromethane Methylene bromide; Dibromomethane Methylene chloride; Dichloromethane Methyl ethyl ketone; MEK; 2-Butanone Methyl iodide; Iodomethane 4-Methyl-2-pentanone; Methyl isobutyl ketone Styrene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethylene; Perchloroethylene Toluene 1,1,1-Trichloroethane; Methyichloroform 1,1,2-Trichloroethane	75-34-3 107-06-2 ic 75-35-4 156-59-2 lt 156-60-5 78-87-5 10061-01-1 10061-02-1 100-41-4 591-78-6 74-87-3 74-95-3 75-09-2 78-93-3 74-88-4 108-10-1 100-42-5

Trich1oroethylene; Trichloroethene	79-01-6
Trichlorofluoromethane; CFC-ll	75-69-4
1,2,3-Trich1oropropane	96-18-4
Vinyl acetate	108-05-4
Vinyl chloride	75-01-4
Xylenes	1330-20-7

- 1. This list contains volatile organics for which possible analytical procedures provided in EPA Report SW-846 "Test Methods for Evaluating Solid Waste", third edition, November 1986, as revised December 1987, includes Method 8260 and 8011; and metals for which SW-846 provides either Method 6010 or a method from the 7000 series of methods.
- 2. Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.
- 3. Chemical Abstracts Service registry number. Where "Total" is entered, all species in the groundwater that contain this element are included.

# 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.

33	2.	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,  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,  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 headquariers 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.
	require agains	understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the ments for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency toted from any unpaid balance on the contract or purchase order.
	authori the rec deemo	mission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and ses the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid ulred business taxes, provided that such information does not contain the amounts of taxes paid nor any other information d by the Tax Commissioner to be confidential.
	and a	penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true curate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate es during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.
	Bidde	Signed:
		Title:
	*Check	any combination of preference consideration(s) indicated above, which you are entitled to receive.

## ANALYSIS OF WATER AND SOIL DEP15729 Vendor's Bid Sheet

Vendor's Name: <u>TestAmerica Laboratories</u>

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

ITEM NO.	EST. QUANTITY	DESCRIPTION	Method #	Method Detection Level*		IT PRICE		AMOUNT
Till (	Resemble	ATTENDED TO SET TO SOME WHAT	64 加斯斯克斯斯特	<b>特别的特别的</b>	影響時期	被独特的特殊	湖滨	医对解神经
1	4000	рН	9040B	N/A	\$	8.4	\$	33,600
IA	10	pH (Solid)	9045C		\$	8.4	\$	84
2	4000	Hot Acidity	SM 2310B	5 mg/L	\$	11.2	S	44,800
2A	1000	Hot Acidity, Alt Method		*	S		\$	0
3	4000	Alkalinity	SM 2320B	5 mg/L	\$	11.2	\$	44,800
3A	1000	Alkalinity, Alt Method			\$		\$	0
4	500	Hardness	SM 2340C	1 mg/L	\$	14	\$	7,000
4A	100	Hardness, Alt Method			S		\$	0
4B	10	Hardness (Solid)			\$	14	\$	140
5	1000	Specific Conductance	SM 2510B	3 uS/cm <sup>2</sup>	\$	11.2	\$	11,200
5A	500	Specific Conductance, Alt Method			\$		\$	0
6	4000	Sulfate	300	5 mg/L	\$	10	\$	40,000
6A	1000	Sulfate, Alt Method			S		\$	0
6B	10	Sulfate (Solid)			S	13	\$	130
7	20 '	Sulfide	SM 4500 S2 F	1 mg/L	\$	16.8	\$	336
7A	10	Sulfide, Alt Method			\$		\$	0 .
8	20	Turbidity	180.1	OK if highly	\$	8.4	\$	168
8A	10	Turbidity, Alt Method			\$		\$	0
9	300	Bromide	300	0.1 mg/L	\$	15	\$	4,500
9A	10	Bromide, Alt Method		1 mg/L	\$		\$	0
)B	10	Bromide (Solid)	300		\$	15	\$	150
10	3000	Chloride	300	5 mg/L	\$	15	\$	45,000
10A	100	Chloride, Alt Method			\$		\$	0
10B	10	Choride (Solid)	300		\$		\$	150
11	25	Fluoride	300	0.2 mg/L	\$		\$	375
11A	10	Fluoride, Alt Method			\$		\$	0
11B	10	Fluoride (Solid)	300		\$	15	\$	150
12	4000	Fecal Coliform (MF)		4 cfu/100 mL	\$		\$	0
I2A	1000	Fecal Coliform (MF), Alt Method	•		\$	*****	\$	. 0
13	100	Fecal Coliform (MPN)		4 cfu/100 mL	\$		\$	0
3A	50	Fecal Coliform (MPN), Alt Method			\$		\$	0
14	20	Total Coliform			\$		\$	0
15	25	Total Solids	SM 2540B				\$	280
5A	10	Total Solids, Alt Method			\$		\$	0
5B	10	Total Solid (Solid)	SM 2540G				\$	112
6	3000	Dissolved Solids (TDS)	SM 2540C				\$	33,600
6A	1000	Dissolved Solids (TDS), lt. Method			S		S	0
7	4000	Suspended Solids (TSS)	SM 2540D	3 mg/L	\$	11.2	\$	44,800

ITEM NO.	EST. QUANTITY	DESCRIPTION	Method#	Method Detection Level*	UNIT PRICE		AMOUNT
家的問題	<b>在数据文件等。在</b>	<b>医类类的形式类似的类似的类似的形式的形式</b>	<b>建物性的的</b>	BEATS HEAD	子和海岸河南郊南	11/33	為或能夠與於
17A	1000	Suspended Solids (TSS), Alt Method	,		\$	\$	0
18	25	<ul> <li>Settleable Solids</li> </ul>	SM 2540F		\$ 11.2	\$	280
18A	10	Settleable Solids, Alt Method			\$.	\$	. 0
19.	25	Volatile Solids	160.4	1 mg/L	\$ 11.2	\$	. 280
19A	10	Volatile Solids, Alt Method			\$	S	0
19B	10	Volatile Solid (Solid)	SM 2540G		\$ 11.2	\$	112
20	25	Percent Solids		1% .	\$ 11.2	\$	280
20Å	10	Percent Solids, Alt Method	)×		\$	\$	0
20B	10	Percent Solids (Solid)			\$ 6	\$	60
21	400	Kjeldalıl Nitrogen	SM 4500 Norg C	0.1 mg/L	\$ 25	\$	10,000
21A	100	Kjeldahl Nitrogen, Alt Method			\$	\$	0
21B	10	Kjeldahl Nitrogen (Solid)	351.2		\$ 25	S	250
	10	Kjeldahl Nitrogen (Solid., Alt Method)			\$	\$	0
22	50	Ammonia Nitrogen	350.1	0.1 mg/L	\$ 14	S	700
22A	10	Ammonia Nitrogen, Alt Method			\$	\$	0
22B	10	Ammonia Nitrogen (Solid)	350.1		\$ 14	\$	140
	10	Ammonia Nitrogen (Solid), Alt Method			S	\$	0
	50	Organic Nitrogen	Nitrogen, Org		\$ 20	\$	1,000
	10	Organic Nitrogen, Alt Method			\$	\$	0
	50	Nitrate-Nitrogen	300		\$ 18	\$	900
	10	Nitrate-Nitrogen, Alt Method			\$ .	\$	0
	50	Nitrite-Nitrogen	353.2		\$ 14	S	700
	10	Nitrite-Nitrogen, Alt Method			S	\$	0
	10	Nitrite-Nitrogen (Solid)	353.2		\$ 14	\$	140
-	10	Nitrite-Nitrogen (Solid), Alt Method			\$	\$	0
	400	Nitrite-Nitrate	353.2		S 14	S	5,600
	100	Nitrite-Nitrate, Alt.Method			S	\$	0
	10	Nitrite-Nitrate (Solid)	Nitrate by calc		\$ 14	\$	140
	10	Nitrite-Nitrate (Solid), Alt.Method			S	\$	0
	400	Total Phosphorus	365.1		\$ 22	\$	8,800
	100	Total Phosphorus, Alt Method			s	\$	0
	10	Total Phosphorus (solid)	365.1		\$ 22.4	\$	224
	10	Total Phosphorus (solid), Alt Method	00011			\$	0
	50	Orthophosphate	300			\$	700
	10	Orthophosphate , Alt Method				\$	0
	50	Total Phosphate				\$	1,100
	10	Total Phosphate Alt Method	*			\$	0
	10	Total Phosphate (Solid)				\$	224
	10	Total Phosphate (solid), Alt Method				\$	0
	25	BOD	SM 5210B			\$	550
	10	BOD Alt Method				S	0
	25	BOD - carbonaceous		2 mg/L		s	550
	10	BOD - carbonaceous Alt Method		5		\$	0
	25	COD	410.4	0.5 mg/L 5		\$	350
	10	COD Alt Method		olo mg 2		\$	0
	25	TOC	5310C	1 mg/L		\$	800
	10	TOC Alt Method		3	3	\$	0
	25	MBAS	SM 5540C	0.05 mg/L 5		\$	1,125
	10	MBAS Alt Method	03.3 00 100	0.03 Mg/L		\$	0
	25	Phenolics	420.1	0.01 mg/L		\$	490
	10	Phenolics Alt Method	TAUL	O.OT MIGIE		\$	0
	10	Phenolics (Solid)	9065	5		\$	196
	25	Total Cyanide	9012A	0.005 mg/L \$	22,4	\$	560
U 12		Total Cyanide Alt Method	70120	0.003 HgL 3		\$	0

ITEM NO.	EST. QUANTITY	DESCRIPTION	Method #	Method Detection Level*	UNIT PRICE		AMOUNT
孫傳第	SIGNATION IN	型於非常學術的學術學學的學學學	<b>力为的</b> 的 等是	是對於其某個人的	是其中的地震到	置的	得知為當時限
36B	10	Total Cyanide (Solid)	9012A		\$ 22	\$	220
37	200	Hexavalent Chromium	7196A	0.005 mg/L	\$ 22	\$	4,400
37A	10	Hexavalent Chromium Alt Method			\$	\$	0
37B	10	Hexavalent Chromium (Solid)	7196A		\$ 22	\$	220
38	25	Oil-Grease	9070A	2 mg/L	\$ 40	\$	1,000
38A	10	Oil-Grease Alt Method			\$	\$	0
38B	10	Oil-Grease (Solid)	1664A		\$ 55	\$	550
39	100	Chlorophyll A		0.5 μg/L	\$	S	0
39A	20	Chlorophyll A Alt Method			\$	\$	0
40	25	Color (APHA)	SM 2120B	5 color units	\$ 12	\$	300
40A	10	Color (APHA) Alt Method			\$	\$	0
41	25	Color (ADMI)		10 ADMI value	\$	\$	0
41A	10	Color Alt.Method			\$	\$	0
42	25	Cyanide, Amenable	9012A	0.005 mg/L	\$	\$	0
42A	10	Cyanide, Amenable Alt Method	1677		\$ 100	\$	1,000
43	25	Cyanide, Free (ASTM)	9012A	0.005 mg/L	\$	\$	0
13A	10	Cyanide, Free Alt Method			\$	\$	0
14	25	Mineral Acidity		1 mg/L	\$	\$	0 .
14A	10	Mineral Acidity Alt Method			\$	S	0
15	25	Total Acidity	SM 2310B	1 mg/L	\$ 11.2	\$	280
15A	10	Total Acidity Alt Method			\$	\$	0
		al Petroleum Hydrocarbons GRO/DRO (8015) EA	CH	0.5 mg/L	S 45	\$	1,125
16A	10	etroleum Hydrocarbons GRO/DRO (8015) (Solid)	EACH		S	\$	0
	25	Fecal Streptococci		4 cfu/100mL	\$	\$	0
	10	Fecal Streptococci Alt Method			\$	\$	0
17B	10	Fecal Streptococci (Solid)			\$	S	0
	25	Escherichia Coli (Numerical Result)		1 cfu/100 mL	S	S	0
	10	Escherichia Coli (Numerical Result) Alt Method			S	\$	0
19	100	Enterococci		1 cfu/100 mL	S	\$	0
	20	Iron Bacteria	Subcontract		S 42	\$	840
	20	Sulfate Reducing Bacteria	Subcontract		\$ 53	\$	1,060
	25	Bicarbonate (Standard Methods)		1 mg/L	\$	\$	0
	10	Bicarbonate Alt Method			\$	S	0
	25	Ferrous Iron (Standard Methods)	SM 3500 FE D		\$ 28	S	700
	10	Ferrous Iron Alt Method			\$	\$	0
	25	Dissolved Organic Carbon	SM 5310C		\$ 30	\$	750
	10	Dissolved Organic Carbon Alt Method			\$	\$	0
	4000	Aluminum	6010		\$ 8	\$	32,000
	100	Aluminum Alt Method	6020		\$ 10	\$	1,000
	10	Aluminum (Solid)	6010			\$	80
	20	Antimony	6010			\$	160
	10	Antimony Alt Method	6020			\$	100
	10	Antimony (Solid)	6010			\$	80
	20	Arsenic	6010			\$	160
	10	Arsenic Alt Method	6020			\$	100
	10	Arseine (Solid)	6010			\$	80
	20	Barium	6010			\$	160
	10	Barium Alt Method	6020			\$	100
	10	Barium (Solid)	6010			\$	80
	20	Beryllium	6010			\$	160
		Beryllium Alt Method	6020			\$	100
VA I	10	Beryllium (Solid)	6010			\$	80

ITEM NO.	EST. QUANTITY	DESCRIPTION	Method #	Method Detection Level*		UNIT PRICE		AMOUNT
382		THE STREET SHOWS TO STREET SHOWS TO SHOW THE	的更得到较多级的	<b>第37节期分割为</b>	3/1/2	等於《為的PA)	察院	所是經過國軍所
60	20	Boron	6010	0.02 mg/L	\$	8	\$	160
60A	10	Boron Alt Method	6020		\$	10	\$	100
60B	10	Boron (Solid)	6010		\$	8.	\$	80
61	200	Cadmium	6010	0.00005 mg/L	S	8	\$	1,600
61A	20	Cadmium Alt Method	6020		\$	10	\$	200
61B	10	Cadmium (Solid)	6010		\$	8	\$	80
62	5500	Calcium	6010	0.02 mg/L	\$	8	\$	44,000
62A	20	Calcium Alt Method	6020		\$	10	\$	200
62B	10	Calcium (Solid)	6010		\$	8	\$	80
63	20	Chromium	6010	0.001 mg/L	\$	8	\$	160
63A	10	Chromium Alt Method	6020		\$	10	\$	100
63B	10	Chromium (Solid)	6010		S	8	\$	80
64	20	Cobalt	6010	0.001 mg/L	\$	8	S	160
64A	10	Cobalt Alt Method	6020		\$	10	\$	100
64B	10	Cobalt (Solid)	6010		\$	8	\$	80
65	200	Copper	6010	0.001 mg/L	S	8	\$	1,600
65A	20	Copper Alt Method	6020	•	\$	10	S	200
65B	10	Copper (Solid)	6010	20	\$	8	\$	80
66	3000	Iron	6010	0.01 mg/L	\$	8	\$	24,000
66A	100	Iron Alt Method	6020		\$	10	\$	1,000
66B	10	Iron (Solid)	6010		\$	8	\$	80
67	200	Lead	6010	0.00054 mg/L	\$	8	\$	1,600
67A	200	Lead Alt Method	6020		\$	10	S	2,000
67B	10	Lead (Solid)	6010		S	8	\$	80
68	20 .	Magnesium	6010	0.05 mg/L	\$	8	\$	160
68A	10	Magnesium Alt Method	6020		\$	10	\$	100
68B	10	Magnesium (Solid)	6010		\$	8	\$	80
69	3000	Manganese	6010	0.005 mg/L	\$	8	\$	24,000
59A	100	Manganese Alt Method	6020		\$	10	\$	1,000
69B	10	Manganese (Solid)	6010		S	8	\$	80
70	200	Mercury	7470	0.0001 mg/L	\$	22	\$	4,400
70A	200	Mercury Alt Method	1613E		\$	80	\$	16,000
70B	10	Mercury (Solid)	7471		\$	22	\$	220
71	20	Molybdenum	6010	0.005 mg/L	\$	8	S	160
71A	10	Molybdenum Alt Method	6020		\$	10	\$	100
71B	10	Molybdenum (Solid)	6010		S	8	\$	80
72	200	Nickel	6010	0.005 mg/L	\$	8	\$	1,600
	20	Nickel Alt Method	6020		\$	10	\$	200
72B	10	Nickel (Solid)	6010		\$	8	\$	80
73	500	Potassium	6010	0.05 mg/L	\$	8	\$	4,000
73A	20	Potassium Alt Method	6020		\$	10	\$	200
73B	10	Potassium (Solid)	6010	1	\$	8	\$	80
74	500	Selenium	6010	0.001 mg/L	S	8	\$	4,000
74A	20	Selenium Alt Method	6020	•	\$	10	\$	200
74B	10	Selenium (Solid)	6010		\$	8	S	80
75	200	Silver	6010		\$	8	\$	1,600
75A	20	Silver Alt Method	6020		\$	10	\$	200
75B	10	Silver (Solid)	6010		S	8	\$	80
76	500	Sodium	6010		S	8	\$	4,000
76A	20	Sodium Alt Method	6020		\$	10	\$	200
76B	10	Sodium (Solid)	6010		\$		\$	80
7	200	Strontium	6010		\$		\$	1,600
77A	20	Strontium Alt Method	6020		\$		\$	200
78	20	Thallium	6010		\$		\$	160

ITEM NO.	EST. QUANTITY	DESCRIPTION	Method#	Method Detection Level*	UNIT PRICE		AMOUNT
温度的影响		RANGE STATE OF STATE	Macinalistics	<b>补约2000年的</b>	\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Blat	<b>对于</b>
78A	10	Thallium Alt Method	6020		\$ 10	\$	100
78B	10	Thallium (Solid)	6010		\$ 8	\$	80
79	20	Tin	6010	0.02 mg/L	\$ 8	\$	160
79A	10	Tin Alt Method	6020		\$ 10	S	100
79B	10	Tin (Solid)	6010		\$ 8	\$	80
80	20	Vanadium	6010	0.005 mg/L	\$ 8	S	160
80A	10	Vanadium Alt Method	6020	vious ing 2	\$ 10	S	100
80B	10	Vanadium (Solid)	6010		\$ 8	\$	80
81	200	Zinc	6010	0.002 mg/L	\$ 8	\$	1,600
	20	Zinc Alt Method	6020	0.002 111923	\$ 10	\$	200
81A		Zinc Alt Method Zinc (Solid)	6010		\$ 8	\$	80
81B	10		3005		\$ 10	\$	2,000
82	200	Metals Prep Cost			\$ 12	\$	120
82A	10	Metals Prep Cost (Solid)	3050		\$ 12	1.0	120
83	20	Gross Alpha	9310		\$ 60	\$	1,200
84	20	Gross Beta	9310		\$ 60	\$	1,200
85	20	Ra-226	9315		\$ 90	\$	1,800
	20	Ra-228	9320		\$ 90	\$	1,800
	20	Total Uranium	6010C		\$ 20	\$	400
	20	Sr-89	905		\$ 120	\$	2,400
	20	Sr-90	905		S 120	\$	2,400
	20	Tritium (H3)	906		\$ 80	S	1,600
	20	Gamma (Cs-137)	901.1		\$ 80	\$	1,600
	20	Radon	Subcontract		\$ 100	\$	2,000
92	20	Radon	Suocontract		3 100	1	2,000
		Toxicity Testing - Freshwater Organisms					
		Acute:			S	\$	0
93	25	Ceriodaphnia			\$	S	0
	10	Daphnia Pulex / D. magna			\$	S	0
	25	Pimephales promelas			\$	\$	0
	23	Chronic:			S	\$	0
96	25	Ceriodaphnia			S	S	0
	25	Pimephales promelas (Survival & Growth)			S	S	0
1	23	1 michiaics promotes (but vival co crowaly					<del>-</del>
98	200	Analysis of entire "Phase I Parameters" for landfills			\$ 325	\$	65,000
		See Appendix A for list.					
		4.40				,	
		Professional stan representation of data in					. 0
99	10	legal/administrative patting manhaum			\$ 120	3	1,200
Colle	ection of Samul	es - costs associated with sample pickup from the fi	ollowing locations			-	
Cont		stAmerica propses to issue prepaid FedEx slips (					
	NOIE Its	officies as a more economical alternative to cour	for nickun. The n	er cooler charge			
	various neiu	associated with this service is listed		- Cooler charge			
100	24 1	leston Office, 601 56th St SB, Charleston, WV 253		See Note	\$ 55	\$	1,320
100	on a property of the contract	reston Office, 601 30th St SB, Charleston, W V 23.	CHEMONICAL CONTROL	Several advances	NATE OF THE PARTY	IN JAY	WATER COLOR
		Teays Office, PO Box 662, Teays, WV 25596	HAMP CONTRACTOR TO THE CONTRACTOR	See Note	\$ 55	\$	1,320
	24	1 eays Omce, PO Box 602, 1 eays, W V 23390	453/2/9/2550015200/		ALCOHOLD STREET, STREE		1,520 化对抗抗抗药
		nt Office, 2031 Pleasant Valley Rd, Fairmont, WV	20004			\$	1,320
類常能				The same of the sa		C .	1 200
		mney Office, HC63, Box 2545, Romne, WV 2675	A CONTRACTOR OF THE PARTY OF TH			\$	1,320
the property of the said of	and and an and an	部門的學院學院的學院學院學院學院	(1)。(1) (1) (1) (1) (1)	4200年日初近海岸线的行动	2012年1月1日 (1974年)	<b>新国基础</b>	<b>的复数形式的特别</b>
		h Creek Office, PO Box 38, French Creek, WV 26	210	See Note	\$ 55	\$	1,320

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ITEM NO.	EST. QUANTITY	DESCRIPTION	Method #	Method Detection Level*	UNIT PRICE	AMOUNT
See Si	30.00 February		品级形式公司	<b>多数影響新聞的</b>	部。提供的	自身生物性国际运动
TO CHANGE	的地名美国南非		<b>AMENDALASIA</b>	經濟的難取得無	经外代系的代码的	他的深层类的
105	24	eling Office, 131A Peninsula St, Wheeling, WV 2	6003	See Note	\$ 55	\$ 1,320
京安美雄	和於科學的問題		"特拉特特特特"	的是更加的原理	<b>邓伯利等张地位</b> 第	是物則的特別為當時的
106	24	rsburg Office, 2311 Ohio Ave, Parkersburg, WV 2	26010	See Note	\$ 55	\$ 1,320
校認驗	经的国际的	的意思的音乐的音乐的影響。	华高级的特别	的機能性的數學	<b>新维加强的特殊</b>	
107	24	k Hill Office, 116 Industrial Dr, Oak Hill, WV 259	001	See Note	\$ 55	\$ 1,320
ALC:	<b>计程序的图1</b>	<b>生元为1200元年了300条公司在16年日</b> 年16日1日	信加其中集計	的。例如此是	的原格工物系统的	結構的計學的
108	24	an Office, 1101 George Kostas Dr, Logan, WV 25	601	See Note	\$ 55	\$ 1,320
特別電	學說經過的說	NAC 2019年1月2日 - 1919年1月1日 - 1919年1日 - 19	销售的现在分词	是此時期的代表	李多斯 机光光学	1862年1971年186日
109	24	nilippi Office, 105 S Railroad St, Phillip, WV 2641	6	See Note	\$ 55	\$ 1,320
3.50	物性种类的情况	公司和1950年的共和1950年的共和1950年的共和1950年的共和1950年的	<b>医</b> 对象的	相解的特殊等		4 (1993) (1886) (2013) (1894) (1894)
110	24	Welch Office, 311 Court St, Welch, WV 24801		See Note	\$ 55	\$ 1,320
No.	<b>经对价值的</b>		<b>对的"就是是是对是</b>	<b>经</b> 证据基础。	MARIE RESERVACIO	1882年6月1日
111	5000	Other locations as Cost Per Mile to pickup site		See Note	\$ 55	\$ 275,000
形態間	差制能及的影響	的。这一个时间的时间,他们也是一个时间的一个一个时间,他们也是一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个	19,000,937,935,935	A STATE OF THE STATE OF T	的。46年中代李泽	<b>设置的特殊的。在中的特别</b>
112	10	24 Hour Turnaround Rush Orders**		**************************************	The transfer of the second of	100%
的原理	<b>研究的复数的</b>	发展的 建立物学别性 计自动数据系统 的复数形式	JANA PARTICIPATION	<b>。</b> 提及各种的首先的	<b>指作的数据数据</b>	的。但是一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个
113	10	48 Hour Turnaround Rush Orders**		. 12041-221-1404-21-2-344-3	Carrier and Charles Control	75%
国的影響	<b>阿斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯</b>	(特)的	<b>非常的国际的教育</b>	的意思的表现的	SPORT OF EACH	<b>美国家委员会员</b>
114	10	72 Hour Turnaround Rush Orders**			ra samula resalkada da aktor	60%
的工作。	<b>对别是 建</b> 拉	地方的大学是特别的特别和伊尔特等的公司	ne sacista		E4444780000004141	er in the second second
公司加速	的原理學學		MARKET AND ELL	<b>在建筑是</b> 对于1000年		<b>自然被控制或数据</b>
等情報	認為所有政治院	TOTAL	*		STATE OF THE STATE	\$ 914,251

All unit pricing Alt Methoduoted should be based on standard (not to exceed two weeks) turnaround time.

<sup>\*</sup> For Alternate test methods (and methods for which no MDL is listed), list your current method detection limits for each method

<sup>\*\*</sup> During emergency situations, samples may be requested on a quicker turnaround basis. Enter percent increase over standard turnaround time.

acidalizated according	Mother Description	Method Code			
Water	На надрежения	9040B			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Н	STL00204	0.1		
Water	Acidity	SM2310B			
	Analyte Description	CAS Number	RL-Limit	MDL - Limit	Units
	Acidity	STL00003	S	2	mg/L
Water	Alkalinity	2320B	П		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Alkalinity	STL00171	2	0.4111	mg/L
	Bicarbonate Alkalinity as CaCO3	STL00138	Ω.	0.4111	mg/L
	Carbonate Alkalinity as CaCO3	STL00154	2	0.4111	mg/L
Water	Hardness, Total	2340C	П		
	Analyte Description	CAS Number	RI - I imit	MDI - Limit	Units
	Hardness as calcium carbonate	STL00009	5	1.5336	mg/L
Water	Conductivity, Specific Conductance	2510B	П		
	Analyte Description	CAS Number	RL-Limit	MDL - Limit	Units
	Specific Conductance	STL00244	-		
Water	Anions, Ion Chromatography	300.0_28D			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Sulfate	14808-79-8	<b>t</b>	0.2141	mg/L
Water	Sulfide, Total	SM4500_S2_F			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Suffde	18496-25-8	<u>e</u>	1.227	mg/L
Water	Turbidity, Nephelometric	180.1	П		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Turbidity	STL00189	0.85	0.0504	NTU

Water	Anions, Ion Chromatography	300.0			
			]		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Bromide	24959-67-9	0.2	0.1908	mg/L
Water	Anions, Ion Chromatography	300.0 28D			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Chloride	16837-00-6	<del></del>	0.1952	mg/L
Water	Anions, Ion Chromatography	300.0_28D			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Fluoride	16984-48-8	0.05	0.0139	mg/L
Water	Solids, Total	SM2540B	П		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Total Solids	STL00291	10	10	mg/L
	Residue, Total	STL00283	10	10	mg/L
Water	Solids, Total Dissolved (TDS)	2540C_Calcd	П		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Total Dissolved Solids	STL00242	10	10	mg/L
Water	Solids, Total Suspended (TSS)	2540D			
	Analysis December	CAS Number	imi - Ia	MDI - I jmit	Units
	Total Suspended Solids	STL00161	4	2	mg/L
Water	Solids, Settleable	SM2540F	П		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Settleable Solids	STL00013	0.5		
Water	Solids, Total Volatile (TVS)	160.4			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Total Volatile Solids	STL00236	10	10	mg/L
Water	Nitrogen-Total Kjeldahl	SM4500Norg_C			

	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Nitrogen, Kjeldahl	STL00296	n	2.5	mg/L
		- Designation of the Control of the	ı		
Water	Preparation, Nitrogen -Total Kjeldahl	SM4500Norg_C_P			
Water	Nitrogen, Ammonia	350.1			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Ammonia, undistilled	7664-41-7	0.1	0.041	mg/L
	Ammonia, distilled	7664-41-7	0.1	0.0328	mg/L
			1		
Water	Distillation, Ammonia	Distill_Ammonia			
Water	Nitrogen, Organic	Nitrogen, Org			
			1		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Nitrogen, Kjeldahl	STL00296	က		
	Nitrogen	7727-37-9	8		
	Ammonia	7664-41-7	8		
	Nitrogen, Organic	STL00111	8		
Water	Anions, Ion Chromatography	300			
	Analyte Decorption	CASNimber	RI - I imit	MDL - Limit	Units
	Nitrate as N	14797-55-8	0.05	0.0425	mg/L
Water	Nitrogen, Nitrite	353.2_Nitrite			
	Analyta Description	CAS Number	RL-Limit	MDL - Limit	Units
	Nitrite as N	14797-65-0	0.1	0.0116	mg/L
Water	Nitrogen, Nitrate-Nitrite	353.2_Pres			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Nitrate Nitrite as N	STL00217	0.1	0.014	mg/L
		-	Г		
Water	Phosphorus, Total	365.1	7		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Total Phosphorus as PO4	STL00988	0.1	0.033	mg/L
Water	Phosphorus, Total	365_Prep	Г		
Market	BOD 5-Day	5210B	1		
Water	500, 500		7		

			١		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Carbonaceous Biochemical Oxygen Demand	STL00260		0.3313	mg/L
	Biochemical Oxygen Demand	STL00311	2	0.7922	mg/L
Water	cop	410.4			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Chemical Oxygen Demand	STL00070	10	3.9451	mg/L
NA PARTIE	GOS	410.4 Pren	_		
Water	gos	45.1-1-10.1	_		
Water	T0C	5310C			
Water	Methylene Blue Active Substances (MBAS)	5540C			
					100
	Analyte Description	CAS Number	RL-Limit	MDL - Limit	Units
	Methylene Blue Active Substances	STL00077	0.05	0.0129	mg/L
Water	Phenolics, Total Recoverable	420.1			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Phenolics, Total Recoverable	STL00166	0.01	0.0062	mg/L
Mador	Dietilation Dhanoline	Dietili Phana	_		
water	Usullation, Friendics	Desiring	_		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Prep Analyte	STL00048			
Water	Cyanide, Total and/or Amenable	9012A	_		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Cyanide, Total	57-12-5	10	1.5	ng/L
Wicker	Omide Tetal and/or Amenable Distillation	Ign12A Pren	_		
*vater	Opening transport and the second and		7		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Prep Analyte	STL00048			
		Misson	_		
Water	Chromium, Hexavalent	/196A			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Cr (VI)	18540-29-9	0.01	0.0017	mg/L
Water	HEM and SGT-HEM	9070A	_		
			7		

				2000	11-14-
	Analyte Description	CAS Number	RL-LIMIT	MDL - LIMIT	SILO
	HEM	STL00181	2	1.4986	mg/L
	SGT-HEM	STL00240	2	1.4704	mg/L
Water	HEM and SGT-HEM (SPE)	9070A_SPE			
Water	Color, Colorimetric	2120B			
			100	NO.	4101
	Analyte Description	CAS Number	1		OIIIO
	Color	STL00153	2	c.	2
		2234	Γ		
Water	Cyanide, Available (Flow Injection)	7.701	7		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Available cyanide	STL00015	0.002	0.0003	mg/L
	Discolation Committee Comm	Odd ashool	Γ		
Water	Diesel Kange Organics (DRO) (GO)	000000000000000000000000000000000000000	7		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	C10-C20	STL00115	200	238	ng/L
Water	Liquid-Liquid Extraction (Continuous)	3520C			
Water	Gasoline Range Organics - (GC)	8015B_GRO			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	C6-C10	8006-61-9	100	52	ng/L
	Trifluorotoluene (Surr)	8-80-86			ug/L
Water	Purge and Trap	5030B			
Water	Iron, Ferrous	3500_F+2_D_Calc			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Ferrous Iron	15438-31-0	0.05	0.018	mg/L
Water	Organic Carbon, Dissolved (DOC)	SM5310_DOC_C			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Dissolved Organic Carbon	7440-44-0	-	0.1401	mg/L
	Dissolved Organic Carbon - Duplicate	7440-44-0	-	0.1401	mg/L
	DOC Result 1	STL00345	-	0.1401	mg/L
	DOC Result 2	STL00346	-	0.1401	mg/L
	DOC Result 3	STL00347	-	0.1401	mg/L
	DOC Result 4	STL00348	-	0.1401	mg/L

	Dissolved Organic Carbon - Quad	7440-44-0	-	0.1401	mg/L
Water	ition	Filtration_AC			
Water	Metals (ICP)	6010B			
				MDi I imit	linite
	Analyte Description	CAS Number	אר - רווווו	MIDE - LITTLE	
	Silver	7440-22-4	2	0.58	ng/L
Messe	Decorporation Total Bosonscapile or Discolused Metals	30054			
water					
Water	Metals (ICP/MS)	6020			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Silver	7440-22-4		0.0362	ng/L
Water	I Recoverable or Dissolved Metals	3005A			
Water	Metals (ICP/MS)	6020			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Silver		-	0.0362	ug/L
	Aluminum	7429-90-5	30	2.5662	ug/L
	Arsenic	7440-38-2	1	0.2908	ng/L
		7440-42-8	5	0.2772	ng/L
	Barium	7440-39-3	10	860.0	ug/L
	Beryllium	7440-41-7		0.0367	ng/L
	Calcium	7440-70-2	100	2.8374	ug/L
	Cadmium	7440-43-9	-	0.1144	ug/L
	Cobalt	7440-48-4	0.5	0.0263	ug/L
	Chromium	7440-47-3	2	0.5433	ng/L
	Cesium	7440-46-2			ug/L
	Copper	7440-50-8	2	0.2443	ug/L
	Iron	7439-89-6	50	6.0901	ng/L
	Potassium	7440-09-7	100	5.823	ng/L
	Magnesium	7439-95-4	100	1.1665	ug/L
	Manganese	7439-96-5	c)	0.0389	ng/L
	Molybdenum	7439-98-7	2	0.2229	ng/L
	Sodium	7440-23-5	100	3.8135	ng/L
	Nickel	7440-02-0	-	0.1749	ng/L
	Lead	7439-92-1	-	0.0192	ng/L
	Antimony	7440-36-0	2	0.0187	ng/L
	Selenium	7782-49-2	5	0.4216	Ug/L

Silicon	7440-21-3	200	3.1648	ng/L
Tin	7440-31-5	5	1.5089	ng/L
Strontium	7440-24-6	5	0.0178	ng/L
Titanium	7440-32-6	2	603800	ng/L
Thallium	7440-28-0	-	0.0152	ng/L
Vanadium	7440-62-2	_	0.0824	ng/L
Yttrium - 89 (Internal Standard)	7440-65-5			ng/L
Zinc	7440-66-6	2	6096.0	ng/L
Li-6 Internal Standard	14258-72-1			ng/L
Sc (iS)	7440-20-2			ng/L
Rh (IS)	7440-16-6			ug/L
In Internal Standard	7440-74-6			ng/L
Ho (IS)	7440-60-0			ng/L
Tb (IS)	7440-27-9			ng/L
Bi Internal Standard	7440-69-9			ng/L
Be-9	STL00448			ng/L
Co-59	STL00444			ng/L
In-113	STL00442			ng/L
In-115	STL00443			ng/L
Mg-24	STL00446			ng/L
Mg-25	STL00447			ng/L
Mg-26	STL00445			ng/L
Pb-206	STL00439			ng/L
Pb-207	STL00440			ng/L
Pb-208	STL00441			ng/L
Cerium	7440-45-1			ng/L
SiO2, Silica	14808-60-7	1070	6.77	ng/L
Hardness as calcium carbonate	STL00009	29:0	0.0218	mg/L
Phosphorus	7723-14-0	200	73.7	ng/L
Uranium	7440-61-1			ng/L
Thorium	7440-29-1			ng/L
Calcium hardness as calcium carbonate	STL00317	0.25	0.0071	mg/L

The second of th				
Metals (ICP)	6010B			
		-		
Analyte Description	CAS Number	RL-Limit	MDL - Limit	Units
Alalyle Describuor				
Silver	7440-22-4	2	0.68	ng/L

Aliminim	1100 00 1		000	/ 2
	7423-80-5	200	2.00	2000
Arsenic	7440-38-2	10	2.74	ng/L
Boron	7440-42-8	200	1.31	ng/L
Barium	7440-39-3	200	0.62	ng/L
Beryllium	7440-41-7	4	0.23	ng/L
Calcium	7440-70-2	2000	9.68	ng/L
Calcium hardness as CaCO3	STL00317	12.5	0.0242	mg/L
Cadmium	7440-43-9	2	0.13	ng/L
Cobalt	7440-48-4	20	0.4	ng/L
Chromium	7440-47-3	2	0.57	ug/L
Copper	7440-50-8	25	2.71	ng/L
lron	7439-89-6	100	11.91	ng/L
Potassium	7440-09-7	2000	750	ug/L
Magnesium	7439-95-4	2000	20.71	ng/L
Manganese	7439-96-5	15	0.68	ng/L
Molybdenum	7439-98-7	40	1.38	ng/L
Sodium	7440-23-5	2000	215	ng/L
Nickel	7440-02-0	40	1.56	ng/L
Lead	7439-92-1	3	1.26	ng/L
Antimony	7440-36-0	10	1.34	ng/L
Selenium	7782-49-2	2	3.04	ng/L
SiO2, Silica	14808-60-7	1070	28.72	ng/L
Silicon	7440-21-3	200	13.42	ng/L
Tin	7440-31-5	100	2.03	ng/L
Strontium	7440-24-6	90	0.093	ng/L
Titanium	7440-32-6	50	1.94	ng/L
Thallium	7440-28-0	10	2.35	ng/L
Vanadium	7440-62-2	90	1.86	ng/L
Yttrium	7440-65-5			ng/L
Zinc	7440-66-6	20	2.46	ng/L
Lithium	7439-93-2	90	2.78	ng/L
Sc (IS)	7440-20-2			ng/L
<u>c</u>	7440-74-6			ng/L
Мднага	STL00318	21	0.0486	mg/L
Hardness as calcium carbonate	STL00009	33	0.1094	mg/L

ater	Preparation, Total Recoverable or Dissolved Metals	3005A
ater	Mercury (CVAA)	7470A

				**************************************	1 [4]
	Analyte Description	7420 07 6	RL-LIMIT	MDL - Umit	Sino.
	Mercury	0-10-0-1			ų,
Water	Preparation, Mercury	7470A_Prep			
Water	Gross Alpha / Beta (GFPC)	9310			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Gross Alpha	12587-46-1			
	Gross Beta	12587-47-2			
Water	Preparation, Coprecipitation	COPRECIP			
Water	Radium-226 (GFPC)	9315_Ra226			
			1		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Ra-226	13982-63-3			
Water	Preparation, Precipitate Separation (14-Day In-Growth)	PrecSep_14			
Water	Radium-228 (GFPC)	9320_Ra228			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Ra-228	15262-20-1			
			1		
Water	Preparation, Precipitate Separation	PrecSep_0			
Water	Metals (ICP)	6010C			
Water	Strontium-89 (GFPC)	905.0	_		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Sr-89	14158-27-1			
Water	Strontium-90 (GFPC)	905_Sr90			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Sr-90	10098-97-2			
Water	Preparation, Precipitate Separation (14-Day In-Growth)	PrecSep_14			
Water	Tritium, Total	0.906.0			
			100	imi I	Inite
	Analyte Description	10028-17-8	אר - רווווו		SIIIO
	ושמשו	0-71-087001			
Water	Distillation and Suspension (LSC)	LSC_Dist_Susp			
			7		

Analyte Description  Am-24.1  Go-80  Gs-137  Fill Geometry, No In-Growth General Sub Contract Method Aniens, Ion Chromatography  Mercury  Mercury  Mercury  Preparation, Low Level (CVAFS)  Mercury  General Sub Contract Method  General Sub Contract Method  PH  Aniens, Ion Chromatography  Aniens, Ion Chromatogra	Water.	Cesium 137 & Other Gamma Emitters (GS)	901.1 Cs	Γ		
Total Free   Fig. Limit   MOL - Limit   MO						
The control of the		Analyte Description		RL - Limit	MDL - Limit	Units
The control of the			14596-10-2			
Fill Governiery, No Hi-Structh		09-00	10198-40-0			
Fill Geometry, No Tru-Chowth   Fill Geo_ Jo Geometry, No Tru-Chowth   Fill Geo_ Jo Geometry, No Tru-Chowth   Analyse Description   14285-44-2   CAS Number   CA		Cs-137	10045-97-3			
High control Marian		1, 0 1 1/4 0 mm	C C = L			
General Sub Courses Method   SUBCONTRACT   Anialyte Description   14285-442   CAS Number   R.L. Link   M.D. Link	Water	Fill Geometry, No In-Growth	LIII_Geo_U	7		
Actions, for Chromatography   2000   2005   200772   10	Water	General Sub Contract Method	SUBCONTRACT			
Morcury Low Level (CVAFS)   1631E   MOL - Limit   MOL -	Water	Anions, Ion Chromatography	300			
Mercury, Low Level (CVAS)   1531E   Mercury		Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
Morcury, Low Level (CVAFS)   T631E   CAS Number   CAS N						mg/L
Metally   Motor   Mo	Water	Mercury, Low Level (CVAFS)	1631E			
Marcury   Analyte Description   Total Fund   Mober	water			7		
Mercuny         TA39-97-6         0.5         0.12         Inch           Proposation, Low Level, Mercuny         1631E, P. Heated         40.12         Inch         Inch <td< td=""><td></td><td>Analyte Description</td><td>CAS Number</td><td></td><td>ADL - Limit</td><td>1.00</td></td<>		Analyte Description	CAS Number		ADL - Limit	1.00
Preparation, Low Low Level, Mercury   1631E_P_Heated   SUBCONTRACT     Ceneral Sub Contract Method   SUBCONTRACT     Contract Method   STLO0204   CAS Number   RL_Limit   MDL_Limit     Aniens, Ion Chromatography   STLO0204   CAS Number   RL_Limit   MDL_Limit     Aniens, Ion Chromatography   STLO0204   ASTM_Leaching Procedure   ASTM_Leaching   ASTM_Leaching Procedure   AS			7439-97-6	0.5		ng/L
General Sub Contract Method   SUBCONTRACT   STLO0204   O.1   SUL-Limit   MDL-Limit   MDL-Lim	Water	Preparation, Low Level, Mercury	1631E_P_Heated	Γ		
Ceneral Sub Contract Method   SUBCONTRACT   SHACE	Water	General Sub Contract Method	SUBCONTRACT			
pH         Analyte Description         STL00204         CAS Number         RL-Linit         MDL-Linit	Water	General Sub Contract Method	SUBCONTRACT			
Anions, Ion Chromatography   STL00204   STL00204   O.1   MDL - Limit	Soil	Hd	9045C			
Analyte Description   STL00204   O.1   R.LLimit   MDL-Limit						77.11
Anions, Ion Chromatography   300		Analyte Description			MDL - Limit	Onits
Anions, Ion Chromatography         300         CAS Number         RL - Limit         MDL - Limit		Hd	STL00204	0.1		
Mitrate as N         Analyte Description         14797-55-8         CAS Number         RL - Limit         MDL - Limit         Impl- Limit         MDL - Limit	Soil	Anions, Ion Chromatography	300	П		
ASTM Leaching Procedure         ASTM_LEACH_NP         RL-Limit         MDL-Limit         mg/L           Total, Fixed, and Volatile Solids         \$71,00291         CAS Number         RL-Limit         MDL-Limit         MDL-Limit           Total, Fixed, and Volatile Solids         2540G         STL00291         Analyte Description         Analyte Description         Analyte Description         Analyte Description         Analyte Description         RL-Limit         MDL-Limit		Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
ASTM Leaching Procedure         ASTM_LEACH_NP         ASTM_LEACH_NP         MDL-Limit         MDL				0.05	0.0425	mg/L
Total, Fixed, and Volatile Solids	:	ACTAIL southing Description	N HEACH NP	Γ		
Total, Fixed, and Volatile Solids         2540G         RL-Limit         MDL-Limit           Total Solids         3TL00291         0.5         Analyte Description         BRL-Limit         MDL-Limit         MDL-Limit         Analyte Description         Analyte Description         BRL-Limit         MDL-Limit         MDL-Limit         Analyte Description         Brain Volatile Solids         Brain Volatile Solids<	Soil	AS IN Leading Procedure				
Analyte Description         CAS Number         RL-Limit         MDL-Limit           Total Solids         2540G         Analyte Description         2540G           Total Volatile Solids         STL00236         Analyte Description         RL-Limit         MDL-Limit	Soil	Total, Fixed, and Volatile Solids	2540G	7		
Total Solids         STL00291         0.5           Total, Fixed, and Volatile Solids         2540G           Analyte Description         CAS Number         RL - Limit         MDL - Limit           Total Volatile Solids         STL00236         0.5				1 1	MDL - Limit	Units
Total, Fixed, and Volatile Solids         2540G           Total (Fixed, and Volatile Solids)         CAS Number         RL - Limit         MDL - Limit			STL00291	0.5		
Analyte Description CAS Number RL - Limit MDL - Limit	Soil	Total, Fixed, and Volatile Solids.	2540G			
Analyte Description         CAS Number         RL - Limit         MDL - Limit           STL00236         0.5						
STL00236					MDL - Limit	Units
		Total Volatile Solids	STL00236	6.0		

		100.1-4	Γ		
Soil	Percent Moisture	Moisture	_		
	Analyte Description	CAS Number	RL-Limit	MDL - Limit	Units
		STI 00177	0.1		
	Percent Moisture	SILUUTA	-		
	Percent Solids	STL00234	0.1		
Soil	Nitrogen, Total Kjeldahl	351.2	$\neg$		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
		98000 ILS			
	Nitrogen, Kjeldani	01100230			
Soil	Nitrogen, Total Kjeldahl	351.2_Prep			
Soil	Nitrogen, Ammonia	350.1			
			1		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Ammonia, undistilled	7664-41-7			mg/Kg
	Ammonia, distilled	7664-41-7	S	2.2313	mg/Kg
Soil	Distillation, Ammonia	Distill_Ammonia			
Soil	Nitrogen, Nitrite	353.2_Nitrite			
				177	11-36-
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Onits
	Nitrite as N	14797-65-0	-	0.116	mg/Kg
			[		
Soil	Deionized Water Leaching Procedure	DI_LEACH			
Soil	Nitrogen, Nitrate-Nitrite	Nitrate_Calc			
			11.	timi i ion	offer I
	Analyte Description	CAS Number	AL-LIMIT	ואוסר - רווווור	marka
	Nitrate as N	14/9/-00-0	-	5	D. D
	Nitrite as N	14797-65-0			
	Nitrate Nitrite as N	STL00217			
		OV 4	Γ		
Soil	Di Leach -Auto complete	DI_Leadil_AC			
Soil	Phosphorus, Total	365.1	П		
				2	20-10
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Total Phosphorus as PO4	STL00988	0.1	0.033	mg/L
	Discontinuo Total	365 Dran	Γ		
Soil	Prosphorus, Lotal	dallon	T		
Soil	ASTM Leaching Procedure	ASTM_LEACH			
Soil	Phenolics, Total Recoverable	3065			

			1		11.11
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Phenolics, Total Recoverable	STL00166	0.2	0.1601	mg/Kg
			[		
Soil	ASTM Leaching Procedure	ASTM_LEACH_NP			
Soil	Cyanide, Total and/or Amenable	9012A			
	Analyte Description	CAS Number	RL-Limit	MDL - Limit	Units
	Cyanide, Total	57-12-5	10	1.5	ng/L
Soil	Cyanide, Total and/or Amenable, Distillation	9012A_Prep			
	Analida Danasiation	CAC Nimber	N Imit	MDL - Limit	Units
	Prep Analyte	STL00048			
	300				
Soil	ASTM Leaching Procedure	ASTM_LEACH_NP			
Soil	Chromium, Hexavalent	7196A			
	A to the December of the Paris	CAS Nimbor	- I imit	MDI - I imit	Units
	Analyte Description	18540-29-9	0.4	0.1004	mg/Kg
Soil	Alkaline Digestion (Chromium, Hexavalent)	3060A	П		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Prep Analyte	STL00048	_		
Soil	HEM and SGT-HEM	1664A	П		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	HEM (Oil and Grease)		5	1.4986	mg/L
	ТРН	STL00240	2	1.4704	mg/L
Soil	HEM and SGT-HEM (SPE)	1664A_SPE			
Soil	ASTM Leaching Procedure	ASTM_LEACH_NP	90		
Soil	Diesel Range Organics (DRO) (GC)	8015B_DRO	П		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	C10-C20	STL00115	16.7	9.26	mg/Kg
	Sacklet Edmotion	[3540C	Γ		
Soil	Soxniet Extraction	00000	T		
Soil	Gasoline Range Organics - (GC)	8015B_GRO	7		
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units

	C6-C10	8006-61-9	100	46	ug/kg
	Trifluorotoluene (Surr)	8-90-86			ug/Kg
Soil	Purge and Trap	5030B_Solid			
Soil	Metals (ICP)	6010B			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Silver	7440-22-4	0.5	0.058	mg/Kg
			_		
Soil	Preparation, Metals	3050B			
Soil	Metals (ICP)	6010B	_		
			i i	timi I ICA	Inite
	Analyte Description	CAS Number	חווו אר - רוווווו	ח האשר - רווווור	mo/Ka
	Silver	/440-22-4	0.0	2000	S. S.
	Aluminum	7429-90-5	20	1.083	mg/Kg
	Arsenic	7440-38-2	1	0.223	mg/Kg
	Boron	7440-42-8	20	0.257	mg/Kg
	Barium	7440-39-3	20	0.05	mg/Kg
	Beryllium	7440-41-7	0.4	0.015	mg/Kg
	Calcium	7440-70-2	200	0.982	mg/Kg
	Caldium hardness as CaCO3	STL00317			mg/Kg
	Cadmim	7440-43-9	0.5	0.024	mg/Kg
	+	7440.48-4	2	0.089	mg/Kg
		7440,47-3	0.5	0.085	mg/Kg
	Cincina	0 0 0 0 0	25	0.342	ma/Ka
	Copper	7440-50-6	2. 5	2,000	2,000
	Iron	7439-89-6	10	2.976	mg/kg
	Potassium	7440-09-7	200	75	mg/Kg
	Magnesium	7439-95-4	200	2.208	mg/Kg
	Manganese	7439-96-5	1.5	0.048	mg/Kg
	Molybdenum	7439-98-7	4	0.152	mg/Kg
	Sodium	7440-23-5	200	8.207	mg/Kg
	Nickel	7440-02-0	4	0.384	mg/Kg
	Lead	7439-92-1	0.3	0.145	mg/Kg
	Antimony	7440-36-0	7	0.164	mg/Kg
	Selenium	7782-49-2	0.5	0.207	mg/Kg
	SiO2. Silica	14808-60-7	107	2.756	mg/Kg
	uwilio.	7440-21-3	20	1.288	mg/Kg
	F	7440-31-5	10	0.536	mg/Kg
		7440.24-6	2	0.013	mg/Kg
	Stronturin				

	Titanium	7440-32-6	0	0.400	mg/kg
	Thallium	7440-28-0	-	0.207	mg/Kg
	Vanadium	7440-62-2	2	0.186	mg/Kg
	Yttrium	7440-65-5			mg/Kg
	Zinc	7440-66-6	2	0.223	mg/Kg
	Lithium	7439-93-2	5	0.352	mg/Kg
	Sc (IS)	7440-20-2			mg/Kg
	<u>u</u>	7440-74-6			mg/Kg
	MgHard	STL00318			mg/Kg
	Hardness as calcium carbonate	STL00009			
170	Decembration Matale	ואסקינן	ſ		
lio	riebalaudi, Metalis	20000	T		
Soil	Metals (ICP/MS)	6020			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Silver	7440-22-4	0.1	0.0039	mg/Kg
Soil	Preparation, Metals	3050B			
Soil	Metals (ICP/MS)	6020			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Silver	7440-22-4	0.1	0.0039	mg/Kg
	Aluminum	7429-90-5	n	0.2849	mg/Kg
	Arsenic	7440-38-2	0.1	0.0181	mg/Kg
	Boron	7440-42-8	0.5	0.037	mg/Kg
	Barium	7440-39-3	-	0.0107	mg/Kg
	Beryllium	7440-41-7	0.1	0.0075	mg/Kg
	Calcium	7440-70-2	10	1.326	mg/Kg
	Cadmium	7440-43-9	0.1	0.007	mg/Kg
	Cobalt	7440-48-4	90.0	0.0015	mg/Kg
	Chromium	7440-47-3	0.2	0.0061	mg/Kg
	Cesium	7440-46-2			mg/Kg
	Copper	7440-50-8	0.2	0.033	mg/Kg
	Iron	7439-89-6	ĸ	0.3539	mg/Kg
	Potassium	7440-09-7	10	1.3583	mg/Kg
	Magnesium	7439-95-4	10	0.187	mg/Kg
	Manganese	7439-96-5	0.5	0.0103	mg/Kg
	Molybdenum	7439-98-7	0.5	0.0208	mg/Kg
		7 440 00 0	70	1 260	2/1/0

Nickel Lead Antimony Selenium Silicon Titanium Thallium Vanadium Yetrium - 89 (Internal Standard) Zinc Li-6 Internal Standard Sc (IS) Rh (IS) In Internal Standard Ho (IS)	7440-02-0 7439-92-1 7440-36-0 7782-49-2	0.1	0.0038 0.0026	mg/Kg mg/Kg
Lead Antimony Selenium Silicon Tin Strontium Titanium Thallium Vanadium  Yttrium - 89 (Internal Standard) Zinc Li-6 Internal Standard Sc (IS) Rh (IS) In Internal Standard		0.7	0.0038	mg/Kg
Antimony Selenium Silicon Tin Strontium Titanium Thallium Vanadium Yttrium - 88 (Internal Standard) Zinc Li-6 Internal Standard Sc (IS) Rh (IS) In Internal Standard		0.2	0.0026	mailka
Selenium Silicon Tin Strontium Titanium Vanadium Vanadium Vine - 89 (Internal Standard) Zinc Li-6 Internal Standard Sc (IS) Rh (IS) In Internal Standard Ho (IS)		90		2
Silicon Tin Strontium Titanium Thallium Vanadium		0.0	0.0502	mg/Kg
Tin Strontium Titanium Thallium Vanadium  Yttrium - 89 (Internal Standard) Zinc Li-6 Internal Standard Sc (IS) Rh (IS) In Internal Standard	7440-21-3	20	0.3601	mg/Kg
Strontium Titanium Thallium Vanadium Yttrium - 89 (Internal Standard) Zinc Li-6 Internal Standard Sc (IS) Rh (IS) In Internal Standard	7440-31-5	0.5	0.0593	mg/Kg
Titanium Thallium Vanadium Yehrium - 89 (Internal Standard) Zinc Li-6 Internal Standard Sc (IS) Rh (IS) In Internal Standard	7440-24-6	0.5	0.0027	mg/Kg
Thallium Vanadium Yarium - 89 (Internal Standard) Zinc Li-6 Internal Standard Sc (IS) Rh (IS) In Internal Standard Ho (IS)	7440-32-6	9.0	0.0428	mg/Kg
Vanadium Yttrium - 89 (Internal Standard) Zinc Li-6 Internal Standard Sc (IS) Rh (IS) In Internal Standard	7440-28-0	0.1	0.002	mg/Kg
Yttrium - 89 (Internal Standard) Zinc Li-6 Internal Standard Sc (IS) Rh (IS) In Internal Standard Ho (IS)	7440-62-2	0.1	0.0079	mg/Kg
Zinc Li-6 Internal Standard Sc (IS) Rh (IS) In Internal Standard Ho (IS)	7440-65-5			mg/Kg
Li-6 Internal Standard Sc (IS) Rh (IS) In Internal Standard Ho (IS)	7440-66-6	0.5	0.0648	mg/Kg
Sc (IS) Rh (IS) In Internal Standard Ho (IS)	14258-72-1			mg/Kg
Rh (IS) In Internal Standard Ho (IS)	7440-20-2			mg/Kg
In Internal Standard Ho (IS)	7440-16-6			mg/Kg
Ho (IS)	7440-74-6			mg/Kg
	7440-60-0			mg/Kg
Tb (IS)	7440-27-9			mg/Kg
Bi Internal Standard	7440-69-9			mg/Kg
Be-9	STL00448			mg/Kg
Co-59	STL00444			mg/Kg
In-113	STL00442			mg/Kg
In-115	STL00443			mg/Kg
Mg-24	STL00446			mg/Kg
Mg-25	STL00447			mg/Kg
M9-26	STL00445			mg/Kg
Pb-206	STL00439			mg/Kg
Pb-207	STL00440			mg/Kg
Pb-208	STL00441			mg/Kg
Cerium	7440-45-1			mg/Kg
SiO2, Silica	14808-60-7	107	0.771	mg/Kg
Hardness as calcium carbonate	STL00009			mg/Kg
Phosphorus	7723-14-0	20	7.37	mg/Kg
Uranium	7440-61-1			
Thorium	7440-29-1			
Calcium hardness as calcium carbonate	STL00317			
	1	,		
Preparation, Metals	3050B			

Soil	Mercury (CVAA)	7471A			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Mercury	7439-97-6	0.033	0.0109	mg/Kg
Soil	Preparation, Mercury	7471A_Prep			
Soil	Anions, Ion Chromatography	300			
	Analyte Description	CAS Number	RL - Limit	MDL - Limit	Units
	Nitrate as N	14797-55-8	0.5	0.0627	mg/Kg
	Nitrite as N	14797-65-0	0.5	0.0342	mg/Kg
	Fluoride	16984-48-8	0.5	0.1499	mg/Kg
	Chloride	16887-00-6	10	2.2041	mg/Kg
	Bromide	24959-67-9	2	0.6207	mg/Kg
	Sulfate	14808-79-8	10	1.1796	mg/Kg
	Orthophosphate	14265-44-2	2	0.4237	mg/Kg
170	Onionison (Motor) analysis Descendence	10 vu i 10	Г		
100 100	Deionized Water Leaching Procedure	D_LEACH			
			1		

RFQ No. DEP15729

# 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:**

WITNESS THE FOLLOWING SIGNATURE

"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 countles 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 countles 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 exceed 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.

# Authorized Signature: Authorized Signature: State of State of Allgheny , to-wit: Taken, subscribed, and sworn to before me this day of My Commission expires AUGUST 19, 2012. AFFIX SEAL HERE COMMONWEALTH OF PENNSYLVANIA Notarial Seal Daria J. Skowronek, Notary Public

Bell Twp., Westmoreland County My Commission Expires Aug. 14, 2012 Member, Pennsylvania Association of Notaries

## **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 relimburse 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 rerrewal 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 Altorney General, is available online at www.state.wv.us/admin/purchase/vro/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 verify that the vendor is licensed and in good standing with the above entities. the director or spending
- 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 willhout 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 opaning. Fallure 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 50160, 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).



# Response to RFP # DEP15729 General Analysis of Water and Soil

## Statement of Qualifications

TestAmerica Laboratories, Inc is pleased to submit this proposal for laboratory services in support of Analysis of Water and Soil for the West Virginia Department of Environmental Protection (WV DEP). With over 90 service locations in the United States, including 36 laboratories in the United States and Asia, 36 service centers, a fleet of mobile labs and more than 2,300 employees, TestAmerica is nearly 4 times larger than our nearest competitor, processing over 7 million analyses annually. TestAmerica's technical leadership, innovation, experience and quality systems are industry leading in their class. Our scale, breadth of services and financial stability allows TestAmerica to offer comprehensive national coverage, delivered locally and to the economic advantage of our clients.

The Pittsburgh facility was established in 1956 as an environmental laboratory and has continued to grow in its service offerings and capabilities since that time. Today, the Pittsburgh laboratory is a part of the TestAmerica laboratory network, enabling the lab to offer local access to the world's most comprehensive environmental laboratory network. With a work history average of over 17 years, Pittsburgh's professional staff of over 65 chemists and support personnel, is positioned to assist with your environmental needs. These resources, coupled with a continuous investment in equipment, have allowed the laboratory to meet the increasingly complex requirements of Federal and commercial clients' analytical programs.

The laboratory holds many certifications and has been approved for work under the following programs:

- National Environmental Laboratory Accreditation Program (NELAC certification)
- United States Department of Defense
- West Virginia DEP
- NELAC or State program certifications in 18 states
- The laboratory also maintains a soil permit for the receipt and analysis of foreign and domestic soils under the United States Department of Agriculture (USDA).

TestAmerica brings a unique blend of expertise and convenience to its customers. Our ability to deliver the widest variety of environmental testing services is a function of our unmatched scale. Among the large variety of testing applications TestAmerica provides are:

Metals by ICP & ICP/MS

**Explosive & Energetic Compounds** 

Low Level Mercury

Petroleum Hydrocarbons Bioavailability

Bioavailable Arsenic and Lead

Radiological & Mixed Waste

Alkyl Tins

Radiobioassay & Radio Dating

Metals Speciation

Sediments & Elutriates



Trace Level Volatile Organics

Plant & Animal Tissues

Trace Level Semi-Volatiles

**Aquatic Toxicology** 

Pesticides by HR/MS

**Drinking Water** 

Agricultural Pesticides

Mold, Fungi & Legionella

Ambient & Source Air

Geotechnical

Herbicides

PCB Congeners & Homolog

Multi-Incremental Sampling

Oil Fingerprinting/Biomarkers

High Resolution Dioxin & Furans

Pharmaceuticals & Personal Care Products

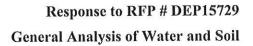
#### **Delivery of Services**

TestAmerica strongly believes that a critical component of a successful analytical program is the relationship between client and laboratory. Relationships based on partnership result in effective planning, successful communication and desired project results. TestAmerica looks forward to working as a partner with the West Virginia DEP to help ensure the success of your analytical program.

TestAmerica proposes that our Pittsburgh laboratory serve as lead laboratory, with Project Management residing there. TestAmerica's Project Managers serve as the point of contact at the laboratory and are dedicated to managing the analytical program to the specific needs of each client. Each Project Manager monitors all requests from initiation through to data reporting and invoicing, ensuring that West Virginia DEP's needs are being met consistently. They also assist with sampling and analysis plans, budgeting, and project scheduling as well as shipping arrangements. This allows for prompt response to status requests while meeting critical scheduling commitments.

TestAmerica will use several network labs to provide the West Virginia DEP with certified analysis when at all possible. Our Nashville and North Canton laboratories have been included to provide some general chemistry parameters, as well as low level mercury in North Canton. TestAmerica's Richland laboratory performs radon analysis, although they do not have certification for this analysis in West Virginia. The St. Louis laboratory will perform radiological analysis and has applied for West Virginia certification for these analysis. Finally, EMLAB will provide sulfate and iron reducing bacteria analysis. EMLAB has not applied for West Virginia certification for these analyses.

We also understand the need for flexibility, as unscheduled, emergency sampling and analyses may be required at any given time. TestAmerica is pleased to commit the necessary personnel and laboratory resources needed to provide high quality data in a timely manner and customer service that meets and exceeds West Virginia DEP's xpectations for your analytical program.





#### Added Value Service Offerings

#### **TotalAccess**

TotalAccess, TestAmerica's On-Line Data Delivery Solution, provides West Virginia DEP unprecedented project flexibility. Today's environmental programs involve many individuals, in various locations. Communication can become a major barrier and source of expense. TotalAccess provides real time access to analytical status and the data at TestAmerica facilities.

Multiple personnel at West Virginia DEP (with individual levels of security) can log-on to the West Virginia DEP central, password-protected project site and retrieve the information associated with the project, for which they are authorized; contracts, project documents, schedules, specifications, forms, reports, amendments, audits, data deliverables.

TestAmerica employs a web-based client services management system that allows West Virginia DEP and their trusted client(s) to track all aspects of the program with accuracy, speed, and efficiency. TotalAccess is available day or night, at the office or on the road, enabling improved communication, access to data and project management.

Enhances features of TotalAccess include:

- New easy to use icons and Quick-links auto-complete search capabilities
- New Dashboard Home Page Easy access to all your Jobs, Projects, Documents and Invoices
- Multi-Project Report Generation Capabilities Consolidate multiple sample events into one EDD report
- Regulatory Limits Comparison Tool enables easy copy and customization of lists to fit your specific project requirements
- New Search Capability by Sampling Date
- IPad accessible format

TotalAccess provides TestAmerica clientele with online, secure access to services that enable faster communications, rapid access to data, and a centralized repository for all your project information. Users of the TotalAccess system benefit from having...

- Rapid Data Access
- User Customized Data Reporting Functionality (EDD's)
- Data Trending Tool and Wizard
- Budgeting tool for analytical projects
- Customizable User Preference Settings
- Quick reference to Contacts for each project
- Project Status Updates for results, electronic deliverables and other documents generated for your project
- Downloadable project documentation; invoices, reports, EDDs, and COCs.
- Interactive search utility for TestAmerica analytical capabilities, methodologies and certifications
- Customizable displays capturing data in a single grid and single click downloads to Excel, PDF, or XPS.



Document repository for document generated for your project

#### Ask the Expert

Featuring TestAmerica's panel of 30 testing experts, each with their own special area of focus, TestAmerica's "Ask the Expert" program allows any individual with a question relative to environmental testing to access the thoughts and opinions of recognized experts in their field through a free, easy to use online. Our experts are available online at www.testamericainc.com.



Ask the Expert Webinars

The response to our Ask the Expert program has been so great that we are pleased to welcome you to the new, free, TestAmerica's <u>Ask the Expert</u> Webinar Series. These webinars are designed with the client in mind to provide an in depth learning experience regarding important topics in the environmental laboratory process.

Each month, the webinar series will present a technical based webinar relating to the environmental laboratory analysis process supporting your projects. Each webinar will consist of approximately 30 minutes of material presentation including real time audience feedback followed by a question and answer session with the presenting expert. Our experts will remain on the webinar to field all of your questions relating to the current topic.

**TestAmerica Specialty Testing - Sediments** 

Sediment environmental testing projects assess sediment quality to determine if there is a potential hazard to aquatic life through direct toxicity or if there is a potential hazard through bioaccumulation of contaminants of concern to aquatic life, wildlife and/or humans. The assessment can include the analysis of contaminants of concern in sediment, surface water, pore water, ambient air, and associated tissues. TestAmerica supports the physical and chemical environmental testing of sediment, surface water, pore water, ambient air as well as tissues.

TestAmerica understands that sediment sites can vary tremendously in their size and complexity. Our successful project experience has demonstrated that these projects require detailed pre-project scoping, planning and execution. TestAmerica has six nationwide laboratories who are dedicated to support sediment as well as tissue projects. TestAmerica's Sediment Laboratories are committed to provide outstanding client service, the lowest detection limits, the highest integrity, the fastest turnaround times, with the best accuracy and precision, at a competitive price.

TestAmerica Specialty Testing - Air Program

TestAmerica's comprehensive ambient air testing capabilities and capacity far surpass any other laboratory in the environmental testing industry. TestAmerica supports a wide range of air methods required by the U.S. EPA and other regulatory agencies. Our ambient air testing capabilities range from part-per-trillion analysis of volatile organic compounds to the highly specialized testing of dioxins and furans. TestAmerica provides our customers with the following:

- Vapor Intrusion, Soil Gas, Manufactured Gas Plants, Landfill Gas, Industrial Hygiene, Indoor Air and Source Monitoring Program expertise
- Lowest reporting limits for VOCs in the industry
- Largest available inventory of sampling media in the United States
- More than 25 years of ambient, indoor, and source air testing experience
- Broadest range of quality air analysis including testing for VOCs, SVOCs, Dioxins/Furans, and PCB Congeners

TestAmerica's air laboratories are among the industry's top performers. Our laboratories are well established and respected for their significant contributions to ambient air testing.



TestAmerica has teamed with clients for many years to address some of the most significant environmental ambient air issues.

#### Additional TestAmerica Specialty Services

Microscopy Consulting Services
Geotechnical Analyses
Source Emissions Air Analysis
CWA Chemical Degradation Analysis
Natural Attenuation Byproducts
Mold/Mycology/Industrial Hygiene
Field Sampling
QAPP Preparation Assistance
Expert Witness Testimony
Process Improvements

AVS/SEM Ambient Air Analyses Aquatic Toxicology Alkyl Tins Selective Ion Monitoring Asbestos EDD/GIS Capabilities National Program Coordination Technical Support for Industry Method Development



### Certifications

#### Attachment I

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

**Annual Certified Parameter List** 

for

# TESTAMERICA LABORATORIES, INC. PITTSBURGH

#### PITTSBURGH, PENNSYLVANIA

#### PARAMETERS CERTIFIED

ANALYTE	METHOD	TECHNOLOGY
Acidity	SM18th2310 B(4a)	Titrimetric
Acidity	SM20th2310 B(4a)	Titrimetric
Alkalinity	SM18th2320 B	Titrimetric
Alkalinity	SM20th2320 B	Titrimetric
Ammonia	EPA350.1	Colorimetric
Bromide	EPA300.0	IC
Chloride	EPA300.0	IC
Chloride	SM18th4500-Cl E	Discrete
Chloride	SM20th4500-Cl E	Discrete
Color	SM18th2120 B	Visual Comparison
Color	SM20th2120 B	Visual Comparison
Conductance, Specific	EPA120.1 Rev-1982	Probe
Conductance, Specific	SW9050A	Probe
Cyanide, Total	EPA335.4	Discrete
Cyanide, Total	SW9012B	Discrete
Cyanide, Available	EPA1667	FIA
Demand, Biochemical(BOD)	SM20th5210B	Probe
Demand, Carbonaceous (CBOD)	SM20th5210B	Probe
Demand, Chemical Oxygen (COD)	EPA410.4	Spectrophotometric.
Demand, Chemical Oxygen (COD)	HACH8000	Spectrophotometric
Fluoride	EPA300.0	IC:
Hardness, Calcium	SM20th2340 B	Calculation
Hardness, Calcium	SM20th2340 C	Titration
Hardness, Total	SM20th2340 B	Calculation
Hardness, Total	SM20(h2340 C	Titration
Nitrate	EPA300.0	1C

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		<b>*</b> 6
ANALYTE	METHOD	TECHNOLOGY
Nitrate	EPA353.2	Discrete
Nitrate-Nitrite	EPA353.2	Discrete
Nitrite	EPA300.0	IC
Nitrite	EPA353.2	Discrete
Oil & Grease	EPA1664A	Gravimetric
Oil & Grease	SW9070	Gravimetric
Oil & Grease	SW9070A	Gravimetric
Organic Carbon, Total	SM20th5310 C	Oxidation
Organic Carbon, Total	SW9060	Oxidation
Organic Carbon, Total	SW9060A	Oxidation
Phenolics, Total	EPA420.4 Rev 1978	Discrete
Phosphate, ortho	EPA300.0	IC
Silica, Dissolved	EPA200.7 Rev 4.4-1994	ICP
Silica, Dissolved	EPA200.8 Rev 5.4-1994	ICP-MS
Solids, Dissolved	SM20th2540 C	Gravimetric
Solids, Settleable	SM20th2540 F	Volumetric
Solids, Suspended	SM20th2540 D	Gravimetric
Solids, Total	SM20th2540 B	Gravimetric
Solids, Volatile	EPA160.4	Gravimetric
Sulfate	EPA300.0	IC
Sulfide	SM20th4500-S2 F	Titrimetric
Sulfide	SW9034B	Titrimetric
Surfactants (MBAS)	SM20th5540 C	Spectrophotometric
Turbidity	EPA180.1	Turbidimetric
pH	SM20th4500-H B	Probe
Ammonia	BPA350.1	Distillation
Cyanide	EPA335.4	Distillation
Cyanide	SW9010B	Distillation.
Phenolics	EPA420.1	Distillation
Sulfide	\$W9030B	Distillation

METAL	METHOD	TECHNOLOGY
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	<b>ICP</b>
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
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



METAL		METHOD	TECHNOLOGY
Lead		EPA200.7 Rev 4.4-1994	ICP
Magnesium		EPA200.7 Rev 4.4-1994	ICP
Manganese		EPA200.7 Rev 4,4-1994	ICP
Molybdenum		BPA200.7 Rev 4.4-1994	ICP
Nickel		EPA200.7 Rev 4.4-1994	ICP
Potassium	ĕ	EPA200.7 Rev 4.4-1994	TCP
Selenium		EPA200.7 Rev 4.4-1994	ICP
Silicon		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
Boron		EPA200.8 Rev 5.4-1994	ICP-MS
Cadmium		EPA200.8 Rev 5.4-1994	ICP-MS
Calcium		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	ſ	EPA200.8 Rev 5.4-1994	ICP-MS
Magnesium		EPA200.8 Rev 5.4-1994	ICP-MS
Manganese		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
Potassium	(8)	EPA200.8 Rev 5.4-1994	ICP-MS
Selenium	<i>₩</i> .	EPA200.8 Rev 5.4-1994	ICP-MS
Silicon		EPA200.8 Rev 5.4-1994	ICP-MS
Silver		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
Thallium		EPA200.8 Rev 5.4-1994	ICP-MS
Tin		EPA200.8 Rev 5.4-1994	ICP-MS
Titanium.		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
Aluminum		SW6010C	ICP
Antimony		SW6010C	ICP
Arsenic		SW6010C	ICP
Barium		SW6010C	ICP



METAL	METHOD	TECHNOLOGY
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
Silicon	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
Aluminum.	SW6020A	ICP-MS
	SW6020A	ICP-MS
Antimony Arsenic	SW6020A	ICP-MS
Barium	SW6020A	ICP-MS
the control of the co	SW6020A	ICP-MS
Beryllium Boron	SW6020A	ICP-MS
Cadmium	SW6020A	ICP-MS
Calcium	SW6020A	ICP-MS
Chromium	SW6020A	ICP-MS
Cobalt	SW6020A	ICP-MS
	SW6020A	ICP-MS
Copper	SW6020A	ICP-MS
Lead		ICP-MS
Magnesium	SW6020A	ICP-MS
Manganese	SW6020A	ICP-MS
Molybdenum	SW6020A	
Nickel	SW6020A	ICP-MS
Potassium	SW6020A	ICP-MS
Selenium	SW6020A	ICP-MS
Silicon	SW6020A	ICP-MS
Silver	SW6020A	ICP-MS
Sodium	SW6020A	ICP-MS
Strontium	SW6020Å	ICP-MS
Thallium	SW6020A	ICP-MS

METAL	METHOD	TECHNOLOGY
Tin	SW6020A	ICP-MS
Titanium	SW6020A	ICP-MS
Vanadium	SW6020A	ICP-MS
Zinc	SW6020A	ICP-MS
Mercury	EPA245.1	CVAA
Mercury	SW7470A	CVAA
Chromium, Hexavalent	SM20th3500-Cr D	Colorimetric
Chromium, Hexavalent	SW7196A	Colorimetric
Metals digestion	SW3005A	Hot Block
Metals digestion	SW3010A	Hot Block
Total Recoverable	EPA200.2 Rev -1994	Digestion
Total Recoverable	EPA200.8 Rev 5.4-1994	Digestion
Total Recoverable	EPA200.7 Rev 4.4-1994	Digestion
Mercury	SW7470A	Digestion

#### NONPOTABLE WATER VOLATILE ORGANIC CHEMICALS

GROUP METHOD TECHNO	2001
Purgeables EPA624 GC/MS	
Volatile Organic Compounds SW8260B GC/MS	2
Volatile Organic Compounds SW5030B Purge and	Trap
Volatile Organic Compounds SW5035 Purge and	Trap, Closed

# $\frac{\text{NONPOTABLE WATER EXTRACTABLE AND SEMI-VOLATILE ORGANIC}}{\text{CHEMICALS}}$

GROUP	<u>METHOD</u>	TECHNOLOGY
Pesticides and PCBs	BPA608	GC/ECD
Polynuclear Aromatic Hydrocarbons	EPA610	HPLC
Base/Neutrals and Acids	BPA625	GC/MS
EDB & DBCP	SW8011	GC/ECD
Ethylene Glycol	SW8015B	GC/FID
Ethylene Glycol	SW8015C	GC/FID
Organochlorine Pesticides	SW8081A	GC/ECD
Organochlorine Pesticides	SW8081B	GC/ECD
Polychlorinated Biphenyls	SW8082	GC/ECD
Polychlorinated Biphenyls	SW8082A	GC/ECD
Oganophosphorus Compounds	SW8141A	GG
Oganophosphorus Compounds	SW8141B	ĠĊ
Chlorinated Herbicides	SW8151A	GC/ECD
Semivolatile Organic Compounds	SW8270C	GC/MS
Semivolatile Organic Compounds	SW8270D	GC/MS
Polynuclear Aromatic Hydrocarbons	SW8310	HPLC



GROUP	METHOD	TECHNOLOGY
Organic Extractions and Prep Liquid-Liquid Extraction (Sep. Funnel)	SW3500C SW3510C	Extraction
Liquid-Liquid Extraction (CLLE)	SW3520C	Extraction
Wasto Dilution	SW3580 A	Dilution.
Waste Dilution for Volatiles	SW3585	Dilution
Cleanups	SW3600	Cleanup
Florisil Cleanup	SW3620 C	Cleanup
Gel-Permeation	SW3640A	Cleanup
Sulfur Cleanup	SW3660B	Cleanup
Chlorinated Herbicides	SW8151A	Extraction

#### HAZARDOUS WASTE CHARACTERISTICS

PROCEDURE	METHOD	TECHNOLOGY
Corrosivity	SW9040 C	Probe
Corrosivity	SW9045 D	Probe
Ignitability	SW1010A	Closed Cup
Ignitability	SW1020B	Setaflash
Paint Filter Test	SW9095B	Gravimetric
TCLP (Metals and Organics)	SW1311A	Rotating Extractor
SPLP (Metals and Organics)	SW1312	Rotating Extractor

#### SOLID AND CHEMICAL INORGANIC NONMETALS

ANALYTE .	METHOD	TECHNOLOGY
pH	SW9040 C	Probe
pH:	SW9045 D	Probe
Ammonia	EPA350.1	Discrete
Bromide	SW9056 A	IC
Chloride	SW9056 A	īC.
Cyanide, Total	SW9012 B	Discrete
Demand, Chemical (COD)	EPA410.4	Spectrophotometric
Demand, Chemical (COD)	HACH8000	Spectrophotometric
Fluoride	SW9056 A	IC
Nitrate	SW9056 A	IC
Nitrate-Nitrite	EPA353.2	IC
Nitrite	SW9056 A	IC
Oil & Grease	SW9071 B	Gravimetrio
Organic Carbon, Total	Lloyd Khan	Oxidation
Phenolics, Total	SW9066	Discrete
Phosphate, ortho	SW9056A	ic
Solids, Total	SM20th2540 G	Gravimetric
Solids, Volatile	EPA160.4	Gravimetric
Sulfate	SW9056 A	IC.
	IN ANTONIO COMMONIA	550

ANALYTE	<u>METHOD</u>	TECHNOLOGY
Ammonia Cyanide Cyanide	BPA350.1 SW9010 B SW9010 C	Distillation Distillation Distillation
DI Leach Procedure	ASTM D3987-85	Leach Procedure

#### SOLID AND CHEMICAL TRACE METALS

METAL	<u>MBTHOD</u>	TECHNOLOGY
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
Silicon	SW6010G	1CP
Silver	SW6010C	ICP
Sodium	SW6010C	1CP
Strontium	SW6010C	ICP
Thallium	SW6010C	ICP
Tin	SW6010C	ICP
Titanium	SW6010C	ICP
Vanadium	SW6010C	ICP
Zinc	SW6010C	ICP
Aluminum	SW6020A	ICP-MS
Antimony	SW6020A	ICP-MS
Arsenic .	SW6020A	ICP-MS
Barium	SW6020A	ICP-MS
Beryllium	SW6020A	ICP-MS
Boron	SW6020A	ICP-MS
Cadmium	SW6020A	ICP-MS
Calcium	SW6020A	ICP-MS
Chromium	SW6020A	ICP-MS
Cobalt	SW6020A	ICP-MS
ART THE ROOM	554	



METAL	METHOD	TECHNOLOGY
Copper	SW6020A	ICP-MS
Iron	SW6020A	ICP-MS
Lead	SW6020A	ICP-MS
Magnesium	SW6020A	ICP-MS
Manganese	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	SW7471 B	CVAA
Hexavalent Chromium	SW7196A	Colorimetric
Hexavalent Chromium	SW3060 A	Digestion
Metals	SW3050B	Digestion

#### SOLID AND CHEMICAL VOLATILE ORGANIC CHEMICALS

GROUP	<u>METHOD</u>	TECHNOLOGY
Volatile Organic Compounds	SW8260B	GC/MS
Volatile Organic Compounds	SW5035	Purge and Trap, Closed

# SOLID AND CHEMICAL EXTRACTABLE AND SEMI-VOLATILE ORGANIC CHEMICALS

GROUP	METHOD	TECHNOLOGY
EDB & DBCP	SW8011	GC/ECD
Ethylene Glycol	SW8015B	GC/FID
Ethylene Glycol	SW8015C	GC/FID
Organochlorine Pesticides	SW8081 A	GC/ECD
Organochlorine Pesticides	SW8081 B	GC/ECD
Polychlorinated Biphenyls	SW8082	· GC/ECD
Polychlorinated Biphenyls	SW8082 A	GC/ECD
Organophosphorus Compounds	SW8041 A	GC.
Organophosphorus Compounds	SW8041 B	GC
Chlorinated Herbicides	SW8151A	GC/ECD
Semivolatile Organic Compounds	SW8270C	GC/MS

GROUP	METHOD	TECHNOLOGY
Semivolatile Organic Compounds	SW8270D	GC/MS
Polynuclear Aromatic Hydrocarbons	SW8310	HPLC
Automated Soxhlet Extraction	SW3541	Extraction
Ultrasonic Extractions	SW3550 C	Extraction
Waste Dilution	SW3580 A	Dilution
Waste Dilution for Volatiles	SW3585	Dilution
Cleanups	SW3600	Cleanup
Florisil Cleanup	SW3620 C	Cleanup
Gel-Permeation	SW3640A	Cleanup
Sulfur Cleanup	SW3660B	Cleanup
Chlorinated Herbicides	SW8151A	Extraction

Issued on May 17, 2011

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 January 31, 2012.

Certificate No 142

Daniel T. Arnold Program Manager

#### Attachment I

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

#### **Annual Certified Parameter List**

for

TestAmerica Laboratories, Incorporated - Nashville Nashville, Tennessee

#### PARAMETERS CERTIFIED

#### NONPOTABLE WATER FIELD TESTS

ANALYTE	<u>METHOD</u>	TECHNOLOGY
pH (Field Test - Hydrogen Ion)	SM20th4500-H*B	Probe
pH (Field Test - Hydrogen Ion - water)	SW9040C	Probe
pH (Field Test - Hydrogen Ion - soil)	SW9045D	Probe
Temperature (Field Test)	SM20th2550 B	Probe

#### NONPOTABLE WATER INORGANICS

ANALYTB	METHOD	TECHNOLOGY
Acidity Alkalinity Ammonia Ammonia Ammonia Bromide Bromide Bromide Chloride Chloride Chloride Chloride Chloride Chloride Conductance, Specific Conductance, Specific Conductance, Specific Conductance, Specific Chromium, Hexavalent Chromium, Hexavalent Cyanide, Total Cyanide, Total Cyanide, Total Cyanide, Amenable to Chlorination Cyanide, Amenable to Chlorination Cyanide, Amenable to Chlorination Cyanide, Amenable to Chlorination Demand, Biochemical(BOD) Demand, Carbonaceous(CBOD) Demand, Chemical Oxygen (COD) Demand, Chemical Oxygen (COD)	SM20th2310 B (4a) SM20th2320 B EPA350.1 SM20th4500-NH3 B SM20th4500-NH3 G EPA300.0 SM20th4110B SW9056A EPA300.0 SM20th4110 B SM20th4500-Cl E SW9251 SW9056A EPA120.1 SM20th2510 B SW9050A SM20th3500-Cr 6+ B SW7196A EPA335.4 SM20th 4500-CN E SW9012B EPA335.4 SM20th4500-CN G SW9012B SM20th5210 B SM20th5210 B SM20th5210 B SM20th5210 B	Titrimetric Titrimetric Discrete Distillation Discrete IC IC IC IC IC IC Discrete Discrete IC Probe Probe Probe Colorimetric Colorimetric Spectrometric

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vest virginia CIOO department of environmental protection

ANALYTE	METHOD	TECHNOLOGY
Fluoride	EPA300.0	IC
	SM20th4110 B	ĨČ
Fluoride	SM20th4500-F- C	ISE
Fluoride		IC
Fluoride	SW9056A -	ISE
Fluoride	SW9214	ICP .
Hardness, Calcium	BPA200.7	
Hardness, Calcium	SM20th2340 B	ICP
Hardness, Calcium	\$W6010C	ICP
Hardness, Total	EPA200.7	ICP
Hardness, Total	SM20th2340 B	ICP
Hardness, Total	SW6010C	ICP
Iron, Ferrous	SM20th3500-Fe <sup>2+</sup> B	Spectrometric
Kjeldahl Nitrogen, Total	EPA351.2	Discrete
Nitrate	EPA300.0	IC
Nitrate	EPA353.2	Discrete
· Nitrate	. SM20th4110 B	(C
Nitrate	SM20th4500NO <sub>3</sub> F	Discrete
Nitrate	SW9056A	IC
Nitrate-Nitrite	BPA300.0	IC
Nitrate-Nitrite	EPA353.2	Discrete
Nitrate-Nitrite	SM20th4110 B	IC
Nitrate-Nitrite	SM20th4500NO3 F	Discrete '
Nitrate-Nitrite	SW9056A	IC
Nitrite	EPA300.0	IC
Nitrite	EPA353.2	Discrete
Nitrite	SM20th4110 B	IC
Nitrite	SM20th4500NO <sub>3</sub> F	Discrete
Nitrite	SW9056A	IC
Oil & Grease	EPA1664A	Gravimetric
Oil & Grease	SW9070A	Gravimetric
Organic Carbon, Total	SM20th5310 B	Oxidation
Organic Carbon, Total	SM20th5310 C	Oxidation
Organic Carbon, Total	SW9060A	Oxidation
Organic Halides, Total	SM20th5320 B	Oxidation
Organic Halides, Total	SW9020B	Oxidation
Phenolics, Total	EPA420.4	Spectrometric
Phenolics, Total	SW9066	Spectrometric
	SM20th4500-P E	Discrete
Phosphate, Ortho Phosphorus, Total	EPA365.4	Discrete
	SM20th4500-SiO <sub>2</sub> C	Spectrometric
Silica, Dissolved	SM20th2540 C	Gravimetric
Solids, Dissolved	SM20th2540 F	Gravimetric
Solids, Settleable	SM20th2540 D	Gravimetric
Solids, Suspended	SM20th2540 B	Gravimetric
Solids, Total	EPA160.4	Gravimetric
Solids, Volatile		Gravinetric
Solids, Volatile .	SM20th2540 B	Turbidimetric
Sulfate	ASTM-D516-02	
Sulfate	EPA300.0	IC
Sulfate	SM20th4110 B	· IC
Sulfate	SW9038	Turbidimetric
Sulfate	SW9056A	IC
Sulfide	SM20th4500-S <sup>2</sup> - D	Spectrometric
Sulfide	SM20th4500-S2- F	Titrimetric
Sulfide	SW9034	Titrimetric
Surfactants (MBAS)	SM20th5540 C	Spectrometric
Turbidity	EPA180.1	Turbidimetric
Turbidity	SM20th2130 B	Turbidimetric
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#### NONPOTABLE WATER TRACE METALS

METAL	METHOD	TECHNOLOGY
Aluminum	EPA200.7 Rev 4.4-1994	ICP
Antimony	BPA200.7 Rev 4.4-1994	ICP.
Arsenic	EPA200.7 Rev 4.4-1994	ICP '
Barium	BPA200.7 Rev 4.4-1994	ICP
Beryllium	EPA200.7 Rev 4.4-1994	ICP
Boron	EPA200.7 Rev 4.4-1994	ICP
Cadmium	BPA200.7 Rev 4.4-1994	ICP
Calcium	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
Hardness	EPA200.7 Rev 4.4-1994	ICP
Iron	EPA200.7 Rev 4.4-1994 · · ·	ICP · · ·
Lead	EPA200.7 Rev 4.4-1994	ICP
Magnesium	BPA200.7 Rev 4.4-1994	ICP
Manganese	BPA200.7 Rev 4.4-1994	ICP
Molybdenum	EPA200.7 Rev 4.4-1994	ICP
Nickel	BPA200.7 Rev 4.4-1994	ICP
Potassium	EPA200.7 Rev 4.4-1994	ICP
Selenium .	BPA200.7 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 '	BPA200.7 Rev 4.4-1994	ICP
	EPA200.7 Rev 4.4-1994	ICP
Tin	EPA200.7 Rev 4.4-1994	ICP
Titanium	BPA200.7 Rev 4.4-1994	ICP
Vanadium	EPA200.7 Rev 4.4-1994	ICP
Zinc	EI A200.7 Rov 4.4-1554	
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	BPA200.8 Rev 5.4-1994	ICP-MS
Boron	EPA200.8 Rev 5.4-1994	ICP-MS
Cadmium .		ICP-MS
Chromium		ICP-MS
Cobalt .		ICP-MS
Copper		ICP-MS
Iron		ICP-M\$
Lead		ICP-MS
Manganese		ICP-MS
Molybdenum		ICP-MS
Nickel		ICP-MS
Selenium		ICP-MS
Silver		ICP-MS
Thallium		ICP-MS
Tin	######################################	ICP-MS
Titanium	EPA200.8 Rev 5.4-1994	ICP-M\$
Vanadium	EPA200.8 Rev 5.4-1994	ICP-MS
Zinc	EPA200.8 Rev 5.4-1994	ICP-MS
5000000		

METAL	METHOD	TECHNOLOGY
	EPA245.1	CVAA
Mercury	SM19th3112 B	CVAA
Mercury	SW7470A	CVAA
Mercury	3W/470A	CVAA
Chromium, Hexavalent	SM20th3500-Cr6+ B	Colorimetric
Chromium, Hexavalent	SW7196A	Colorimetric
<b>5 5</b>	dia Anna Mariana Mariana dia Anna Mariana dia Anna Mariana dia	
Iron, Ferrous	SM20th3500-Fe <sup>2+</sup> B	Colorimetric
A Tourismous	SW6010C	ICP
Aluminum	SW6010C	ICP
Antimony Arsenio	SW6010C	ICP
Barium	SW6010C	ICP
Beryllium	SW6010C	ICP
Boron	SW6010C	ÎCP .
Cadmium	SW6010C	ICP
Calcium	SW6010C	ICP
Chromium	SW6010C	ICP
Cobalt	SW6010C	ICP
Copper	SW6010C	ICP
Hardness	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
Aluminum	SW6020A	ICP-MS
Aluminum	SW6020A	ICP-MS
Antimony	SW6020A	ICP-MS
Arsenic Bārium~	· SW6020A-	ICP-MS
Berylliun	. SW6020A	ICP-MS
Cadmium	SW6020A	ICP-MS ,
Chromium	SW6020A	ICP-MS
Cobalt	SW6020A	ICP-MS
Copper	SW6020A	ICP-MS
Iron	SW6020A	ICP-MS
Lead	SW6020A	ICP-MS
Manganese	SW6020A	ICP-MS
Molybdenum	SW6020A	ICP-MS
Nickel	SW6020A	ICP-MS
Selenium	SW6020A	ICP-MS
Silver	SW6020A	ICP-MS
Thallium	SW6020A	ICP-MS
Tin	SW6020A	ICP-MS
Titanium	SW6020A	ICP-MS
Vanadium	SW6020A	ICP-MS
Zinc	SW6020A	ICP-MS
Disk.	127 12	Page

#### NONPOTABLE WATER VOLATILES

GROUP	<u>METHOD</u>	TECHNOLOGY
Purgeable Aromatics	EPA602	GC/FID
Aromatics (Fuels - BTEX & MTBE)	EPA602	GC/FID
Purgeables	BPA624	GC/MS
Non-Halogenated Volatiles	SW8015C	GC/FID
Total Petroleums (TPH - Fuel - GRO)	SW8015C	GC/FID
Aromatic Volatiles (Modified)	SW8021B	GC/FID
Aromatics (Fuels - BTEX & MTBE)	SW8021B	GC/FID
Volatiles	SW8260B	GC/MS

#### NONPOTABLE WATER EXTRACTABLES & SEMI-VOLATILES

GROUP	METHOD	TECHNOLOGY
EDB & DBCP Pesticides & PCBs Methoxchlor Polynuclear Aromatics (PAHs/PNAs) Base/Neutrals & Acids	EPA504.1 EPA608 EPA608.2 EPA610 EPA625	GC/ECD GC/ECD GC/ECD HPLC GC/MS
Methoxchlor Chlorinated Herbicides	SM20th6630 B SM20th6640 B	GC/ECD GC/ECD
EDB & DBCP Non-Halogenated Semi-Volatiles Total Petroleums (TPH - Fuel - DRO) Organochlorine Pesticides Polychlorinated Biphenyls	SW8011 SW8015C SW8015C SW8081B SW8082A	GC/ECD GC/FID GC/FID GC/ECD GC/ECD
Chlorinated Herbicides	SW8151A	GC/ECD
Semi-Volatiles	SW8270D	GC/MS
Polynuclear Aromatics (PAHs/PNAs)  Carbonyl Coinpounds (Acetaldehyde, HCOH)  Nitroaromatics & Nitroamines (Explosives)	SW8310 SW8315A SW8330B	HPLC HPLC HPLC

#### HAZARDOUS WASTE CHARACTERISTICS

PROCEDURE	<u>METHOD</u>	TECHNOLOGY
Corrosivity (Steel)	SW1110A	Coupon
Corrosivity (Water)	SW9040C	Probe
Corrosivity (Soil)	SW9045D	Probe
Ignitability (Penske-Martin)	SW1010A	Closed Cup
Paint Filter Test	SW9095B	Gravimetrio
TCLP (Metals & Organics)	SW1311	Rotating Extractor
SPLP (Metals & Organics)	SW1312	Rotating Extractor
V. 1		

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west virginia department of environmental protection

#### SOLID & CHEMICAL INORGANICS

METHOD	TECHNOLOGY
SW9045D BPA350.1 SW9056A SW9056A SW7196A SW9012B	Probe Discrete IC IC Colorimetric Spectrometric
EPA351.2 SW9056A	IC Discrete IC IC
SW9056A SW9071B	IC Gravimetric Oxidation
SW9066 SM20th4500-P E EPA160.4 SW8000 SW9056A SW9076 SW9023	Spectrometric . Spectrometric . Gravimetric . Gravimetric . IC . Oxidation .
	SW9045D BPA350.1 SW9056A SW9056A SW7196A SW9012B SW9056A BPA351.2 SW9056A SW9056A SW9056A SW9071B SW9060A SW9066 SM20th4500-P E BPA160.4 SW8000 SW9056A SW9076

#### SOLID & CHEMICAL TRACE METALS

METAL	<u>METHOD</u>	TECHNOLOGY
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 · .
Hardness	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	\$W6010C	ICP
Thallium	SW6010C	ICP
Tin	SW6010C	ICP
Titanium	SW6010C	ICP
Vanadium	SW6010C	ICP
Zinc	SW6010C	ICP
900 000 000 000 000 000 000 000 000 000		The institute of the control of the

METAL .	METHOD	TECHNOLOGY
Aluminum	SW6020A	ICP-MS
Antimony	SW6020A	ICP-MS
Arsenic	SW6020A	ICP-MS
Barium	SW6020A	ICP-MS
Beryllium	SW6020A	ICP-MS
Cadmium	SW6020A	ICP-MS
Chromium	SW6020A	ICP-MS
	SW6020A	ICP-MS
Cobalt .	SW6020A	ICP-MS
Copper	SW6020A	ICP-MS
Iron	SW6020A	ICP-MS
Lead	SW6020A SW6020A	ICP-MS
Manganese	성구 기타 전에 사용 전에 보이	ICP-MS
Molybdenum	SW6020A	ICP-MS
Nickel	SW6020A	ICP+MS·····
Selenium	SW6020A	ICP-MS
Silver	SW6020A	ICP-MS
Thallium	SW6020A	
Tin	SW6020A	ICP-MS
Titanium	SW6020A	ICP-MS
Vanadium	SW6020A	ICP-MS
Zinc .	SW6020A	ICP-MS
Chromium, Hexavalent	SW7196A	Spectrometric ·
Mercury	SW7471A	OVAA
Mercury	S.W.7471B	CVAA
Rolphinghom American (2.1774/PALIS)	READ WILL	337.124
SOLID & CH	IEMICAL VOLATILES	GOV C
with the character	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	COMMUN
GROUP	METHOD	TECHNOLOGY
Control of the	CHIOA1CO .	COMIN
Non-Halogenated Volatiles	SW8015C	ĠC/FÍD
Total Petroleums (TPH - Fuel - GRO)	SW8015C	GC/FID
Aromatic Volatiles (Modified)	SW8021B	GC/FID
Aromatics (Fuels - BTEX & MTBE)	SW8021B	GC/FID
*	•	and a second
Volatiles	SW8260B	GC/MS

GROUP	METHOD	TECHNOLOGY
Non-Halogenated Semi-Volatiles	SW8015C	GC/FID
Total Petroleums (TPH - Fuel - DRO)	SW8015C	GC/FID
Organochlorine Pesticides	SW8081B	GC/BCD
Polychlorinated Biphenyls (PCBs)	SW8082A	GC/ECD
y that	· : [·.] ,	JANGTHORN
Chlorinated Herbicides	SW8151A	GC/ECD
Semi-volatiles	SW8270D	GC/MS
Polynuclear Aromatics (PAHs/PNAs)	SW8310	HPLC
Carbonyl Compounds (Acetaldehyde, HCOH)		HPEC.
Nitroaromatics & Nitroamines (Explosives)	SW8930A ·	HPLC
Titionionimaea ee riii eministre (		n n

#### EXTRACTION, DIGESTION, CLEANUP, & PREPARATORY METHODS

GROUP	METHOD	TECHNOLOGY
Metals Digestion Metals Digestion Metals Digestion Metals Digestion Metals Digestion	BPA200.7 Rev 4.4-1994 BPA200.7 Rev 4.4-1994 BPA200.8 Rev 5.4-1994 BPA200.8 Rev 5.4-1994	Total Dissolved Total Dissolved
Ammonia Cyanide Extraction	SM20th4500-NH <sub>3</sub> B SM20th4500-CN <sup>-</sup> C SM20th6640B	Distillation Distillation Separatory Funnel
Metals digestion	SW3005A SW3010A SW3015A SW3030C SW3050B SW3051A SW3060A	Hot Block Hot Block Microwave Hot Block Acid Microwave Hexchrome
Extraction (LL) Extraction Extraction Extraction (Sonication) Extraction	SW3510C SW3535A SW3541 SW3550C SW3580A	Separatory Funnel Solid Phase (SPE) Soxhlet Ultrasonic Waste Dilution
Cleanup Cleanup Cleanup Cleanup	SW3620C SW3630C SW3660B SW3665A	Florisil Silica Gol Sulfur H <sub>2</sub> SO <sub>4</sub> /Permanganate
Extraction (Aqueous) Extraction (Soils) (Closed) Extraction (Soils)	SW5030B SW5035A SW5050	Purge & Trap (P&T) Purge & Trap Bomb
Digestion Digestion	SW7470A SW7471B	Mercury - Aqueous Mercury - Soils
Sulfide	SW9030B	Distillation

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.

Issued On, <u>30 April 2011</u>.

This Certification Expires On, 28 February 2012.

Certificate No. 219.

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

#### TESTAMERICA NORTH CANTON NORTH CANTON, OHIO

#### PARAMETERS CERTIFIED

#### NONPOTABLE WATER INORGANICS

ANALYTE	METHOD	TECHNOLOGY '
Alkalinity Ammonia Ammonia Ammonia Bromide Bromide Chloride Chloride	SM18th2320 B SM18th4500-NH3 B SM18th4500-NH3 E SM18th4500-NH3 F EPA300.0 SW9056A EPA300.0 SM18th4500-Cl <sup>-</sup> E	Titrimetric Distillation Electrode Spectrometric IC IC IC Spectrometric
Chloride Chromium (Hexavalent) Chromium (Hexavalent) Cyanide, Total Cyanide, Total Cyanide, Total Cyanide, Total Cyanide, Total Demand, Chemical Oxygen (COD) Fluoride	SW9056A SM18th3500-Cr <sup>6+</sup> D SW7196A SM18th 4500-CN B SM18th 4500-CN C SM18th 4500-CN E SW9012A ,	IC Spectrometric Spectrometric Spectrometric Spectrometric Spectrometric Spectrometric Spectrometric Spectrometric
Fluoride Hydrogen Ion (pH in Laboratory Test) Kjeldahl Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl Nitrogen, Total Nitrate Nitrate Nitrate Nitrite Nitrite Oil & Grease Organic Carbon, Total Organic Carbon, Total	SW9056A SW9040B SM18th4500-Norg B SM18th4500-NH <sub>3</sub> B SM18th4500-NH <sub>3</sub> E EPA300.0 SW9056A EPA300.0 SW9056A EPA1664A SM18th5310 C SW9060	IC Probe Digestion Distillation Electrode IC IC IC IC C IC Oravimetric Oxidation Oxidation

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department of environmental protection....

ANALYTE	METHOD	TECHNOLOGY
Phosphate, Ortho Phosphate, Ortho Phosphate, Ortho Phosphate, Ortho Phosphorus, Total Phosphorus, Total Phosphorus, Total Phosphorus, Total Solids, Dissolved Solids, Settleable Solids, Suspended Solids, Total	EPA300.0 EPA365.1 SM18th4500-P E SW9056A EPA365.1	IC Spectrometric Spectrometric IC Spectrometric Digestion Spectrometric Gravimetric Gravimetric Gravimetric Gravimetric Gravimetric
Sulfate Sulfate Sulfide Sulfide	EPA300.0 SW9056A SM18th4500-S <sup>2</sup> E SW9030B	IC . IC Titrimetric Spectrometric
Turbidity	EPA180.1	Turbidimetric

METAL	METHOD	TECHNOLOGY
	WD 4 0 0 0 7 D 4 4 1 0 0 4	ICID
Aluminum .	EPA200.7 Rev 4.4-1994	ICP
Antimony	EPA200.7 Rev 4.4-1994	1CP
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
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	BPA200.7 Rev 4.4-1994	ICP
Lead '	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	BPA200.7 Rev 4.4-1994	ICP
Potassium	BPA200.7 Rev 4.4-1994	ICP
Selenium	EPA200.7 Rev 4.4-1994	ICP
Silver	BPA200.7 Rev 4.4-1994	ICP
Sodium	EPA200.7 Rev 4.4-1994	ICP
Thallium	EPA200.7 Rev 4.4-1994	ICP
Tin	EPA200.7 Rev 4.4-1994	ICP
Titanium	BPA200.7 Rev 4.4-1994	ICP
Vanadium	EPA200.7 Rev 4.4-1994	ICP
Zinc	EPA200.7 Rev 4.4-1994	ICP
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METAL	<u>METHOD</u>	TECHNOLOGY
Aluminum	EPA200.8 Rev 5.4-1994	ICP-MS
Antimony	EPA200.8 Rev 5.4-1994	ICP-MS
	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	시구·경기 등 하게 하면 하면 이 것이 있다면 보다가 되었습니다. 그런 하겠습니다.	ICP-MS
Cadmium	EPA200.8 Rev 5.4-1994	
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
Iron	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 .
Molybdenum	EPA200.8 Rev 5.4-1994	ICP-MS
Nickel	EPA200.8 Rev 5.4-1994	ICP-MS
	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		ICP-MS
Tin	EPA200.8 Rev 5.4-1994	
Vanadium	EPA200.8 Rev 5.4-1994	ICP-MS
Zinc	EPA200.8 Rev 5.4-1994	ICP-MS
T.		
Mercury	EPA245.1	CVAA
Mercury (Methyl)	EPA1630	CVAA (Tissue & Solid)
Mercury	EPA1631	CVAA (Low Level)
Mercury	EPA1669	CVAA (LL Sampling)
	SW7470A	CVAA `
Mercury	B1174701A	011111
	SW6010B	ICP · ·
Aluminum	SW6010B	ICP
Antimony		ICP
Arsenic	SW6010B	
Barium	SW6010B	ICP ,
Beryllium ·	SW6010B	ICP
Boron	. SW6010B	ICP
Cadmium	SW6010B	ICP
Calcium	SW6010B	ICP
Chromium	SW6010B	ICP
Cobalt	SW6010B	ICP
	SW6010B .	ICP ·
Copper	SW6010B	ICP
Iron	SW6010B	ICP
Lead .	SW6010B	ICP
Magnesium		ICP
Manganese	SW6010B	ICP
Molybdenum	SW6010B	
Nickel	SW6010B	ICP
Potassium	SW6010B	·ICP
Selenium	SW6010B .	ICP
Silver	SW6010B	ICP
Sodium	SW6010B	ICP
Thallium	SW6010B	· ICb
Tin	SW6010B	ICP
	SW6010B	ICP
Titanium	SW6010B	ICP
Vanadium	SW6010B	ICP .
Zinc	2 MONTAD	101

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

GROUP	METHOD	TECHNOLOGY
Purgeables	EPA624	GC/MS
Non-Halogenated Volatiles	SW8015B	GC/FID
Volatiles	SW8260B	GC/MS

GROUP	METHOD	TECHNOLOGY
Pesticides & PCBs Base/Neutrals & Acids	EPA608 EPA625	GC/ECD GC/M8
Total Petroleums (TPH - Fuel - DRO) Organochlorine Pesticides Polychlorinated Biphenyls	SW8015B SW8081A SW8082	GC/FID GC/ECD GC/ECD
Chlorinated Herbicides	SW8151A	GC/ECD
Semi-volatiles	SW8270C	GC/MS

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#### HAZARDOUS WASTE CHARACTERISTICS

PROCEDURE	METHOD	TECHNOLOGY
Corrosivity (Water)	SW9040B	Probe
Corrosivity (Soil)	SW9045C	Probe
Ignitability (Penske-Martin)	SW1010	Closed Cup
TCLP (Metals & Organics)	SW1311	Rotating Extractor

#### SOLID & CHEMICAL INORGANICS

	ANALYTE		METHOD		TECHNOLOG	Y
	pH		SW9045C		Probe	
•	Alkalinity .	•	SM:18th2320 B		Titrimetric	
	Ammonia		SM18th4500-NH <sub>3</sub> B		Distillation	
	Ammonia		SM18th4500-NH₃ E		Electrode	
	Ammonia		SM18th4500-NH3 F		Spectrometric	
	Bromide		EPA300.0		IC	
	Bromide		SW9056A		IC	
	Chloride		EPA300.0		IC	
	Chloride		SM18th4500-Cl°E		Spectrometric	
	Chloride .		SW9056A		IC	
	Chromium, Hexavalent		SW7196A		Spectrometric	
	Cyanide, Total		SM18th 4500-CN' E		Spectrometric	
	Cyanide, Total		SW9012A		Spectrometric	•
	Demand, Chemical Oxygen (COD)	140	SM18th5520 D		Spectrometric	
	Fluoride		EPA300.0		IC	
	Fluoride		SW9056A	¥	IC	
	Halides, Extractable Organic (EOX)		SW9023	**	Oxidation	900
	Kjeldahl Nitrogen, Total		SM18th4500-Norg B		Digestion ,	
	Kjeldahl Nitrogen, Total		SM18th4500-NH <sub>3</sub> B		Distillation	
	Kjeldahl Nitrogen, Total		SM18th4500-NH₃ E		Electrode	
	Nitrate		EPA300.0		IC	
	Nitrate		SW9056A		IC	
	Nitrite		EPA300.0		IC	
	Nitrite		SW9056A		IC	
٠	Oil & Grease		EPA1664A		Gravimetric	•
	Organic Carbon, Total		. SM18th5310 C		Oxidation	
	Organic Carbon, Total		Walkley-Black		Oxidation	
	Phosphate, Ortho		EPA300.0		IC	
	Phosphate, Ortho		BPA365.1		Spectrometric	
	Phosphate, Ortho		SM18th4500-P E		Spectrometric	
	Phosphate, Ortho		SW9056A		IC	
	Phosphorus, Total		SM18th4500-P B.5		Digestion	
	Phosphorus, Total		SM18th4500-P E		Spectrometric	
	Phosphorus, Total		EPA365.1		Spectrometric	
	Solids, Total		SM18th2540 B		Gravimetric	
	Sulfate		EPA300.0	8	IC	
	Sulfate		SW9056A		IC	
	Sulfide .		SM18th4500-S2- E		Titrimetric	
	Sulfide		SW9030B		Spectrometric	
	Sulfide		SW9034		Spectrometric	
	bush.					Page 5

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#### SOLID & CHEMICAL TRACE METALS

METAL	METHOD	TECHNOLOGY
Aluminum	SW6010B	ICP
	SW6010B	ICP
Antimony	SW6010B	ICP .
Arsenic	SW6010B	ICP
Barium		ICP
Beryllium	SW6010B	ICP
Boron	SW6010B	
Cadmium	SW6010B	ICP
Calcium	SW6010B	ICP
Chromium	SW6010B	ICP
Cobalt	SW6010B	ICP
Copper	SW6010B	ICP
Iron	SW6010B	ICP
Lead ·	SW6010B	ICP ·
	SW6010B	ICP
Magnesium ·		ICP .
Manganese	SW6010B	ICP
Molybdenum	SW6010B	ICP
Nickel	SW6010B	
Potassium	SW6010B	ICP
Selenium	\$W6010B	ICP
Silver	SW6010B	ICP ·
Sodium	SW6010B	ICP
Thallium	SW6010B	ICP
Tin	SW6010B	ICP
Titanium	SW6010B	ICP
Vanadium	SW6010B	ICP '
	SW6010B	ICP .
Zinc	\$ 400100	101
Aluminum	SW6020	ICP-MS
Antimony	SW6020	ICP-MS
Arsenic	SW6020	ICP-MS
Barium	SW6020	ICP-MS
Beryllium	SW6020	ICP-MS
	SW6020	ICP-MS
Boron .	SW6020	ICP-MS
Cadmium		ICP-MS
Chromium	SW6020	ICP-MS
Cobalt	SW6020	
Copper	SW6020	ICP-MS
Iron	SW6020	. ICP-MS
Lead	. SW6020	ICP-MS
Magnesium	SW6020	ICP-MS
Manganese	\$W6020	1CP-MS
Molybdenum	\$W6020	ICP-MS
Nickel	SW6020	ICP-MS
	SW6020	. ICP-MS
Selenium	SW6020	ICP-MS
Silver		ICP-MS
Sodium	SW6020	ICP-MS
Thallium	SW6020	ICP-MS
Tin	SW6020	
Titanium	SW6020	ICP-MS
Vanadium ·	SW6020	ICP-MS
Zinc	SW6020	ICP-MS
Manager (M. 44-4)	EPA1630	CVAA (Tissue & Solid)
Mercury (Methyl)	SW7471A	CVAA
Mercury	311/4/17	-,
	524350MP	

#### SOLID & CHEMICAL VOLATILES

<u>GROUP</u> <u>METHOD</u> <u>TECHNOLOGY</u>

Non-Halogenated Volatiles SW8015B GC/FID

Volatiles SW8260B GC/MS

#### SOLID & CHEMICAL EXTRACTABLES & SEMI-VOLATILES

GROUP	<u>METHOD</u>	TECHNOLOGY
Total Petroleums (TPH - Fuel - DRO) Organochlorine Pesticides Polychlorinated Biphenyls (PCBs)	SW8015B SW8081A SW8082	GC/FID GC/ECD GC/ECD
Chlorinated Herbicides	SW8151A	GC/ECD
Semi-volatiles	SW8270C	GC/MS

#### EXTRACTION, DIGESTION, CLEANUP, & PREPARATORY METHODS

GROUP		METHOD	TECHNOLOGY
Digestion (Metals) Digestion (Metals) Digestion (Metals) Digestion (Metals)		SW3005 SW3010 SW3050 SW3060	Hot Block Acid (Aqueous) Acid (Solids) Hexchrome
Extraction Extraction Extraction Extraction Extraction Extraction Extraction	,**	SW3510 SW3520 SW3540 SW3541 SW3550 SW3580' SW3585	Separatory Funnel (LL) Continuous (CLL) Soxhlet Soxhlet (Automated) Ultrasonic (Sonication) Waste Dilution Waste Dilution - VOAs
Cleanup Cleanup Cleanup		SW3620 SW3640 SW3660 SW3665	Florisil Gel Permeation Sulfur H <sub>2</sub> SO <sub>4</sub> /Permanganate
Extraction (Aqueous) Extraction (Soils) Extraction (Soils)	¥ 6	SW5030 SW5035 SW5035A	Purge & Trap (P&T) Purge & Trap (Closed) Purge & Trap (Closed)
Digestion (Metals) Digestion (Metals)		SW7470 SW7471	Mercury - Aqueous Mercury - Soils Page 7 of 8

est virginia CEO department of environmental protection......

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.

Issued On, 31 January 2012.

This Certification Expires On, 31 December 2012.

Certificate No. 210.

David F Wolfe, PhD Quality Assurance Officer

# Department of Natural Resources State of Missouri

for Chemical Laboratory Service Certificate of Approval

This is to certify that

# TestAmerica Laboratory - St. Louis

is hereby approved to perform the analysis of drinking water as specified on the Certified Parameter List, which must accompany this certificate to be valid.

Chief, Public Drinking Water Branch Water Protection Program Department of Napotal Resources October 27, 2011 June 30, 2012 780 Certification No. Expiration Date Date Issued

Director, Environmenty/Services Program Department of Natural Resources

anno

Evaluation Officer, Environmental Services Program Department of Natural Resources



13715 Earth Rider Trail North, Earth City, MO 63045

has been approved to perform the indicated procedures on drinking water under the Missouri Public Drinking Water Regulations (10 CSR 60-5.020). Specific method numbers or references are included in parenthesis when appropriate.

#### **RADIOCHEMISTRY**

EPA 900.0, August 1980 edition - Gross Alpha, Gross Beta; EPA 901.1,
August 1980 edition - Radioactive Cesium 134/137; EPA 903.0, August 1980
edition - Radium 226; EPA 904.0, August 1980 edition - Radium 228; EPA
905.0, August 1980 edition - Strontium 90; EPA 906.0, August 1980 edition Tritium; DOE SR-02, HASL 300 Nov. 1990 edition - Strontium 90; DOE SR-03,
HASL 300 Nov. 1990 edition - Strontium 90

Expiration Date: June 30, 2012 Certificate No.: 780 Original Certifying State: Florida



## Key Personnel Resumes

Pittsburgh			
Name	Position	Degree/Discipline	Experience Start
Rusty Vicinie	General Manager	BS Chemistry & Biology	1981
Debbie Lowe	Laboratory Director	BS Chemistry	1989
Nasreen DeRubeis	QA Manager	BS Biology	1987
Larry Matko	Technical Director	BS Chemical Engineering	1988
Steve Jackson	Regional Safety Director, Waste Management Supervisor	AA Environmental Science	1991
Dave Miller	Business Development Manager	BA Biology	1979
Ryan Hall	Customer Service Manager	MS Environmental Mgmt, BS Environmental Resource Mgmt	1997
Emily Bauer	Customer Service Manager Virginia Beach Service Center	BS Biology	2000
Ken Ives	Customer Service Manager	MS Agronomy	1991
Dave Dunlap	Director of Project Management	BS Chemistry	1985
Kathy Bort	Project Manager	AS Lab Technology /Chemistry	1982
Veronica Bortot	Project Manager	BA Biology	1984
Carrie Gamber	Project Manager	BS Biology	1987
John Danek	Project Manager	BS Chemistry	2000
Sharon Bacha	Organics Manager	MS Forensic Science BA Chemistry	1987
Mike Wesoloski	Wet Chem Department Manager	BS Biology	1988
Brian Pino	Organic Extractions Supervisor	AS Wildlife Technology	1990
Chris Kovitch	Sample Receipt Manager	AS Business Management	1990
Roseann Ruyechan	Report Generation Section Manager	BS Biology	1983



#### Personnel Resume

#### Deborah L. Lowe Lab Director

#### **Qualifications Summary**

Ms. Lowe is the Laboratory Director for TestAmerica Laboratories Inc. in Pittsburgh. Ms. Lowe has over 18 years of experience. She is proficient in the operation and troubleshooting of a variety of laboratory equipment and instrumentation. She is experienced in managing production for a service oriented industry in a regulatory environment. She has thorough understanding of operational, quality assurance, personnel and financial issues.

#### **Professional Experience**

#### **Laboratory Director**

TestAmerica Laboratories, Inc. - Pittsburgh, PA - Oct 2010 to Present

- Ms.Lowe's responsibilities include all aspects of the administrative management of the analytical laboratory, ensuring that client deadlines are met and assuring that the quality of data is acceptable.
- The functional groups of the facility include Project Management Customer Service Management, QA/QC and Information Technology, Report Generation, GC/MS Volatiles, GC/MS Semivolatiles, GC Semivolatiles, Metals, Wet Chemistry, Organic Prep and Sample Control/Sample Preparation.
- Other responsibilities include adherence to budget, staff development and control, quality assurance and quality control, scheduling, client support/liaison, as well as profit and loss responsibility for the Pittsburgh facility.
- In addition, she is responsible for oversight of the Environmental Health and Safety Program.

#### **Laboratory Director**

03-11

TestAmerica Laboratories, Inc. - Dayton, OH -- 2006 to 2010

- Oversaw Operations of \$3.5M/year and 35 employees. Lead a team of managers including lab operations, customer service and quality assurance requirements.
- Developed and maintained Quality systems consistent with ISO based NEALP requirements.
- Instrumental in profit turnaround and increase by tracking and implementing purchasing strategies and streamlining operations.
- Implemented departmental budgets and cost center analyses to determine department profitability.
- Established incentive programs for department managers based on production and quality driven goals resulting in a more cohesive management team.
- Coordinated special projects within the lab and acted as technical liaison for clients that require testing outside the normal scope.



# Deborah L. Lowe Lab Director

**Laboratory Director** 

TestAmerica Laboratories, Inc.-- Buffalo Grove, IL and Oak Creek, WI -- 1997 to 2006

- Oversaw Operations of \$5M/year and 60 employees at two locations: Buffalo Grove IL and Oak Creek, WI. Lead a team of 5 managers including lab operations, customer service and quality assurance requirements.
- Developed and maintained Quality systems consistent with ISO based NEALP requirements.
- Instrumental in profit turnaround and increase by tracking and implementing purchasing strategies and streamlining operations.
- Implemented departmental budgets and cost center analyses to determine department profitability.
- Established incentive programs for department managers based on production and quality driven goals resulting in a more cohesive management team.
- Coordinated special projects within the lab and acted as technical liaison for clients that require testing outside the normal scope.
- Created benchmarking and training programs to improve safety of employees and the quality and timeliness of their work.

**Marketing Manager** 

TestAmerica Laboratories, Inc.-- Buffalo Grove, IL and Oak Creek, WI -- 1996 to 1997

Co-designed and implemented a marketing plan in a newly created position. Conveyed marketing strategies to the entire staff. Designed value added customer programs, including technical seminars, promotional materials and special events. Customized industry related training sessions for individual clients. Prepared technical brochures and marketing literature. Attended industry association meetings and trade shows. Assembled data validation packages.

Department Manager

TestAmerica Laboratories, Inc.-- Buffalo Grove, IL and Oak Creek, WI -- 1994 to 1996

Managed a team of five analysts. Wrote and reviewed department SOPs. Implemented department training and cross training program. Performed all equipment maintenance and repair. Streamlined analyses, increasing efficiency by 35%. Developed methods for new applications. Established internship program with local colleges and universities.

**Analyst** 

TestAmerica Laboratories, Inc.-- Buffalo Grove, IL and Oak Creek, WI -- 1992 to 1994

Analyzed samples for volatile organic compounds using Purge and Trap technology by gas chromatograph coupled with Photo-ionization, Flame Ionization, Electrolytic Conductivity, and Mass Selective Detectors. Performed Classical wet chemistry techniques such as distillation, colorimetry, titrations and gravimetric analyses. Prepared hot plate digestion samples submitted for metal analyses according to EPA methodologies.



# Deborah L. Lowe Lab Director

### Education

➤ BS in Chemistry – University of Illinois -- Urbana, IL -- 1992

### **Professional Affiliations**

- > American Chemical Society
- > American Council of Independent Laboratories
- > Southwest Ohio Water Environmental Association
- > SWOWEA Laboratory Analysts Committee

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# David M. Miller Business Development Manager

#### **Qualifications Summary**

Mr. Miller has more than 24 years experience in the environmental testing industry. He began his career as a research technician in the Environmental Resources and Occupational Health Division of a fortune 100 corporation, advancing through the technical ranks to Inorganic Chemistry Manager, then diversifying to Division Manager, Data Management and finally moving into laboratory administrative roles, directing total facility operations. Mr. Miller is skilled in developing systems and teams to improve laboratory information flow and output, which result in superior customer satisfaction and effective business planning. In his current position, Mr. Miller is tasked with the further development of customer satisfaction tools and with the growth of the direct industrial client market.

### **Professional Experience**

# Business Development Manager Customer Service Manager

TestAmerica Laboratories, Inc. - January 2007 to Present

Responsible for the implementation of systems to focus Project Managers and Account Executives on business teaming relationships providing more complete customer satisfaction and ensuring repeat business. In his role as Customer Service Manager (CSM), Mr. Miller is a central point of contact within the Pittsburgh facility providing a bridge between the proposal and project stage to Pittsburgh clients. Duties include proposal preparation, pricing, technical scope definition, contract review, and customer satisfaction surveys.

# Business Development Manager Customer Service Manager

Severn-Trent Laboratories, Inc - August 2000 to December 2006

Responsible for the implementation of systems to focus Project Managers and Account Executives on business teaming relationships providing more complete customer satisfaction and ensuring repeat business. In his role as Customer Service Manager (CSM), Mr. Miller is a central point of contact within the Pittsburgh facility providing a bridge between the proposal and project stage to Pittsburgh clients. Duties include proposal preparation, pricing, technical scope definition, contract review, and customer satisfaction surveys.

#### President

Antech Ltd, Export, PA.—January 1994 to February 2000



# David M. Miller Business Development Manager

Responsible for the financial performance and business development of a commercial environmental laboratory. Grew the business from \$1.6 million in sales to \$4.9 million in sales while maintaining consistent profit returns. Developed a commercial radiochemistry division through the successful inclusion of a formerly captive nuclear chemistry laboratory in Madison, PA. Duties include business planning and profit/loss management; development of market strategy and sales focus; develop key management team; business growths though niche markets and geographic expansion.

# Laboratory Director / Vice President of Operations

Antech Ltd., Export, PA--January1989 to December 1993

Responsibilities include overall operations management to streamline sample flow throughout the laboratory while increasing efficiencies and reducing costs and sample turnaround. Duties included managing Antech's analytical laboratories; development of staff and key management team; laboratory department reorganization, and business planning.

Division Manager, Data Management

Spectrix (formerly Keystone Environmental Resources, Inc.)--Houston, TX--March 1987 to January 1989

Responsible for the development and implementation of a centralized Laboratory Information Management System (LIMS) networking operations in Pittsburgh, PA, Houston, TX and Los Angeles, CA. Duties included: database blueprinting; training and implementation; user interface programming; data upload development; and management of reports and CLP production groups.

Inorganic Chemistry, Manager / Manager, Laboratory Information Systems Keystone Environmental Resources, Inc. (a subsidiary of Koppers, Co. Inc.)--Monroeville, PA--1983 to 1987

Responsible for supervising the Metals, General Chemistry and Instrumental Analysis Groups. Managed the login, reports production, and LIMS departments; succeesfully implementing the first computer tracking and data management system used by the company.

Supervisor, Instrumental Analysis Group / Environmental Audit Team Member Koppers, Co. Inc.—Monroeville, PA—1981 to 1983

Supervised instrument group providing effluent service, groundwater, and soils testing to Koppers, Co. facilities internationally and to Koppers subsidiaries and key clients. Participated in budget preparation, training and staffing. Implemented Perkin-Elmer AA, Perkin-Elmer ICP, Alpkem Autoanalyzer, Mitsubishi TOX, Oceanographic International TOC, and Dohrman TOC instruments into the laboratory.

#### Chemist I

Allegheny Power Systems—Greensburg, PA—1980 to 1981 Successfully developed a general chemistry department within the laboratory to test power plant influents, effluents, boiler blowdown and cooling tower waters. Performed metals analysis, ion chromatography, gas chromatography, and general chemistry on water samples. Performed BTU, sulfur, ash, and moisture analysis on coal samples.

#### Research Technician

Koppers, Co., Inc.-Monroeville, PA-1979 to 1980



David M. Miller Business Development Manager

Performed wet chemical analyses as a member of the Environmental Resources and Occupational Health (EROH) Group located at the Koppers Research Facility. Performed field sampling of effluents, groundwater, and air samples.

#### Education

➤ BA in Biology – Dordt College – Sioux Center, Iowa -- 1977

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# Larry Matko Technical Director

### **Qualifications Summary**

Mr. Matko is the Laboratory Technical Director for TestAmerica Pittsburgh. Mr. Matko has over 23 years of experience as Lab Director, Operations Manager and previously as a chemist in the area of pesticides/PCBs and herbicides analyses.

### **Professional Experience**

#### **Technical Director**

TestAmerica Laboratories, Inc. -- Pittsburgh, PA - 2010 to Present

- Mr. Matko solves technical problems in the laboratory including troubleshooting instruments and develops or modifies methods as needed to meet customer requirements.
- Performs sample analyses, data write up and final data reviews.
- Maintains and repairs analytical instruments to reduce downtime.
- Consults with clients, regulators, and others regarding technical aspects of analyses.
- Suggests and implements process improvements to maximize productivity, cost savings and decrease turnaround time.
- Leads the implementation and follow up of TestAmerica's best practice process' to spread best technical practices and develops Standard Operating Procedures.
- Evaluates and adapts new technologies and methodologies, performs non routine
  analysis as required to meet the needs of current long-term clients or as a means to
  capture new clients in support of business development efforts.
- Prepares reports and recommendations for senior management, sets up and conducts training for analyst and technicians, mentors associates in the laboratory.
- Assists in the development of TestAmerica's health and safety protocols.
- Investigates issues raised by clients, QA, Sales, and other departments to find root cause and implement corrective action and proper response.
- Contributes technical information and evaluation for major new equipment purchases and capital expenditures.
- · Carries out technical and business tasks as assigned by the Lab Director.

### **Laboratory Director**

TestAmerica Pittsburgh (formerly STL Pittsburgh) -2006 to 2010

Mr.Matko's responsibilities included all aspects of the administrative management of the analytical laboratory, ensuring that client deadlines are met and assuring that the quality of data is acceptable. The functional groups of the facility include Project Management Customer Service Management, QA/QC and Information Technology, Report Generation, GC/MS Volatiles, GC/MS Semivolatiles, GC Semivolatiles, Metals, Wet Chemistry, Organic Prep and Sample Control/Sample Preparation. His other responsibilities include adherence to budget, staff development and control, quality assurance and quality control, scheduling, client support/liaison, as well as profit and loss responsibility for the Pittsburgh facility. In addition, he is responsible for oversight of the Environmental Health and Safety Program.

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# Larry Matko Technical Director

**Operations Manager** 

STL-Pittsburgh -- Pittsburgh, PA - 2005 to 2006

Operations Manger is responsible for the production activities of the analytical groups of the laboratory. Essential duties include implementing improvements to enhance systems for processing samples and scheduling work through the laboratory, resource leveling to meet production requirements, and managing the sample backlog for 100% on-time delivery. He also assists the laboratory manager with review and development of standard operating procedures and prepares recommendations as the need arises for new or revised analytical methods.

**Project Manager** 

STL Pittsburgh (formerly Quanterra Incorporated)—Pittsburgh, PA--2004 to 2005

GC/Organic Prep Group Leader

STL Pittsburgh (formerly Quanterra Incorporated)—Pittsburgh, PA—2000 to 2004

GC/Organic Prep Group Leader

Quanterra Incorporated--Pittsburgh, PA—1996 to 2000

GC Semivolatiles Team Leader

Quanterra Incorporated--Pittsburgh, PA—1995 to 1996

**GC Chemist** 

Quanterra Incorporated--Pittsburgh, PA-1994 to 1995

**GC Chemist** 

IT Analytical Services--Pittsburgh, PA—1993 to 1994

**GC Chemist** 

Chester Labnet—Monroeville, PA—1991 to 1993

**GC Chemist** 

IT Analytical Services—Pittsburgh, PA—1989 to 1991

Lab Technician

IT Analytical Services—Pittsburgh, PA—1988 to 1989

### Education

03-11

> BS in Chemical Engineering - Pennsylvania State University—State Park, PA--1985



# Ryan Hall Customer Service Manager

# **Qualifications Summary**

Mr. Hall has over 13 years of experience as an environmental scientist. His tenure covers the gamut from sampling, to analysis, reporting, consulting, project management and business development. This diversity helps Mr. Hall to accurately understand the client's needs and deliver exceptional customer service.

### **Professional Experience**

# Customer Service Manager,

TestAmerica - Pittsburgh, PA – January 2010 to Present Duties include:

- Program Manager for Marcellus Shale services
- Primary point of contact for multiple E&P firms
- Set up projects for accurate and effective execution by the laboratory
- Work closely with E&P Predrill and Ground Water Protection teams to document compliance
- Respond to requests for pricing and issue quotation

# **Analytical Service Business Unit Coordinator**

RJ Lee Group - Pittsburgh, PA - 2006 to 2010

- Salesman for IH and industrial forensic analytical services
- Product Manager for TVA Fly Ash Recovery efforts
- Product Manager for BP Deep Water Horizon environmental forensics evaluation
- Product Manager for Westinghouse and Nuclear Navy leachable metals compliance
- Coordinate subcontractors
- Direct environmental and IH field events
- Consult on environmental air, water, and solid waste control and compliance

# Chemist, GC Semivolatiles

STL - Pittsburgh - Pittsburgh, PA – June 2003 to August 2006 Duties include:

- Proficient with GC, GC/MS and HPLC instrumentation
- Responsible for data entry and review
- Compile reports for validation purposes
- Organics department purchaser, responsible for supply chain management

#### **Project Manager**

STL Sacramento – Sacremento, CA – 2001 to 2003 Duties include:



# Ryan Hall Customer Service Manager

 Overseeing al project related aspects for a broad mix of clients including sanitation districts, private firms, and government programs]

 Specialized in Dioxin/Furan and PCB Congener programs in addition to standard analytical parameters

 Serving as the liaisaon between the client and the laboratory endsuring that the delivered product was in agreement with the clients' requirements.

Responsible for all aspects of writing and compiling finished reports

Workd closely with Sacramento senior staff and STL Pittsburgh to oversee the dioxin
portion of the high-profile program. This included daily briefings with Operations and
Senior Staff as well as intensive documentation and extensive communication with
both STL Pittsburgh and the client

Managed \$1.2 of revenue for fiscal year 2002 and \$4.5 million for fiscal year 2003

# **Environmental Scientist/Laboratory Technician**

STL - Anchorage – Anchorage, AK – 2000 - 2001 Duties included:

 Filling roles in all aspects of STL Anchorage's service center operations including sample control, bottle prep, field services, and logistics

Serving as the Health and Safety representative

 Performing organic extractions of 8270 SIM, BNA, PAH, AK102, AK103, 8081, and 8082

Training in DOT and IATA shipping regulations

Serving as one of two environmental scientists for the Alyeska Pipeline contract

 Conducting specialized air, crude oil and standard environmental testing from source fields, pump stations, and the Valdez Marine Terminal

Operating independently in remote location

#### **Environmental Scientist**

Blazosky Associates - Pittsburgh, PA – 1999 to 2000 Duties included:

- Managing all aspects of compliance oversight for seven constructed landfill cells/caps
- Working with a professional engineer to publish Certification Reports for cell/cap construction
- Working with a professional geologist/engineer to perform ESA's and NPDES permitting
- Designing under PE approval a wastewater treatment syste for a private firm

Installing and performing sampling of monitoring wells

 Preparing, under PG approval, a soil management plan for an Ohio Hazardous Waste facility.

#### **Undergraduate Research Assistant**

Pennsylvania State University – State College, PA – 1998 to 1999 Duties included:

- Assisting Doctoral and Post Doctoral research of plant homone transmission
- Study focuses on the correlation between plant herbivory and ethylene transmission



# Ryan Hall Customer Service Manager

- Presenting research on plant hormone transmission to the Howard Hughes Medical Institute
- Assisting Masters research on constructed wetland success at Ft. Drum, NY

#### Education

- Masters of Environmental Management Duquesne University Pittsburgh, PA -- 2009
- ▶ BS in Environmental Resource Management Pennsylvania State University State College, PA -- 1999

### **Professional Training**

- SafeLand Core "Train the Trainer"
- > 8 hr Nuclear Safety
- OSHA 40Hr, and 1<sup>st</sup> Refresher
- > DOT Shipping
- > IATA Shipping
- > NICET I Geomembranes and Geofilters
- > U.S. Army ROTC Basic Course

#### Awards / Honors

- Adjunct Professor at Penn State University Eberly College of Science (2009present)
- ➤ Guest lecturer at Carnegie Mellon University concerning 9/11 assessment
- > Howard Hughes Medical Institute grant for undergraduate research
- > PSU College of agriculture scholarship for exceptional internship
- > Eagle Scout



# Sharon Bacha Organics Department Manager

#### **Qualifications Summary**

Sharon Bacha has extensive experience in organics analysis, volatiles and semivolatiles by GC/MS using current EPA CLP and SW-846 methods for samples of various matrices, and GC/MS data review. She is knowledgeable of various computer programs such as Target Data System, LIMS, Windows 2000 and Word. Sharon oversees the operation of the GCMS Volatile, Semivolatile and GC groups.

### **Professional Experience**

**Organics Group Leader** 

TestAmerica Pittsburgh —Pittsburgh, PA--2004 to Present

Responsible for the overall operation of the GC/MS Volatile, GC/MS Semi-volatile and the GC Semi-volatile areas. Her duties include planning, scheduling and supervising all organic analyses. In addition, Sharon is responsible for daily technical oversight for the organic groups including instrumentation maintenance, inventory management, data review, QC implementation, H&S, method development and training. Sharon serves as the GCMS technical contact/ resource to analysts, project managers and clients.

GC/MS BNA Group Leader

STL Pittsburgh (formerly Quanterra Incorporated)—Pittsburgh, PA--2000 to 2004

GC/MS BNA Group Leader

Quanterra Incorporated—Pittsburgh, PA—1996 to 2000

GC/MS Chemist, BNA Group

Quanterra Incorporated—Pittsburgh, PA—1994 to 1996

Team Leader, MS VOA and MS BNA Groups

IT Analytical Services—Pittsburgh, PA—1991 to 1994

Team Leader, BNA Group

IT Analytical Services—Pittsburgh, PA—1987 to 1991

#### Education

- BA in Chemistry Washington & Jefferson College –Washington, PA—1985
- MS, Forensic Sciences—Virginia Commonwealth University—Richmond, VA 1987



# Bill Reinheimer Metals Department Supervisor

### **Qualifications Summary**

Mr. Reinheimer is the Metals Group Leader and principal ICP-MS analyst. He is responsible for preparing and analyzing water and soil samples. Mr. Reinheimer is also responsible for analyzing samples on the ICP and the ICP Trace, reviewing data and preparing data packages.

# **Professional Experience**

**Team Leader, Metals Group** 

TestAmerica Pittsburgh —Pittsburgh, PA—May 2011 to Present Responsibilities include the analysis of samples for metals determination, review of analytical data for compliance, and assisting in the preparation of analytical reports.

- Analyzing samples for metals determination on the ICP, Trace ICP and ICPMS.
- Calculating analytical results.
- Summarizing of analytical results according to CLP and other standard formats.
- Supervising personnel in the calculations of analytical results.
- Supervising personnel in performing ICP trace metals, furnace techniques and mercury analyses.

Directing the application of new methodologies in the metals preparation and metals analyses.

Chemist, Metals Group

TestAmerica Pittsburgh —Pittsburgh, PA— January 2010 to May 2011 Responsibilities include the analysis of samples for metals determination, review of analytical data for compliance, and assisting in the preparation of analytical reports.

- Analyzing samples for metals determination on the ICP, Trace ICP and ICPMS.
- Calculating analytical results.
- Summarizing of analytical results according to CLP and other standard formats.
   Directing the application of new methodologies in the metals preparation and metals analyses

Team Leader, Metals Group

TestAmerica Pittsburgh —Pittsburgh, PA—2 January 2007 to Jan 2010 Responsibilities include the analysis of samples for metals determination, review of analytical data for compliance, and assisting in the preparation of analytical reports.

- Analyzing samples for metals determination on the ICP, Trace ICP and ICPMS.
- Calculating analytical results.
- Summarizing of analytical results according to CLP and other standard formats.
- Supervising personnel in the calculations of analytical results.
- Supervising personnel in performing ICP trace metals, furnace techniques and mercury analyses.
- Directing the application of new methodologies in the metals preparation and metals analyses.



# Bill Reinheimer Metals Department Supervisor

**Team Leader, Metals Group** 

STL Pittsburgh\* -- Pittsburgh, PA – January 2004 to January 2007 Responsibilities include the analysis of samples for metals determination, review of analytical data for compliance, and assisting in the preparation of analytical reports.

- Analyzing samples for metals determination on the ICP, Trace ICP and ICPMS.
- Calculating analytical results.
- Summarizing of analytical results according to CLP and other standard formats.
- Supervising personnel in the calculations of analytical results.
- Supervising personnel in performing ICP trace metals, furnace techniques and mercury analyses.
- Directing the application of new methodologies in the metals preparation and metals analyses.

Chemist/Analyst III

STL Pittsburgh\* -- Pittsburgh, PA – October 2000 to December 2003 Duties include:

- Responsible for the preparation and analysis of mercury samples.
- Involved with the scheduling of projects in order to meet holding times and analytical due dates.
- Responsible for data review involving correct quality control and data entry.

### **Group Leader/Senior Chemist**

Antech LTD -- Export, PA – January 1992 to October 2000 Duties include:

- Managing metals department.
- Training new employees in the use of instrumental analysis and samples preparation techniques.
- · Developing all existing analytical programs.
- Implementing and overseeing all QA/QC criteria.
- Creating QA/QC deliverable packages for the metals department.
- Troubleshooting and maintaining all department instrumentation.
- Reviewing and finalizing all data generated from testing and preparation procedures.
- Consulting with clients on testing methods and data evaluation.

#### Chemist I

Antech LTD -- Export, PA - August 1990 to January 1992 Responsibilities included:

- Developing expertise in the following instrumentation: TJA 61E Trace ICP, ARL 3560 ICP, Perkin Elmer 5100 Graphite Furnace AA, Leeman Labs PS200II Cold Vapor AA, and the Varian Spec 20 AA spectrophotometer including cold vapor/gaseous hydride VGA analyzer.
- Acquiring detailed knowledge of the methodologies including USEPA 600 Series/SW-846, USEPA Contract Laboratory Program, NPDES 200 Series, and ASTM Standard Methods.



# Bill Reinheimer Metals Department Supervisor

 Testing water, soil, waste, and air filter samples utilizing Atomic Absorption (AA) and Atomic Emission (AE) techniques.

### Education

BS in Chemistry – Minors in Mathematics and Physics – University of Pittsburgh – Pittsburgh, PA -- 1990

### **Professional Affiliations**

The Spectroscopy Society of Pittsburgh



Michael T. Wesoloski Wet Chemistry Department Supervisor

### **Qualifications Summary**

Mr. Wesoloski is the Wet Chemistry Team Leader. He is responsible for managing the operations of the group and analysis of samples by various methods. Mr. Wesoloski is also actively involved in the review of analysis of analytical results to determine compliance with the quality control program standards, reviewing of data and preparing data packages.

#### Professional Experience

#### **Team Leader, Wet Chemistry Group**

TestAmerica Pittsburgh —Pittsburgh, PA—2 January 2007 to Present Responsibilities include the analysis of samples for various inorganic analytes by classical techniques, review of analytical data for compliance, and assisting in the preparation of analytical reports.

- Analyzing samples for wet chemistry parameters on various instrumentation (Alpkem/Lachat/Dionex IC) etc.
- Calculating analytical results.
- Summarizing of analytical results according to CLP and other standard formats.
- Supervising personnel in calculations of analytical results.
- Determining appropriate schedules/staffing levels within the group.
- Directing the application of new methodologies in the wet chemistry department.
- Evaluating equipment selection and maintaining adequate supply of materials and chemicals.
- Hold weekly meetings with group and QA Manager to implement any procedural modifications.
- Set and implement new methods within the Wet Chemistry Department.
- Added new instrumentation to the group in timely manner.

#### Team Leader, Wet Chemistry Group

STL Pittsburgh\* -- Pittsburgh, PA – January 2004 to January 2007 Responsibilities include the analysis of samples for various inorganic analytes by classical techniques, review of analytical data for compliance, and assisting in the preparation of analytical reports.

- Analyzing samples for wet chemistry parameters on various instrumentation (Alpkem/Lachat/Dionex IC) etc.
- Calculating analytical results.
- Summarizing of analytical results according to CLP and other standard formats.
- Supervising personnel in calculations of analytical results.
- Determining appropriate schedules/staffing levels within the group.
- Directing the application of new methodologies in the wet chemistry department.
- Evaluating equipment selection and maintaining adequate supply of materials and chemicals.
- Hold weekly meetings with group and QA Manager to implement any procedural modifications.



# Michael T. Wesoloski Wet Chemistry Department Supervisor

Added new instrumentation to the group in timely manner.

# Team Leader, Metals Group

STL Pittsburgh\* -- Pittsburgh, PA – December 2000 to December 2003 Responsibilities include the analysis of samples for metals determination, review of analytical data for compliance, and assisting in the preparation of analytical reports.

- Analyzing samples for metals determination on the ICP and the Trace ICP.
- Calculating analytical results.
- Summarizing of analytical results according to CLP and other standard formats.
- Supervising personnel in the calculations of analytical results.
- Supervising personnel in performing ICP trace metals, furnace techniques and mercury analyses.
- Directing the application of new methodologies in the metals preparation and metals analyses.

#### Chemist/Analyst III

STL Pittsburgh\* -- Pittsburgh, PA – January 2000 to Dec 2000 Duties include:

- Responsible for the preparation and analysis of mercury samples.
- Involved with the scheduling of projects in order to meet holding times and analytical due dates.
- Responsible for data review involving correct quality control and data entry.

### Chemist/Analyst III

Quanterra Inc. -- Pittsburgh, PA -- July 1996 to Jan 2000 Duties include:

- Responsible for the preparation and analysis of mercury samples.
- Involved with the scheduling of projects in order to meet holding times and analytical due dates.
- Responsible for data review involving correct quality control and data entry.

### **Inorganics Group Leader**

Quanterra Inc. -- Pittsburgh, PA--1994 to July 1996

Duties include:

 Day to day operations of Metals, Inorganic Preparation and General Chemistry analyses.

#### **Team Leader, Metals Group**

Quanterra Inc. -- Pittsburgh, PA—1994 to 1994

**Duties include:** 

- Analysis of samples for metals determination
- Review of analytical data for compliance
- Assisted in the preparation of analytical reports:
  - a) Analyzing samples for metals by flame, furnace and ICP procedures.
  - b) Calculating analytical results



# Michael T. Wesoloski Wet Chemistry Department Supervisor

- Summarizing of analytical results according to CLP and other standard formats.
- d) Supervising computerized calculations of analytical results.
- e) Supervising personnel in performing trace metal analyses.
- f) Directing the application of new methodologies in the metals analysis.

#### **Team Leader, Metals Group**

IT Analytical Services—Pittsburgh, PA—1991 to 1994 Duties include:

- Analysis of samples for metals determination
- · Review of analytical data for compliance
- Assisting in the preparation of analytical reports:
  - a) Analyzing samples for metals by flame, furnace and ICP procedures.
  - b) Calculating analytical results
  - Summarizing of analytical results according to CLP and other standard formats.
  - d) Supervising computerized calculations of analytical results.
  - e) Supervising personnel in performing trace metal analyses.
  - f) Directing the application of new methodologies in the metals analysis.

### Group Leader, Inorganic Preparation group

IT Analytical Services—Pittsburgh, PA—1990 to 1991

Duties include:

- Preparing samples for analysis for metals determination.
- Training of laboratory personnel in the performance of sample preparation.
- Organizing and scheduling sample preparation within the group.
- Supervising and/or performing preparations of Performance Evaluation samples.

#### Laboratory Technician, Metals Group

IT Analytical Services—Pittsburgh, PA—1989 to 1990 Duties include:

- Operating instruments 5100 GFAA and 5000 GFAA.
- Utilizing CLP SOW 7/88 and SW846 methods for various samples and analyses.
- Preparing standards for GFAA.
- Calculating data and analyzing Quality Control samples.

#### Sample Preparation Specialist, Laboratory Technician

IT Analytical Services—Pittsburgh, PA—1987 to 1989

Duties include:

- Performing CLP and non-CLP digestions on soils, wastes, waters ad air filters.
- Performing pH determinations, specific conductance, flashpoint, TCLP, EP Toxicity, water content, SAR CEC and extractions.
- Testing the soil for grain size, water content and consolidation tests.

#### Education



Michael T. Wesoloski Wet Chemistry Department Supervisor

▶ BS in Biology – LaRoche College – Pittsburgh, PA -- 1987