Memo

GZA GeoEnvironmental, Inc.

Sent Via Email

530 Broadway
Providence, Rhode Island 02909
Phone - (401) 421-4140
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TO: Joseph Martella – RIDEM

FROM: Meg Kilpatrick – GZA

CC: Michele Leone – NGRID
James Clark – GZA
Barbara Morin – RIDEM Office of Air Resources (OAR)

DATE: September 12, 2012

FILE NO.: 05.0043654.00-C

RE: Summary of June 2012 Waterline Repair and Hydrant Replacement Activities
Former Tidewater Facility
Pawtucket, Rhode Island
RIDEM Case No. 95-022

On behalf of The Narragansett Electric Company d/b/a National Grid (National Grid), GZA GeoEnvironmental, Inc. (GZA) is pleased to provide you with this memorandum related to a waterline repair and hydrant replacement activity performed at the Former Tidewater Facility located in Pawtucket, Rhode Island (herein referred to as the "Site"). This memorandum summarizes the repair work and the results of air quality monitoring performed during the work.

This memorandum is subject to the Limitations presented in Attachment A and is subject to modification if subsequent information is established by GZA or any other party.

BACKGROUND

This Site was the location of the former Tidewater MGP and the former Pawtucket No. 1 Power Station. The majority of the Site is currently vacant with the exception of an active natural gas regulating station and active switching and electrical substations, which are both owned and operated by National Grid. The Site consists of approximately 23 acres located on the western bank of the Seekonk River.

The activities described herein were implemented to address a damaged section of waterline and an associated non-functional hydrant located along Tidewater Street on the eastern central portion of the Site. Figure 1 depicts the approximate location of the work area. Review of available utility plans indicates that the waterline runs from the hydrant location to the No.1 Station and provides water for the facility. The waterline was discovered to be damaged by National Grid personnel during the weekend of June 3, 2012. National Grid contacted the Pawtucket Water Supply Board (PWSB) to

temporarily turn-off water service to the Site. A representative from the PWSB was able to successfully stop the flow of water by closing the water shut off valve located at the intersection of Thornton and Merry Street.

The damage to the waterline appeared to be associated with the valve block of the hydrant. The repair required limited earthwork and replacement of the hydrant and associated valve block. The repair took approximately 6 hours to perform.

REPAIR ACTIVITIES

The waterline repair work area, as shown on Figure 1, is located approximately 50 feet south of the natural gas regulating station, along the fenced portion of Tidewater Street. Given the proximity of the work area to the natural has regulating station, the work was conducted consistent with the submittal for the recent regulator station upgrades. Specifically, the repair work was performed consistent with the April 2011*Materials Management Plan* (MMP) prepared for the natural gas regulating station upgrade work in 2011. In addition, during all earthwork activities, air monitoring was performed by GZA consistent with the RIDEM-approved April 2011 *Air Quality Monitoring Program* (AQMP) and subsequent May 5, 2011 correspondence with the Department.

The activities described herein were implemented on June 26, 2012. These activities included excavating down to the hydrant valve block, replacing the hydrant and backfilling the excavation. The excavation was approximately 10 feet by 10 feet and approximately 4.5 feet below ground surface (bgs). Figure 1 depicts the approximate location and limits of the final excavation.

Waterline repair, hydrant replacement and earthwork activities were performed by Universal Construction of Johnston, Rhode Island and their subcontractor, A.E. Bragger of Warwick, Rhode Island. A GZA representative was on-Site to observe and document repair activities and perform air quality monitoring during this work.

Erosion and sedimentation controls, consisting of hay bales and polyethylene sheeting were installed on the pavement for the temporary stockpiling of soils associated with the repair. A small excavator combined with hand work was used to expose the damaged valve block. The excavated material appeared to be consistent with urban fill, with sands, gravel and trace amounts of anthropogenic material (slag, clinker, bricks). No significant environmental impacts were observed by GZA in the excavated material. A new hydrant with valve block was installed and the excavation was backfilled to match surrounding grade. All excavated material was re-used as backfill and no material was transported off-Site. The final surface was completed with approximately 3-inches of gravel. Refer to Attachment B for representative photographs of the work completed.

Upon completion of the repair work, PWSB re-activated the Site water service and National Grid personnel confirmed that water service to the No. 1 Station was restored.

AIR QUALITY MONITORING

In accordance with the April 2011 AQMP and May 2011 correspondence with RIDEM, air quality monitoring was performed during intrusive activities, similar to that completed during the natural gas regulator station upgrades. The AQMP was designed to be protective by using a two- tiered approach: real-time air monitoring and time integrated sampling using US EPA-approved sampling and

analytical methods. The AQMP includes established actions levels for both tiers; requiring certain responses (additional sampling, changes in work practices, *etc*.) in the event of exceedances. The following sections summarize the results of both the real-time and time integrated air monitoring performed during this activity. As described below, no action level exceedances resulting from this activity were detected.

Real-Time Monitoring

Real-time monitoring performed by GZA consisted of the following: Total Volatile Organic Compounds (TVOCs) using a Photovac 2020 Photoionization Detector (PID); Benzene using a Photovac Voyager portable Gas Chromatograph (GC); and Respirable Dust (PM10) Levels using a DustTrak dust meter. The PID, GC and dust meter were calibrated prior to performing the repair work. Regular monitoring was conducted within the work zone and the perimeter monitoring locations shown on the attached Figure 1. Air monitoring equipment was moved periodically (approximately once every two hours) between perimeter sampling locations to check parameters at the Site perimeter. During the remainder of time, the equipment was stationed proximate to the work zone. Graphs presenting the recorded TVOC, dust, and benzene concentrations are included in Attachment C.

As presented in the data graphs and in the table below, results of the real time monitoring were below the Action Levels for the constituents monitored for both the work zone and perimeter monitoring locations. The results of this real-time monitoring were consistent with the background levels recorded.

Compound	Work Zone Perimeter		Perimeter	
	Action Level	Range	Action Level	Range
Total Volatile Organic Compounds (TVOC) (ppm)	< 1.0	< 0.01 – 0.44	0.1	< 0.01 – 0.04
Respirable Particulate (PM10) (µg/m3)	1,000	<1 – 24	150	<1 – 32
Benzene (ppm)	Not Applicable	<0.01	0.1	<0.01

Time Integrated Monitoring

Consistent with the AQMP, two VOC air samples, one upwind and one downwind from the work zone, were collected during the day intrusive activities were performed. In addition, a field blank was collected and submitted along with the field samples to the laboratory. The sampling locations, as shown on the attached Figure 1, were selected based on actual and predicted wind conditions (directions) for the sampling day, as well as the location of neighboring sensitive receptors. VOC samples were collected using SUMMA stainless steel canisters in conjunction with US EPA Method TO-15 GC/MS Full Scan, as presented in "The Compendium of Methods for the Determination of Toxic Organic Compounds in the Ambient Air."

As indicated previously, there were no exceedances of real-time monitoring levels. However, consistent with the AQMP, the set of SUMMA canisters collected during this activity were submitted for laboratory analysis. The VOC air samples were analyzed for the compounds presented in the table

below by Alpha Analytical of Mansfield, Massachusetts. The laboratory certificate of analysis is presented in Attachment D.

	Units	ACTION LEVELS (24 HOUR AVERAGE)	Summa – Upgradient L1211548-01 6/26/2012		Summa – Downgradient L1211548-02 6/26/2012		Summa - Blank L1211548-03 6/26/2012	
			Result	RL	Result	RL	Result	RL
TO-15 Modified – VOLATILE ORGANICS IN AIR								
Benzene	**ppbv**	**6.2**	<	0.2	<	0.2	<	0.2
Toluene	**ppbv**	**80**	<	0.2	**0.305**	0.2	<	0.2
Ethylbenzene	**ppbv**	**230**	<	0.2	<	0.2	<	0.2
m&p-Xylene	**ppbv**	**23**	<	0.4	<	0.4	<	0.4
o-Xylene	**ppbv**	**23**	<	0.2	<	0.2	<	0.2
Naphthalene	**ppbv**	**20**	<	0.2	<	0.2	<	0.2

As presented above, results of the time-integrated VOC air samples were non-detect with the exception of one compound (toluene), which was detected above the method detection limit in the down-wind air sample. All constituents were well below the Action Levels established in the AQMP.

We trust that this information fulfills your present needs. Please call Meg Kilpatrick if you have any questions or require any additional information at 401-421-4140 Ext. 2719.

ATTACHMENTS

Figure 1	*Site Plan and Air Monitoring and SUMMA Canister Locations*
Attachment A	Limitations
Attachment B	Photographs
Attachment C	Air Monitoring Graphs
Attachment D	Laboratory Certificate of Analysis

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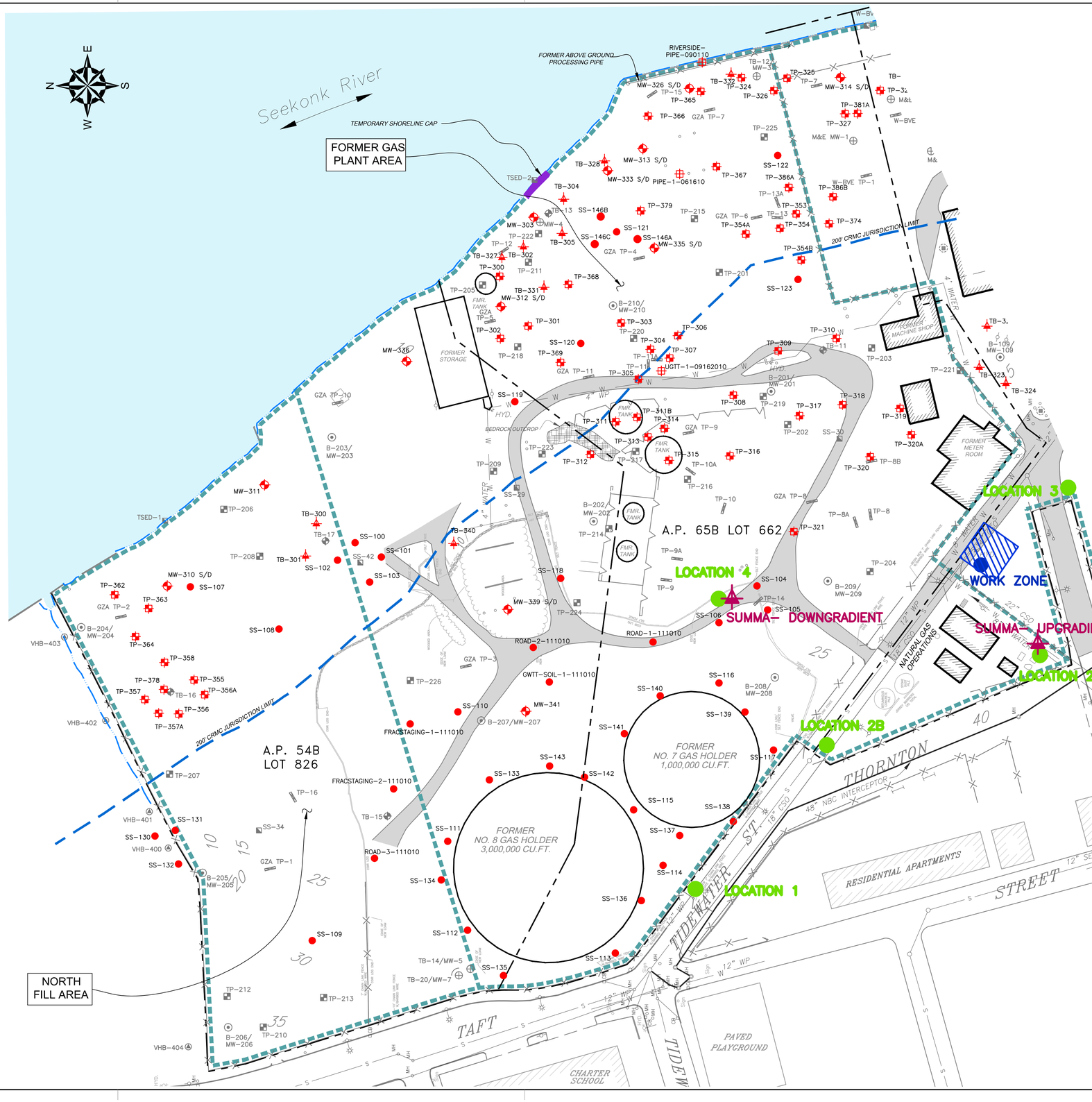
FIGURE



LEGEND:

- SITE AREA BOUNDARIES
- EXISTING BUILDINGS ON–SITE
- EXISTING FOUNDATION/PAD ON–SITE
- EXISTING BUILDINGS/STRUCTURES OFF–SITE
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- PROPERTY LINE
- APPROX. 200 FT. CRMC JURISDICTION LIMIT
- APPROX. WATERS EDGE
- EXISTING NBC INTERCEPTOR SANITARY SEWER
- EXISTING CITY OF PAWTUCKET STORM DRAIN
- EXISTING WATER LINE
- EXISTING STORM/COMBINED SAN. SEWER OVERFLOW
- EXISTING UNDERGROUND ELECTRIC CABLE IN CONDUIT
- EXISTING UNDERGROUND ELECTRIC MH/STRUCTURE
- EXISTING ACCESS ROAD
- EXISTING RETAINING WALLS
- EXISTING FENCE
- EXISTING CATCH BASIN LOCATIONS

SAMPLE LEGEND

SS–9	ATLANTIC SURFACE SOIL SAMPLE LOCATION
TSED–6	ATLANTIC SEDIMENT SAMPLE LOCATION
W–BVE SS–3	WESTON/BLACKSTONE VALLEY ELECTRIC SEDIMENT SAMPLE LOCATION
RIDEM SS–3	RIDEM SURFACE SOIL SAMPLE LOCATION
B–109/ MW–109	MONITORING WELL/BORING (VHB) SURVEYED
TP–3A	ATLANTIC TEST PIT LOCATION
W–BVE	WESTON/BLACKSTONE VALLEY ELECTRIC TEST PIT LOCATION
GZA TP–8	GZA/VALLEY GAS TEST PIT LOCATION
TB–15	ATLANTIC SOIL BORING LOCATION
MW–3	ATLANTIC MONITORING WELL LOCATION
M&E MW–1	METCALF & EDDY MONITORING WELL LOCATION
VHB–400	VHB SURFACE SOIL SAMPLE LOCATION NON–SURVEYED
TP–204	VHB TEST PIT (2006)
GZ–01	GZA TEST PIT (2009)
TB–300	GZA TEST BORING LOCATION (2010)
MW–320 S/D	GZA MONITORING WELL LOCATION (2010)
TP–306	GZA TEST PIT LOCATION (2010)
SS–100	GZA SURFACE SOIL SAMPLE LOCATION (2010)
	ARCADIS SEDIMENT SAMPLE LOCATION (2008)
PIPE–1–061610	GZA RESIDUAL MATERIAL SAMPLE (2010)
WORK ZONE	GZA WORK ZONE AIR MONITORING LOCATION
LOCATION 1	GZA PERIMETER AIR MONITORING LOCATION
SUMMA– UPGRADIENT	SUMMA CANISTER LOCATION

JUNE 2012 APPROXIMATE AREA OF WATER LINE REPAIR AND HYDRANT REPLACEMENT

GENERAL NOTES:

1. EXISTING CONDITIONS BASE MAP DEVELOPED FROM THE FOLLOWING:
   - ELECTRONIC FILES FROM GEI CONSULTANTS, INC. (FORMERLY AES) ENTITLED "HISTORIC STRUCTURES AND SAMPLE LOCATIONS", ORIGINAL SCALE 1"=80', DATED JULY 1999
   - ELECTRONIC FILES FROM VANASSE HANGEN BRUSTLIN, INC. ENTITLED "SOIL BORING, TEST PIT AND MONITOR WELL LOCATIONS", SCALE: 1"=60', UNDATED
   - ELECTRONIC FILES FROM WELSH ASSOCIATES LAND SURVEYORS, INC. ENTITLED "TOPOGRAPHIC SURVEY (AS–BUILT), FORMER TIDEWATER FACILITY, DEMOLITION OF GAS HOLDERS NOS. 7 & 8", DATED DECEMBER 17, 2010
   - ON–SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS DURING 2009 AND 2010.
2. PROPERTY LINES AND LOT INFORMATION ESTABLISHED FROM INFORMATION PROVIDED ON A DRAWING ENTITLED "PERIMETER SURVEY OF LAND AT THE TIDEWATER FORMER MGP SITE IN PAWTUCKET, RHODE ISLAND FOR ATLANTIC ENVIRONMENTAL SERVICES INC." DEVELOPED BY LOUIS FEDERICI AND ASSOCIATES AND AN AUTO CAD FILE ENTITLED "MAX READ FIELD TRACK EXPANSION 2007" PROVIDED BY THE CITY OF PAWTUCKET.
3. HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY GEI CONSULTANTS, INC.
4. VERTICAL DATUM IS BASED ON NGVD 1929 (MSL) FROM BASE MAPPING PROVIDED BY GEI CONSULTANTS, INC.
5. REFERENCE SEWER DATA FROM SCANNED IMAGE PROVIDED BY THE CITY OF PAWTUCKET, RHODE ISLAND, ENTITLED "STUDY OF SEWERAGE FACILITIES" BY WATERMAN ENGINEERING CO. & ANDERSON NICHOLS CO. DATED NOV. 1975, ORIGINAL SCALE 1"=400' & SCANNED IMAGES OF HISTORIC PLAN & PROFILE DRAWINGS PROVIDED BY THE CITY OF PAWTUCKET, RHODE ISLAND.
6. SITE UTILITIES TAKEN FROM 1984 SANBORN MAP AND HISTORIC FIGURES PROVIDED BY NATIONAL GRID. ALL UTILITY LOCATIONS ARE APPROXIMATE AND SHOWN FOR REFERENCE ONLY.

NO.	ISSUE/DESCRIPTION	BY	DATE

FORMER TIDEWATER FACILITY
June 2012 Water Line Repair and Hydrant Replacement

PAWTUCKET, RHODE ISLAND

Site Plan AND
Air Monitoring Locations and SUMMA Canister Locations

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
530 BROADWAY
PROVIDENCE, RHODE ISLAND 02909
(401) 421-4140

PREPARED FOR: NATIONAL GRID

PROJ MGR: MSK	REVIEWED BY: MSK	CHECKED BY: MSK	FIGURE 1
DESIGNED BY: SDN	DRAWN BY: CRD	SCALE: 1" = 50'	
DATE: July 2012	PROJECT NO. 43654.00	REVISION NO. 0	SHEET NO. 1 OF 1

ATTACHMENT A

LIMITATIONS

LIMITATIONS

1. This Summary Memo has been prepared on behalf of and for the exclusive use of The Narragansett Electric Company d/b/a National Grid (National Grid), solely for documenting the work completed as described herein at the Former Tidewater MGP and Power Plant Site ("Site") under the applicable provisions of the State of Rhode Island Department of Environmental Management Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations). This memo and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of GZA GeoEnvironmental, Inc.(GZA) or National Grid.

2. GZA's work was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and GZA observed that degree of care and skill generally exercised by other consultants under similar circumstances and conditions. GZA's findings and conclusions must be considered not as scientific certainties, but rather as our professional opinion concerning the significance of the limited data gathered during the course of the study. No other warranty, express or implied is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during the work described herein.

3. The observations described in this memo were made under the conditions stated therein. The conclusions presented in the memo were based upon services performed and observations made by GZA.

4. In the event that National Grid or others authorized to use this memo obtain information on environmental or hazardous waste issues at the Site not contained in this memo, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this memo.

5. The conclusions and recommendations contained in this memo are based in part upon the data obtained from environmental samples obtained from relatively widely spread subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this memo.

6. The generalized soil profile described in the text is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized and have been developed by interpretations of widely spaced explorations and samples; actual soil transitions are probably more gradual. For specific information, refer to the boring logs.

7. In the event this work included the collection of water level data, these readings have been made in the test pits, borings and/or observation wells at times and under conditions stated on the exploration logs. These data have been reviewed and interpretations have been made in the text of this memo. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

8. The conclusions contained in this memo are based in part upon various types of chemical data and are contingent upon their validity. These data have been reviewed and interpretations made in the memo. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, these data should be reviewed by GZA and the conclusions and recommendations presented herein modified accordingly.

ATTACHMENT B

PHOTOGRAPHS

ATTACHMENT B
WATER LINE REPAIR PHOTOGRAPHS
Former Tidewater Facility
Pawtucket, Rhode Island

Hydrant and Valve Block prior to replacement/repair. June 4, 2012.

Excavation and stockpiled material prior to hydrant install. June 26, 2012.

ATTACHMENT B
WATER LINE REPAIR PHOTOGRAPHS
Former Tidewater Facility
Pawtucket, Rhode Island

Excavation with hydrant installed. Excavation is being backfilled. June 26, 2012.

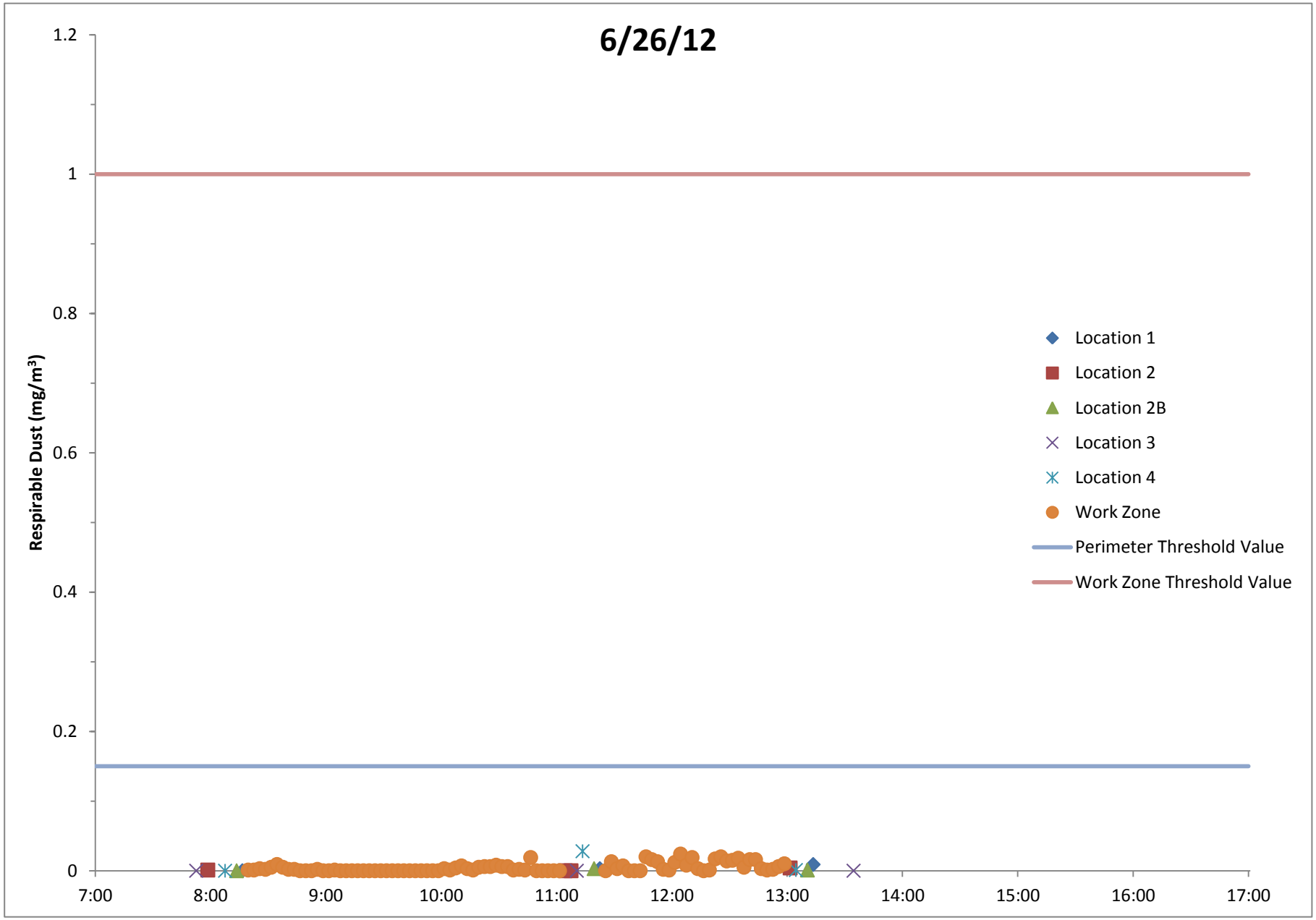
Final new hydrant and backfilled area. June 26, 2012.

ATTACHMENT C

AIR MONITORING GRAPHS

GZA File No. 05.00043654.00

Air Quality Monitoring - Dust
Water Line Repair, Former Tidewater Facility
Pawtucket, Rhode Island



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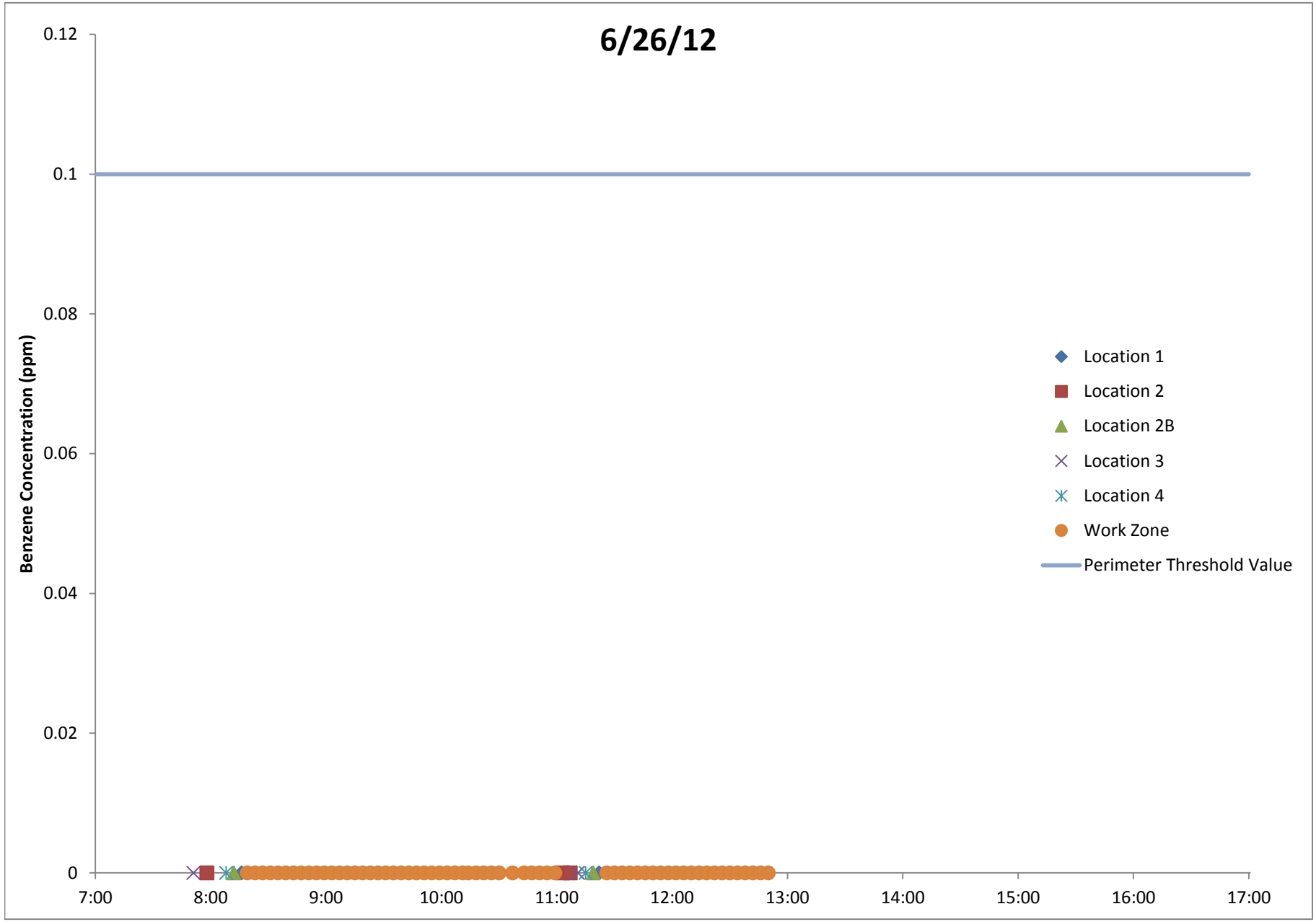
Air Quality Monitoring - Benzene
Water Line Repair, Former Tidewater Facility
Pawtucket, Rhode Island

GZA File No. 05.00043654.00



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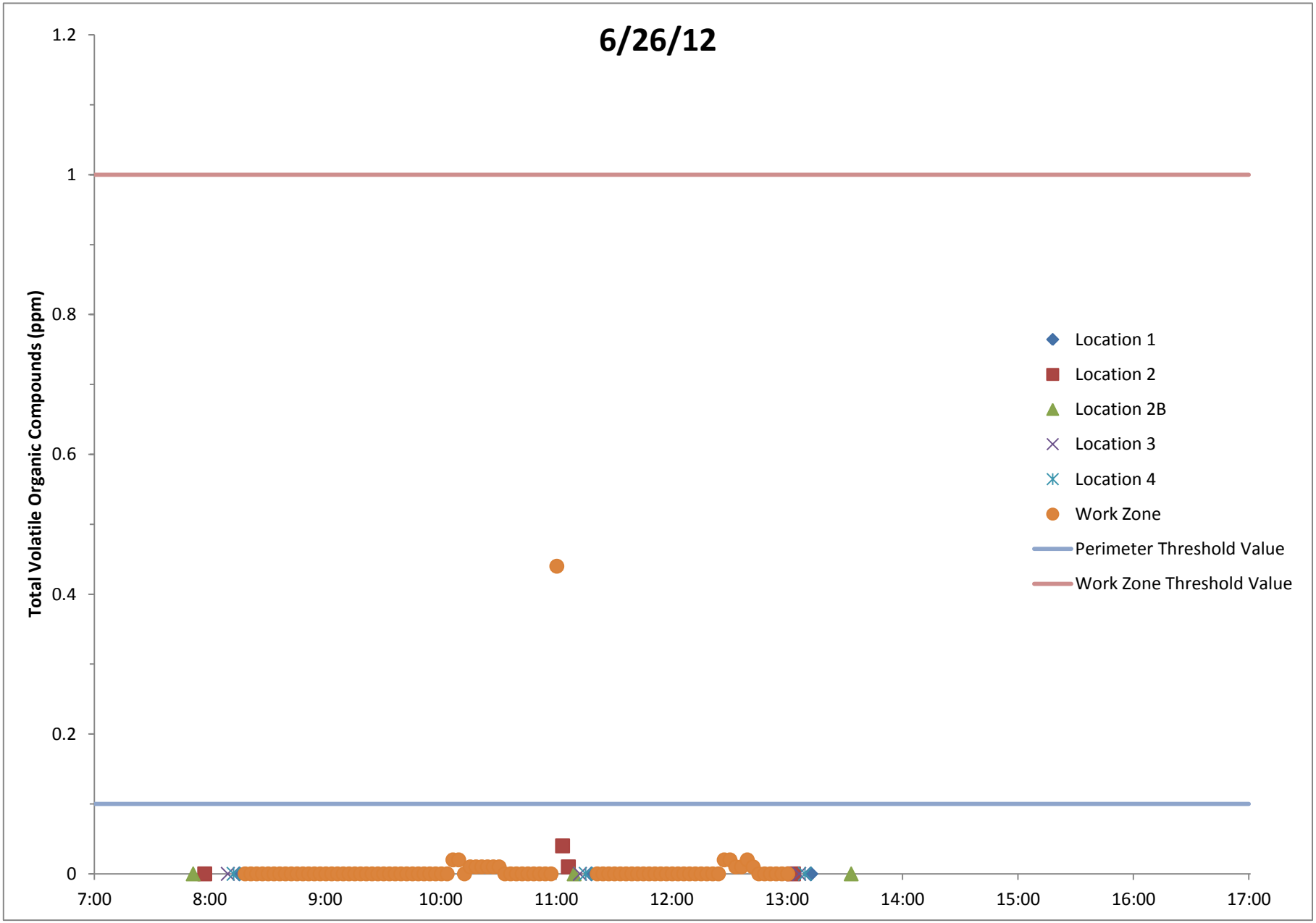
GZA File No. 05.00043654.00

Air Quality Monitoring - TVOCs
Water Line Repair, Former Tidewater Facility
Pawtucket, Rhode Island



J:\ENV\43654.msk\Field Summary\Water Line Repair\TVOCs.xlsx\Graph

ATTACHMENT D

LABORATORY CERTIFICATE OF ANALYSIS

ANALYTICAL REPORT

Lab Number:	L1211548
Client:	GZA GeoEnvironmental, Inc. 530 Broadway Providence, RI 02903
ATTN:	Meg Kilpatrick
Phone:	(401) 421-4140
Project Name:	TIDEWATER
Project Number:	43654
Report Date:	07/06/12

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: TIDEWATER
Project Number: 43654

Lab Number: L1211548
Report Date: 07/06/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1211548-01	SUMMA-UPGRADIENT	PAWTUCKET, RI	06/26/12 13:43
L1211548-02	SUMMA-DOWNGRADIENT	PAWTUCKET, RI	06/26/12 13:38
L1211548-03	SUMMA-BLANK	PAWTUCKET, RI	06/26/12 00:00

Project Name: TIDEWATER
Project Number: 43654

Lab Number: L1211548
Report Date: 07/06/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: TIDEWATER
Project Number: 43654

Lab Number: L1211548
Report Date: 07/06/12

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on June 7, 2012.

The canister certification results are provided as an addendum.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kathleen O'Brien

Title: Technical Director/Representative

Date: 07/06/12

AIR

Project Name: TIDEWATER
Project Number: 43654
Lab Number: L1211548
Report Date: 07/06/12

SAMPLE RESULTS

Lab ID: L1211548-01
Client ID: SUMMA-UPGRADIENT
Sample Location: PAWTUCKET, RI
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 07/02/12 20:08
Analyst: MB

Date Collected: 06/26/12 13:43
Date Received: 06/28/12
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Benzene	ND	0.200	--	ND	0.639	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	98		60-140
Bromochloromethane	98		60-140
chlorobenzene-d5	98		60-140

Project Name: TIDEWATER
Project Number: 43654
Lab Number: L1211548
Report Date: 07/06/12

SAMPLE RESULTS

Lab ID: L1211548-02
Client ID: SUMMA-DOWNGRADIENT
Sample Location: PAWTUCKET, RI
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 07/02/12 19:30
Analyst: MB

Date Collected: 06/26/12 13:38
Date Received: 06/28/12
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Benzene	ND	0.200	--	ND	0.639	--		1
Toluene	0.305	0.200	--	1.15	0.754	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	98		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	96		60-140

Project Name: TIDEWATER
Project Number: 43654
Lab Number: L1211548
Report Date: 07/06/12

SAMPLE RESULTS

Lab ID: L1211548-03
Client ID: SUMMA-BLANK
Sample Location: PAWTUCKET, RI
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 07/02/12 18:51
Analyst: MB

Date Collected: 06/26/12 00:00
Date Received: 06/28/12
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Benzene	ND	0.200	--	ND	0.639	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	92		60-140
Bromochloromethane	90		60-140
chlorobenzene-d5	80		60-140

Project Name: TIDEWATER
Project Number: 43654
Lab Number: L1211548
Report Date: 07/06/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 07/02/12 17:43

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG545998-4								
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1

Project Name: TIDEWATER
Project Number: 43654
Lab Number: L1211548
Report Date: 07/06/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 07/02/12 17:43

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG545998-4								
1,3,5-Trimethybenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
Xylenes, Total	ND	0.600	--	ND	2.61	--		1

Project Name: TIDEWATER
Project Number: 43654
Lab Number: L1211548
Report Date: 07/06/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 07/02/12 17:43

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG545998-4								

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Bromofluorobenzene	88		70-130
Toluene-d8	98		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: TIDEWATER
Project Number: 43654

Lab Number: L1211548
Report Date: 07/06/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG545998-3								
Vinyl chloride	86		-		70-130	-		
Dichlorofluoromethane	72		-		70-130	-		
Acetone	91		-		70-130	-		
1,1-Dichloroethene	90		-		70-130	-		
tert-Butyl Alcohol	88		-		70-130	-		
Methylene chloride	89		-		70-130	-		
Carbon disulfide	88		-		70-130	-		
trans-1,2-Dichloroethene	75		-		70-130	-		
1,1-Dichloroethane	82		-		70-130	-		
2-Butanone	93		-		70-130	-		
cis-1,2-Dichloroethene	89		-		70-130	-		
Chloroform	86		-		70-130	-		
Tetrahydrofuran	84		-		70-130	-		
1,2-Dichloroethane	85		-		70-130	-		
Benzene	81		-		70-130	-		
Cyclohexane	84		-		70-130	-		
1,4-Dioxane	96		-		70-130	-		
Trichloroethene	90		-		70-130	-		
Toluene	81		-		70-130	-		
Tetrachloroethene	88		-		70-130	-		
Chlorobenzene	87		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: TIDEWATER
Project Number: 43654

Lab Number: L1211548
Report Date: 07/06/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG545998-3								
Ethylbenzene	86		-		70-130	-		
p/m-Xylene	84		-		70-130	-		
Styrene	91		-		70-130	-		
o-Xylene	92		-		70-130	-		
1,3,5-Trimethylbenzene	94		-		70-130	-		
1,2,4-Trimethylbenzene	98		-		70-130	-		
1,3-Dichlorobenzene	94		-		70-130	-		
1,4-Dichlorobenzene	95		-		70-130	-		
1,2-Dichlorobenzene	98		-		70-130	-		
1,2,4-Trichlorobenzene	110		-		70-130	-		
Naphthalene	102		-		70-130	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	105				70-130
Toluene-d8	96				70-130
Bromofluorobenzene	97				70-130

Lab Duplicate Analysis
Batch Quality Control

Project Name: TIDEWATER
Project Number: 43654

Lab Number: L1211548
Report Date: 07/06/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG545998-5 QC Sample: L1211643-04 Client ID: DUP Sample						
Vinyl chloride	ND	ND	ppbV	NC		25
Dichlorofluoromethane	ND	ND	ppbV	NC		25
Acetone	12.6	11.3	ppbV	11		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
tert-Butyl Alcohol	ND	ND	ppbV	NC		25
Methylene chloride	340	298	ppbV	13		25
Carbon disulfide	1.29	1.18	ppbV	9		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
2-Butanone	1.68	1.50	ppbV	11		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
Chloroform	9.90	8.86	ppbV	11		25
Tetrahydrofuran	3.34	2.92	ppbV	13		25
1,2-Dichloroethane	6.29	5.80	ppbV	8		25
Benzene	1.02	ND	ppbV	NC		25
Cyclohexane	ND	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
Trichloroethene	ND	ND	ppbV	NC		25
Toluene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: TIDEWATER
Project Number: 43654

Lab Number: L1211548
Report Date: 07/06/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG545998-5 QC Sample: L1211643-04 Client ID: DUP Sample					
Tetrachloroethene	ND	ND	ppbV	NC	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	ND	ND	ppbV	NC	25
p/m-Xylene	ND	ND	ppbV	NC	25
Styrene	ND	ND	ppbV	NC	25
o-Xylene	ND	ND	ppbV	NC	25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC	25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC	25
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC	25
XYLENE (TOTAL)	ND	ND	ppbV	NC	25

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		98		70-130
Toluene-d8	90		84		70-130
Bromofluorobenzene	94		85		70-130

Project Name: TIDEWATER

Project Number: 43654

Lab Number: L1211548

Report Date: 07/06/12

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1211548-01	SUMMA-UPGRADIENT	0024	#20 AMB	06/07/12	78375		-	-	-	Pass	3.8	3.6	5
L1211548-01	SUMMA-UPGRADIENT	367	2.7L Can	06/07/12	78375	L1209008-01	Pass	-29.2	-16.1	-	-	-	-
L1211548-02	SUMMA-DOWNGRADIENT	0427	#16 AMB	06/07/12	78375		-	-	-	Pass	3.8	3.2	17
L1211548-02	SUMMA-DOWNGRADIENT	544	2.7L Can	06/07/12	78375	L1209008-01	Pass	-29.0	-17.0	-	-	-	-
L1211548-03	SUMMA-BLANK	0438	#16 AMB	06/07/12	78375		-	-	-	Pass	4.0	3.8	5
L1211548-03	SUMMA-BLANK	325	2.7L Can	06/07/12	78375	L1209008-01	Pass	-28.6	-28.7	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1209008
Report Date: 07/06/12

Air Canister Certification Results

Lab ID: L1209008-01
Client ID: CAN 124 SHELF 20
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 05/24/12 16:24
Analyst: MB

Date Collected: 05/21/12 15:59
Date Received: 05/22/12
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.860	--		1
Propane	ND	0.200	--	ND	0.361	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.200	--	ND	0.434	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1209008
Report Date: 07/06/12

Air Canister Certification Results

Lab ID: L1209008-01
Client ID: CAN 124 SHELF 20
Sample Location:
Date Collected: 05/21/12 15:59
Date Received: 05/22/12
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L1209008

Project Number: CANISTER QC BAT **Report Date:** 07/06/12

Air Canister Certification Results

Lab ID: L1209008-01 Date Collected: 05/21/12 15:59

Client ID: CAN 124 SHELF 20 Date Received: 05/22/12

Sample Location: Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.20	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L1209008

Project Number: CANISTER QC BAT **Report Date:** 07/06/12

Air Canister Certification Results

Lab ID: L1209008-01 Date Collected: 05/21/12 15:59

Client ID: CAN 124 SHELF 20 Date Received: 05/22/12

Sample Location: Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethybenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	98		60-140
Bromochloromethane	99		60-140
chlorobenzene-d5	93		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1209008
Report Date: 07/06/12

Air Canister Certification Results

Lab ID: L1209008-01
Client ID: CAN 124 SHELF 20
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 05/22/12 19:00
Analyst: MB

Date Collected: 05/21/12 15:59
Date Received: 05/22/12
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.08	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.404	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1209008
Report Date: 07/06/12

Air Canister Certification Results

Lab ID: L1209008-01
Client ID: CAN 124 SHELF 20
Sample Location:
Date Collected: 05/21/12 15:59
Date Received: 05/22/12
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.500	--	ND	2.46	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.500	--	ND	2.74	--		1
p-Isopropyltoluene	ND	0.500	--	ND	2.74	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.500	--	ND	2.74	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L1209008

Project Number: CANISTER QC BAT **Report Date:** 07/06/12

Air Canister Certification Results

Lab ID: L1209008-01 Date Collected: 05/21/12 15:59

Client ID: CAN 124 SHELF 20 Date Received: 05/22/12

Sample Location: Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	101		60-140
bromochloromethane	120		60-140
chlorobenzene-d5	94		60-140

AIR Petro Can Certification

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L1209008

Project Number: CANISTER QC BAT **Report Date:** 07/06/12

AIR CAN CERTIFICATION RESULTS

Lab ID:	L1209008-01	Date Collected:	05/21/12 15:59
Client ID:	CAN 124 SHELF 20	Date Received:	05/22/12
Sample Location:	Not Specified	Field Prep:	Not Specified
Matrix:	Air		
Analytical Method:	96,APH		
Analytical Date:	05/22/12 19:00		
Analyst:	MB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbons in Air - Mansfield Lab						
1,3-Butadiene	ND		ug/m3	2.0	--	1
Methyl tert butyl ether	ND		ug/m3	2.0	--	1
Benzene	ND		ug/m3	2.0	--	1
Toluene	ND		ug/m3	2.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/m3	12	--	1
Ethylbenzene	ND		ug/m3	2.0	--	1
p/m-Xylene	ND		ug/m3	4.0	--	1
o-Xylene	ND		ug/m3	2.0	--	1
Naphthalene	ND		ug/m3	2.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/m3	14	--	1
C9-C10 Aromatics Total	ND		ug/m3	10	--	1

Project Name: TIDEWATER
Project Number: 43654

Lab Number: L1211548
Report Date: 07/06/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1211548-01A	Canister - 2.7 Liter	A	N/A		Y	Absent	TO15-LL(30)
L1211548-02A	Canister - 2.7 Liter	A	N/A		Y	Absent	TO15-LL(30)
L1211548-03A	Canister - 2.7 Liter	A	N/A		Y	Absent	TO15-LL(30)

*Values in parentheses indicate holding time in days

Project Name:	TIDEWATER	**Lab Number:**	L1211548
Project Number:	43654	**Report Date:**	07/06/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	TIDEWATER	**Lab Number:**	L1211548
Project Number:	43654	**Report Date:**	07/06/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised May 10, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1,1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8270C, 8270D, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 3060A, 6020A, 7470A, 7471B, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040B, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

Atmospheric Organic Parameters (EPA 3C, TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 245.7, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A, 7471B, 7474. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8015D, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to NJ-DEP Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A, 6020A, 245.7, 9040B, SM4500H-B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

Serial No:07061211:45

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #: L1211548

Client Information

Client: GZA
Address: 530 BROADWAY
PROVIDENCE, RHODE ISLAND
Phone: 401-421-4140
Fax:
Email: margaret.kilpatrick@gza.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: TIDEWATER
Project Location: PAWTUCKET, RI
Project #: 43654
Project Manager: MSK
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH *(only confirmed if pre-approved!)*
Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☑ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager) AND
EMAIL
sophia.markiewicz@gza.com

Billing Information

☑ Same as Client info | PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements/Comments:

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-14A by TO-15	TO-15 Modified	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Comments (i.e. PID)
L1211548-01	SUMMA-UPGRADIENT	6/26/12	7:30	13:43	-29.80	-16.22	AA	SDN	9	367	24		✓						
-02	SUMMA-downgradient	6/26/12	7:30	13:38	-30.10	-17.54	AA	SDN	9	544	427		✓						
-03	SUMMA-blank	6/26/12	—	—	-29.5		AA	SDN	9	325	—		✓						

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
Sophia Markiewicz	6/27/12 14:20		
[illegible]	6/28/12 1200	[illegible]	6/28/12 11:00
			6/28/12 12:00