



July 10, 2015

Stora Enso C/O  
John T. Kolaga, Esq.  
Rupp Baase Pfalzgraf Cunningham LLC  
1600 Liberty Building  
Buffalo, New York 14202

**RE: IN-SITU BIOREMEDIATION MONITORING REPORT,  
VAILS GATE MANUFACTURING, LLC, VAILS GATE,  
NEW YORK, NYSDEC SITE NO. 336065**

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Dear Mr. Kolaga:

Leader Consulting Services, Inc. (“Leader”) is pleased to provide Rupp Baase Pfalzgraf Cunningham, LLC (“RBFC”), on behalf of Stora Enso, with this report summarizing the results of the In-Situ Bioremediation Quarterly Monitoring completed at the former Vails Gate Manufacturing facility (“VGM”) at 1073 Route 94 in Vails Gate, New York (hereafter referred to as “the Site”). The Site is currently identified as the Vails Gate Business Center (“VGBC”). This is the third Quarterly Monitoring Report required under the Remedial Action Work Plan (“RAWP”). It includes the field and laboratory results from the third quarterly sampling event.

## **1.0 BACKGROUND AND PURPOSE**

Leader was retained to implement the New York State Department of Environmental Conservation (“NYSDEC”)-approved RAWP that was developed for Area of Concern 6 (“AOC 6”) at the Site. As identified in the approved RAWP, In-situ bioremediation was the selected remedial alternative identified in the NYSDEC-approved Corrective Measure Study (“CMS”). The Site-specific Standards, Criteria and Guidance (“SCGs”) applicable to the RAWP were developed to meet the Remedial Action Objectives (“RAOs”) of the CMS. An “unrestricted use remedy” has been established for the Site, which is based on the regulatory standard values for Class GA groundwater identified in 6 NYCRR Part 703.5. The RAWP was developed to address the SCGs and RAOs for the Site. The RAWP has been implemented in accordance with NYSDEC Department of Environmental Remediation (“DER”) Guidance Document DER-10, *Technical Guidance for Site Investigation and Remediation*.

## **2.0 SCOPE-OF-WORK**

The scope of work for the In-Situ Bioremediation program identified in the RAWP was based on the March 2012 Phase II RCRA Facility Investigation (“RFI”) and the 2013 CMS. Quarterly sampling and laboratory analyses of groundwater samples from four (4) groundwater monitoring wells (MW-14, MW-5A/AR, MW-16 and MW-CHA-RFI-7) are required per the RAWP. Included in this report are the third quarterly sampling event Analytical Laboratory Results and Summary Tables (Attachment A) and a Data Validation Summary (Attachment B). Figure 1



includes the approximate Injection Point (“IP”) locations used to apply bioremediation solutions into the subsurface at AOC 6, and the location of the monitoring wells.

### **3.0 QUARTERLY SAMPLING PROGRAM**

The third quarterly sampling event of the bioremediation program was conducted on May 11, 2015. The laboratory parameters for the quarterly samples included analysis for volatile organic compounds (“VOCs”), sulfate, total organic carbon (“TOC”), and dissolved iron. The field parameters included dissolved oxygen (“DO”), pH, oxidation reduction potential (“redox”), temperature and turbidity. Laboratory and field data were reviewed to evaluate VOC concentrations and field data parameters from groundwater samples from each of the wells to assess the impact of biotreatment activity within AOC 6.

### **4.0 FIELD AND LABORATORY GROUNDWATER SAMPLE RESULTS**

#### **4.1 GROUNDWATER SAMPLE FIELD DATA RESULTS**

The DO concentrations within the samples collected from the four (4) wells ranged from 910 parts per billion (“ppb”) to 2,150 ppb. The pH levels within the samples collected from the four (4) wells ranged from 6.43 standard units (“SUs”) to 7.01 SUs. Redox values of the samples collected from the four (4) wells ranged from -73 milliVolts (“mVs”) to 151 mVs. Data interpretation is discussed in Section 4.0.

#### **4.2 GROUNDWATER SAMPLE LABORATORY ANALYTICAL DATA RESULTS**

##### **GWM Well MW-5A/AR**

Acetone was detected within the 3rd Quarter sample from MW-5A/AR at a concentration of 77 ppb, in excess of the NYSDEC Class GA standard of 50 ppb. Chloroethane concentrations decreased from 1010 ppb in February 2015 to a value of 470 ppb in May 2015. 1,1-dichloroethane decreased from 325 ppb in February to 41 ppb in May. 1,1-dichloroethene decreased from 8.62 ppb in February to 1.9 ppb in May, below the Class GA standard of 5 ppb. 1,1,1-trichloroethane concentrations decreased from 200 ppb in February to non-detect in May. Vinyl chloride decreased slightly from 3.59 ppb in February to 2.4 ppb in May. 2-butanone (aka methyl ethyl ketone) concentrations decreased from 82.1 ppb in February to an estimated value of 4.5 ppb in May. 1,2,4 trimethylbenzene was detected for the first time at a concentration of 2.1 ppb, below the Class GA groundwater standard of 5 ppb. Sec-butylbenzene was detected for the first time at a concentration of 1.1 ppb, below the Class GA groundwater standard of 5 ppb.

##### **GWM Well MW-14**

Acetone was detected within the 3rd Quarter sample from MW-14, decreasing from 27.3 ppb in February 2015 to 16 ppb in May. Chloroethane concentrations increased from non-detect in February to 2.1 ppb in May, and remained below the Class GA groundwater standard of 5 ppb. The concentration of 1,1-dichloroethane in May remained similar to the February concentration (48 ppb, 43 ppb, respectively), as did the concentration of 1,1-dichloroethene (3.1 ppb,



3.51ppb). The concentration of vinyl chloride from the sample collected in May remained virtually unchanged from February (2.80 ppb, 2.79 ppb). 2-butanone concentrations increased slightly, from non-detect in February to 2.2 ppb in May, but remained below the Class GA standard of 50 ppb. The remaining VOC analytes were not detected within the May 2015 sample. The analyte concentrations of dichloroethane and vinyl chloride from the May 2015 samples from GWM Well MW-14 were above the NYSDEC Class GA groundwater standards.

#### GWM Well MW-16

Acetone was detected within the 3rd Quarter sample from MW-16, increasing from non-detect in February 2015 to an estimated value of 4.6 ppb in May, but remained below the Class GA standard of 50 ppb. 1,1-dichloroethane concentrations increased from 7.18 ppb in February to 14 ppb in May. 1,1-dichloroethene concentrations increased from 1.73 ppb in February to 5.6 ppb in May, slightly above the Class GA standard of 5 ppb. Tetrachloroethene concentrations increased slightly, from 1.42 ppb in February to 2.2 ppb in May, and remained below the Class GA standard of 5 ppb. Vinyl Chloride concentrations increased slightly from non-detect in February to 1 ppb in May, and remained below the Class GA standard of 2 ppb. Chloroform concentrations increased slightly from 1.85 ppb in February to 4.9 ppb in May, and remained below the Class GA standard of 7 ppb. The concentrations of 1,1-dichloroethane and dichloroethene were the only values above the NYSDEC Class GA groundwater standards from the sample collected from GWM Well MW-16 in May 2015.

#### GWM Well MW-CHA-RFI-7

Acetone was detected in the sample collected from GWM Well MW-CHA-RFI-7 in May, at an estimated concentration of 2.7 ppb. The remaining VOC concentrations from the sample collected from MW-CHA-RFI-7 during the May 2015 sampling event were non-detectable, as they were for the November 2014 and February 2015 sampling events.

## **5.0 DATA INTERPRETATION**

### **5.1 FIELD DATA**

TOC concentrations remain high in monitoring wells MW-5A/AR and MW-14, indicating continuing microbial activity. Groundwater pH levels indicate an environment conducive to continued microbial activity. Though not fluctuating significantly since media injection, the redox values indicate that reducing conditions exist for dechlorination.

### **5.2 LABORATORY DATA**

Dissolved iron and sulfate concentrations are within ranges to support dechlorination. Monitoring well MW-5A/AR remains the well providing the greatest indication of VOC bioremediation activity. The VOC concentrations of acetone, chloroethane, 1,1 dichloroethane and vinyl chloride remain in exceedance of the Class GA groundwater standards, but have decreased from the previous quarter. The general decrease in VOC concentrations within this



well from the previous quarter analysis may be an indication of the beginning of biodegradation of the compounds.

With the exception of 1,1 dichloroethane and vinyl chloride, the concentrations of each of the detected VOCs within the sample from MW-14 during the May 2015 sampling event are currently below the NYSDEC Class GA groundwater standard.

The concentration of 1,1-dichloroethene within the sample collected from MW-16 during the May 2015 sample event (5.6 ppb) is only slightly higher than the Class GA groundwater standard of 5 ppb. 1,1 dichloroethane concentrations remain above the standard. The remaining detected analytes are below the Class GA groundwater standards.

There are no detected VOC analytes (with the exception of an estimated, below detection limit value for acetone) within MW-CHA-RFI-7. This groundwater monitoring well was included in this sampling program as it represents a "background" well, hydraulically upgradient and outside of the influence of AOC 6.

If you need any additional information, please contact the undersigned at (716) 565-0963.

Very truly yours,

Leader Consulting Services, Inc.

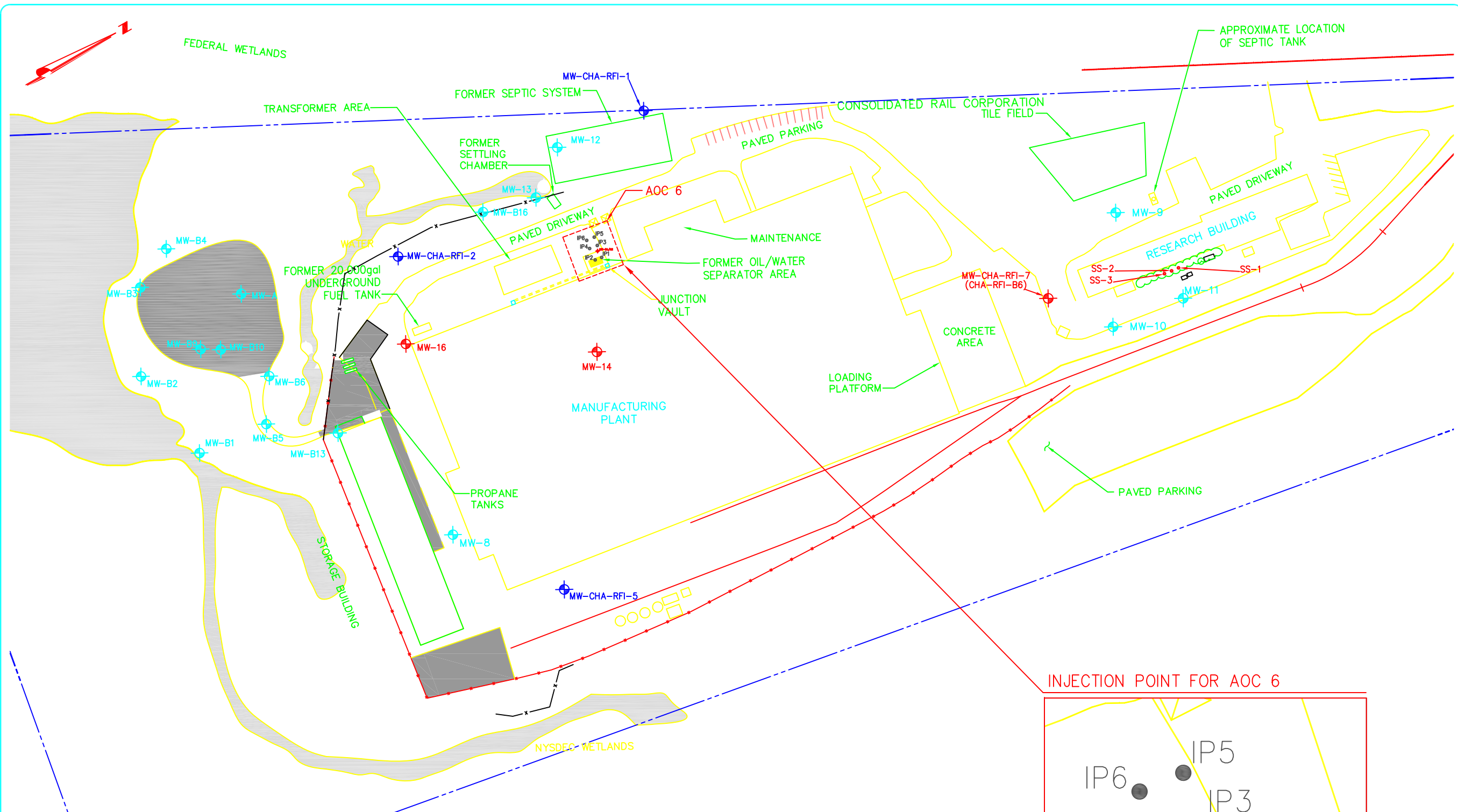
A handwritten signature in black ink that reads "Keith D. Keller".

Keith D. Keller  
Project Manager

A handwritten signature in black ink that reads "Jeffrey A. Wittlinger".

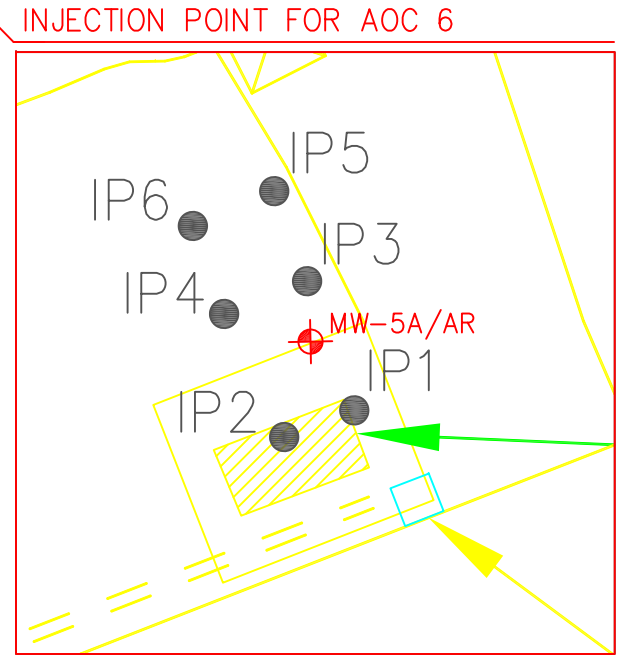
Jeffrey A. Wittlinger, P.E., BCEE  
Principal

# Figure 1



- LEGEND**
- Phase II RFI 2011 Monitoring Well Installation
  - Existing Monitoring Well
  - Injection Point
  - Quarterly Monitoring Well

- NOTES**
- 1) Base map prepared by CHA
  - 2) Phase II RFI test boring/monitoring well and sampling locations located by Leader based on standard surveying techniques.
  - 3) Drawing considered accurate to the degree implied by the method used.



No.	Submittal / Revision	By	Date
1	Phase II RFI	KK	9/2011
2	Corrective Measures Study	KK	12/2012
3	Remedial Action Work Plan	KK	3/2014
4	Bioremediation Report	KK	12/2014

**VAILS GATE  
MANUFACTURING FACILITY  
VAILS GATE, NEW YORK**

**Leader Consulting Services, Inc.**  
2813 Wehrle Drive, Suite 1, Williamsville, NY 14221  
Phone: (716) 565-0963 Fax: (716) 565-0964

Prepared By	Checked By	Date
CHA	CHA	01/12/06
CHA	CHA	01/10/08
CHA	CHA	12/29/12

THIS DOCUMENT IS A PRELIMINARY REPORT AND IS NOT TO BE USED FOR ANY REGULATORY APPLICATIONS WITHOUT THE APPLICABLE STATE AND/OR LOCAL LAWS.

**BIOREMEDIATION PROJECT**

**IN-SITU INJECTION POINT LOCATIONS FOR AOC 6**

Issue Date: 12/29/14 Project No.: 737.003 Scale: NTS



## **Attachment A**

# **Analytical Laboratory Results and Summary Tables**





**TABLE 2****GROUNDWATER MONITORING WELL SAMPLE FIELD DATA**

<b>MW-5A/AR</b>				
<b>Analyte</b>	<b>August 2014 <sup>(4)</sup></b>	<b>November 2014 <sup>(5)</sup></b>	<b>February 2015</b>	<b>May 2015</b>
dissolved oxygen <sup>(1)</sup>	1,150	1,860	1,910	910
pH <sup>(2)</sup>	7.66	7.07	6.74	6.43
redox <sup>(3)</sup>	-137	-90	-42	-73

<b>MW-14</b>				
<b>Analyte</b>	<b>August 2014 <sup>(4)</sup></b>	<b>November 2014 <sup>(5)</sup></b>	<b>February 2015</b>	<b>May 2015</b>
dissolved oxygen <sup>(1)</sup>	1,940	2,110	1,720	1,280
pH <sup>(2)</sup>	7.19	7.41	6.98	6.58
redox <sup>(3)</sup>	7	-1	47	0

<b>MW-16</b>				
<b>Analyte</b>	<b>August 2014 <sup>(4)</sup></b>	<b>November 2014 <sup>(5)</sup></b>	<b>February 2015</b>	<b>May 2015</b>
dissolved oxygen <sup>(1)</sup>	990	2,210	2,750	2,150
pH <sup>(2)</sup>	7.12	6.86	6.94	6.66
redox <sup>(3)</sup>	24	-14	12	151

<b>MW-CHA-RFI-7</b>				
<b>Analyte</b>	<b>August 2014 <sup>(4)</sup></b>	<b>November 2014 <sup>(5)</sup></b>	<b>February 2015</b>	<b>May 2015</b>
dissolved oxygen <sup>(1)</sup>	1,440	1,220	1,760	1,660
pH <sup>(2)</sup>	7.55	7.38	7.55	7.01
redox <sup>(3)</sup>	-36	-1	73	35

**NOTES:**

(1) Value expressed as parts per billion ("ppb").

(2) Value expressed as Standard Unit.

(3) Value expressed as milliVolts (mV).

(4) Sampling date of August 11, 2014, reflects pre-bioremediation injection date of August 13 and 14, 2014.

(5) November 2014 sampling event reflects first post-bioremediation data.

***Pace Analytical e-Report***

**\*Issuance of this report is prior to full data package.**

**Report prepared for:**

Leader Consulting Services, Inc.  
2813 Wehrle Drive  
Suite 1  
Williamsville, NY 14221  
CONTACT: Keith Keller

-----  
**Project ID:** VAILS GATE MANUFACTURING

**Sampling Date(s):** May 11, 2015

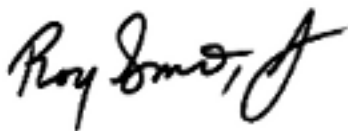
**Lab Report ID:** 15050173

**Client Service Contact:** Nick Nicholas (518) 346-4592  
-----

**Analysis Included:**

Misc Field Analysis  
Dissolved Metals 200.7 - Sub - NY-LI  
EPA Method 8260C  
Sulfate - Sub  
Total Organic Carbon

Test results meet all National Environmental Laboratory Accreditation Conference (NELAC) requirements unless noted in the case narrative. The results contained within the document relate only to the samples included in this report. Pace Analytical is responsible only for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt. This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.



Roy Smith  
Technical Director



Certifications: New York (EPA: NY00906, ELAP: 11078), New Jersey (NY026), Connecticut (PH-0337),  
Massachusetts (M-NY906), Virginia (1884)

Pace Analytical Services, Inc. | 2190 Technology Drive | Schenectady, NY 12308  
Phone: 518.346.4592 | internet: [www.pacelabs.com](http://www.pacelabs.com)

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1

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# QUALIFIERS

## **Definitions**

B - Denotes analyte observed in associated method blank or extraction blank. Analyte concentration should be considered as estimated.

D - Surrogate was diluted. The analysis of the sample required a dilution such that the surrogate concentration was diluted outside the laboratory acceptance criteria.

E - Denotes analyte concentration exceeded calibration range of instrument. Sample could not be re-analyzed at secondary dilution due to insufficient sample amount, quick turn-around request, sample matrix interference or hold time excursion. Concentration result should be considered as estimated.

J - Denotes an estimated concentration. The concentration result is greater than or equal to the Method Detection Limit (MDL) but less than the Practical Quantitation Limit (PQL).

MDL – Method Detection Limit. Denotes lowest analyte concentration observable for the sample based on statistical study.

P - Indicates relative percent difference (RPD) between primary and secondary gas chromatograph (GC) column analysis exceeds 40 % or indicates percent difference (PD) between primary and secondary gas chromatograph (GC) column analysis exceeds 25 %.

PQL – Practical Quantitation Limit. Denotes lowest analyte concentration reportable for the sample.

U - Denotes analyte not detected at concentration greater than the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

Z - Chromatographic interference due to polychlorinated biphenyl (PCB) co-elution.

\* - Value not within control limits.

# SAMPLE CHAIN OF CUSTODY



New York Office  
 2190 Technology Dr.  
 Schenectady, NY 12308  
 (518) 346-4592

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**<15050173P1>**



150501731

Page: 1 of 1

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: <b>Leader Professional Services</b>		Report To: <b>Keith Keller</b>		Attention: <b>Keith Keller</b>	
Address: <b>2813 Wehrle Drive, Suite 1</b>		Copy To: <b>na</b>		Company Name: <b>Leader Professional Services</b>	
<b>Williamsville, NY 14221</b>				Address:	
Email To:		Purchase Order No.:		Pace Quote Reference: <b>#00012704</b>	
Phone: <b>716-565-0963</b> Fax: <b>na</b>		Project Name: <b>Vails Gate Manufactu</b>		Pace Project Manager: <b>Nicholas Nicholas</b>	
Requested Due Date/TAT: <b>Standard 2-Week</b>		Project Number:		Pace Profile #:	

**REGULATORY PROGRAM**

NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER \_\_\_\_\_

**SITE LOCATION** **New York State**

Filtered (Y/N)

**REQUESTED ANALYSES**

\*Specify Metals/Inorganics:  
Iron

ITEM #	Section D Required Client Information	Valid Matrix Codes		MATRIX CODE	SAMPLE TYPE G-GRAB	C-COMP	SAMPLE DATE	SAMPLE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Dissolved Fe	Sulfate	Total Organic Carbon	8260 Full List	Field- DO, Conductivity	Temp, pH, Eh, Turbidity	Pace Laboratory I.D.
		MATRIX	CODE								Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol							
	<b>SAMPLE ID</b> (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	DRINKING WATER WATER WASTE WATER PRODUCT SOL/SOLID OK WIRE AIR OTHER TISSUE	DW WT WW P S SL OL WP AR OT TS																					
1	Field Duplicate-01			WT	G		5/11/15	1215		7	X											AS08975		
2	MW-5A/AR			WT	G		5/11/15	1215		7	X		X									AS08976		
3	MW-14			WT	G		5/11/15	1145		7	X		X									AS08977		
4	MW-16			WT	G		5/11/15	1130		7	X		X									AS08978		
5	MW-CHA-RFI-7			WT	G		5/11/15	1330		7	X		X									AS08979		
6	MW-CHA-RFI-7_MS			WT	G		5/11/15	1330		7	X		X									↓ AS08980		
7	MW-CHA-RFI-7_MSD			WT	G		5/11/15	1330		7	X		X											
8	Trip Blank-01			WT	G		5/11/15	-		2			X											
9				WT	G																			
10				WT	G																			
11				WT	G																			
12				WT	G																			

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS				
							Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact	
NYSDEC DER-10 EQUIS EDD LAB FILTER METALS	MKB PACE	5/11/15	1630	CPH PACE	5/11/15	1630	4.6 (UR)	Y/N	Y/N	Y/N	Y/N
								Y/N	Y/N	Y/N	Y/N
								Y/N	Y/N	Y/N	Y/N

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: **Matt Broker (PACE)**

SIGNATURE of SAMPLER: *MKB* DATE Signed (MM/DD/YY): **5/11/15**



Sample Condition Upon Receipt



CLIENT NAME: Leader Professional Services

PROJECT: Vails Gate Manufacturing

COURIER: FedEx  UPS  Client  Pace  Other

TRACKING # NA CUSTODY SEAL PRESENT: Yes  No

INTACT: Yes  No  N/A

PACKING MATERIAL: Bubble Wrap  Bubble Bags  None  Other

ICE USED: Wet  Blue  None

THERMOMETER USED: #164  IR Gun 03  #122087967

COOLER TEMPERATURE (°C): 4.6°C (1A)

BIOLOGICAL TISSUE IS FROZEN: Yes  No  N/A

Temp should be above freezing to 6°C

COMMENTS:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		3.
Sampler Name / Signature on COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		9.
- Pace Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Containers Intact:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		10.
Filtered volume received for Dissolved tests:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		12.
- Includes date/time/ID/Analysis				
All containers needing preservation have been checked:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are in compliance with EPA recommendation:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	
- Exceptions that are not checked: VOA				
Initial when completed:	<u>ESP</u>	<u>5/11/15</u>		
Lot # of added preservative:			<u>ESP 5/11/15 NA</u>	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot #: <u>NA</u>				

Sample Receipt form filled in: ESP 5/11/15

Line-Out (Includes Copying Shipping Documents and verifying sample pH):

ESP 5/11/15

Log In (Includes notifying PM of any discrepancies and documenting in LIMS):

ESP 5/11/15

Labeling (Includes Scanning Bottles and entering LAB IDs into pH logbook):

ESP 5/11/15

**PACE Analytical Services, Inc. Ground water Field Log**

**Leader Consulting**

**Vails Gate Manufacturing**

**MW-14**

**PACE ID**

Client:

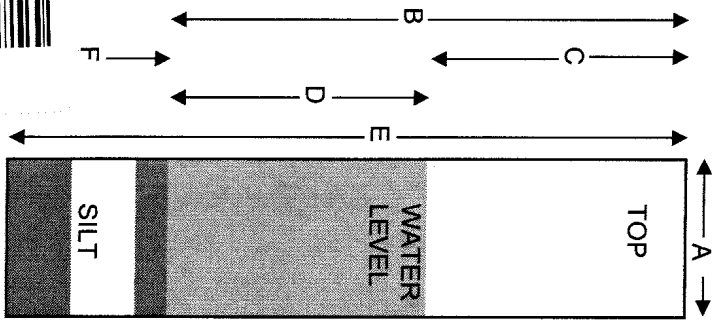
Project:

Well ID:

Condition of Well: Good Locked: Yes

Method of Evacuation: Bailer Lock ID: Flush

Method of Sampling: Bailer



A. Diameter of Well 2.00 inches

B. Well Depth Measured 13.00 feet

C. Depth to Water 4.20 feet

D. Length of Water Column (calculated) 8.80 feet

Conversion Factor 0.16 -----

Well Volume (calculated) 1.41 gallons

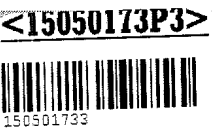
No. of Volumes to be Evacuated 3 -----

Total Volume to be Evacuated 4.23 gallons

Actual Volume Evacuated Dry @ 2.0 gallons

E. Installed Well Depth (if known) N/A feet

F. Depth of Silt (calculated) N/A feet



its	Initial Evacuation	Final Sampling
Water	5/11/15	5/11/15
Time	10:57	11:45
EH	-21	0:00
Temperature	21.3	22.6
pH	6.92	6.58
Specific Cond.	1705	1454
Turbidity	62.5	> 1000
Dissolved Oxygen	1.45	1.28
Appearance	cloudy	grey

Weather: 24C sunny

Observations: Well between pillar 2 and 3 slow recharge

Well located in Unit 4-5

Solar City John Larrauri 518-530-9279

**% Recharge:**

Initial Depth to Water 4.2 feet

Recharge Depth to Water 10.44 feet

2nd water column height \_\_\_\_\_ %

1st water column height \_\_\_\_\_ %

Elevation (Top of Casing) N/A feet

G.W. Elevation = N/A feet

G.W. Elevation = Top of Case Elev - Total Depth

Sampler: Matt Broker

Signature: [Signature]

**PACE Analytical Services, Inc. Ground water Field Log**

**Leader Consulting**

**Vails Gate Manufacturing**

**MW-CHA-RF1-7 MS/MSD**

**PAGE ID**

Client: \_\_\_\_\_

Project: \_\_\_\_\_

Well ID: \_\_\_\_\_

Condition of Well: \_\_\_\_\_

Good

Locked: \_\_\_\_\_

Yes

Method of Evacuation: \_\_\_\_\_

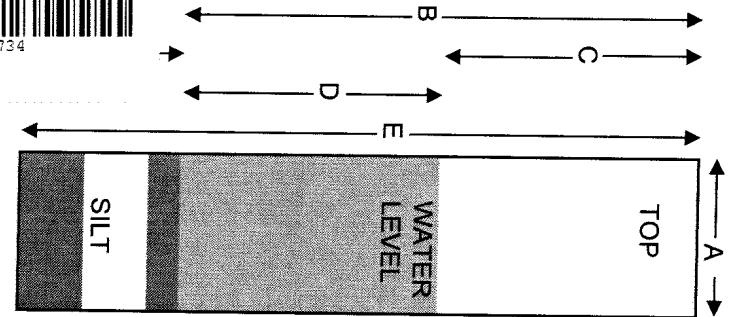
Peristaltic Pump

Lock ID: \_\_\_\_\_

Flush

Method of Sampling: \_\_\_\_\_

Peristaltic Pump



A.	Diameter of Well	2.00	Inches
B.	Well Depth Measured	41.67	feet
C.	Depth to Water	0.00	feet
D.	Length of Water Column (calculated)	41.67	feet
	Conversion Factor	0.16	-----
	Well Volume (calculated)	6.67	gallons
	No. of Volumes to be Evacuated	3	-----
	Total Volume to be Evacuated	20.01	gallons
	Actual Volume Evacuated	15.00	gallons
E.	Installed Well Depth (if known)	N/A	feet
F.	Depth of Silt (calculated)	N/A	feet

15050173P4



150501734

Measurements	Initial Evacuation	Final Sampling
--------------	--------------------	----------------

Date	5/11/15	5/11/15
Time	12:25	13:30
EH	44	35
Temperature	17.9	18
pH	6.72	7.01
Specific Cond.	1467	1465
Turbidity	2.8	4.54
Dissolved Oxygen	1.58	1.66
Appearance	clear	clear

Weather: 28C sunny  
 Observations: sample clear

% Recharge:	
Initial Depth to Water	0 feet
Recharge Depth to Water	14.97 feet
2nd water column height	%
1st water column height	%

Elevation(Top of Casing) N/A feet  
 G.W. Elevation= N/A feet  
 G.W.Elevation =Top of Case Elev.-Total Depth

Sampler: Matt Broker  
 Signature: *[Signature]*

**PACE Analytical Services, Inc. Ground water Field Log**

**Leader Consulting**

**Vails Gate Manufacturing**

**MW-16**

**PAGE ID**

Client:

Project:

Well ID:

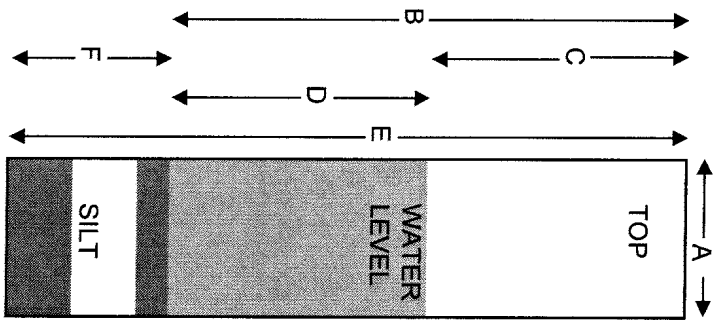
Condition of Well: Good

Locked: Yes

Method of Evacuation: Peristaltic Pump

Lock ID: Flush

Method of Sampling: Peristaltic Pump



A.	Diameter of Well	<u>2.00</u>	inches
B.	Well Depth Measured	<u>13.63</u>	feet
C.	Depth to Water	<u>3.96</u>	feet
D.	Length of Water Column (calculated)	<u>9.67</u>	feet
	Conversion Factor	<u>0.16</u>	-----
	Well Volume (calculated)	<u>1.55</u>	gallons
	No. of Volumes to be Evacuated	<u>3</u>	-----
	Total Volume to be Evacuated	<u>4.65</u>	gallons
	Actual Volume Evacuated	<u>Dry @ 2</u>	gallons
E.	Installed Well Depth (if known)	<u>N/A</u>	feet
F.	Depth of Silt (calculated)	<u>N/A</u>	feet

Field Measurements	Initial Evacuation	Final Sampling
Date	<u>5/11/15</u>	<u>5/11/15</u>
Time	<u>11:20</u>	<u>11:30</u>
EH	<u>113</u>	<u>151</u>
Temperature	<u>17.3</u>	<u>17.6</u>
pH	<u>6.97</u>	<u>6.66</u>
Specific Cond.	<u>1207</u>	<u>1178</u>
Turbidity	<u>35</u>	<u>287</u>
Dissolved Oxygen	<u>1.56</u>	<u>2.15</u>
Appearance	<u>cloudy</u>	<u>cloudy</u>
Weather:	<u>24C sunny</u>	
Observations:	<u>sample cloudy brown</u>	

<b>% Recharge:</b>	
Initial Depth to Water	<u>3.96</u> feet
Recharge Depth to Water	<u>11.45</u> feet
2nd water column height	_____ %
1st water column height	_____ %
Elevation (Top of Casing)	<u>N/A</u> feet
G.W. Elevation =	<u>N/A</u> feet
G.W. Elevation = Top of Case Elev - Total Depth	
Sampler:	<u>Matt Broker</u>
Signature:	

15050173P5



150501735

**PACE Analytical Services, Inc. Ground water Field Log**

**Leader Consulting**

**Vails Gate Manufacturing**

**MW-5A/AR Field Dupe 1**

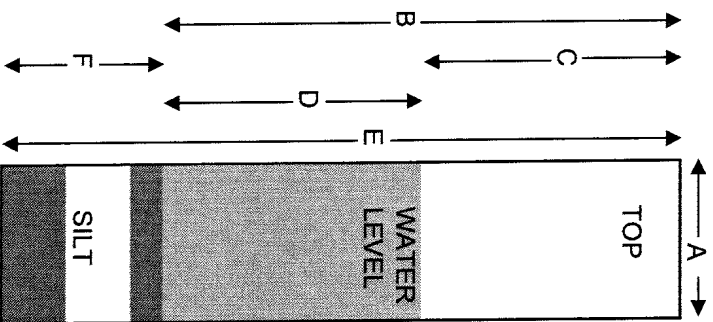
**PACE ID**

Client: \_\_\_\_\_  
 Project: \_\_\_\_\_  
 Well ID: \_\_\_\_\_

Condition of Well: Good Locked: Yes

Method of Evacuation: Peristaltic Pump Lock ID: Flush

Method of Sampling: Peristaltic Pump



A. Diameter of Well	<u>2.00</u>	inches
B. Well Depth Measured	<u>6.50</u>	feet
C. Depth to Water	<u>0.80</u>	feet
D. Length of Water Column (calculated)	<u>5.70</u>	feet
Conversion Factor	<u>0.16</u>	-----
Well Volume (calculated)	<u>0.91</u>	gallons
No. of Volumes to be Evacuated	<u>3</u>	-----
Total Volume to be Evacuated	<u>2.73</u>	gallons
Actual Volume Evacuated	<u>4.00</u>	gallons
E. Installed Well Depth (if known)	<u>N/A</u>	feet
F. Depth of Silt (calculated)	<u>N/A</u>	feet

Field Measurements	Initial Evacuation	Final Sampling
Date	<u>5/11/15</u>	<u>5/11/15</u>
Time	<u>12:00</u>	<u>12:15</u>
EH	<u>-42</u>	<u>-73</u>
Temperature	<u>18.4</u>	<u>17.8</u>
pH	<u>6.53</u>	<u>6.43</u>
Specific Cond.	<u>1170</u>	<u>1093</u>
Turbidity	<u>&gt; 1000</u>	<u>71.8</u>
Dissolved Oxygen	<u>1.45</u>	<u>0.91</u>
Appearance	<u>grey</u>	<u>cloudy</u>
Weather:	<u>26C sunny</u>	
Observations:	<u>Silty bottom thick grey while purging then cleared up</u>	

% Recharge:	
Initial Depth to Water	<u>0.8</u> feet
Recharge Depth to Water	<u>4.12</u> feet
2nd water column height	_____ %
1st water column height	_____ %
Elevation (Top of Casing)	<u>N/A</u> feet
G.W. Elevation =	<u>N/A</u> feet
G.W. Elevation = Top of Case Elev - Total Depth	_____ feet
Sampler:	<u>Matt Broker</u>
Signature:	<u>[Signature]</u>

15050173P6



150501736

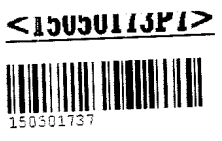
**PACE ANALYTICAL INC.**  
**FIELD CALIBRATION SHEET**

**DATE:** 5/11/15 **SITE:** Vails Gate Manufacturing  
**TECHNICIAN:** Matt Broker **WEATHER:** 24C sunny

**INSTRUMENT:**  
 PH Myron Ultrameter II 6PFce  
 CONDUCTIVITY Myron Ultrameter II 6PFce  
 TEMPERATURE Myron Ultrameter II 6PFce  
 DISSOLVED OXYGEN Sper Scientific 850041  
 TURBIDITY Hanna HI 98703

INSTRUMENT ANALYTE	STANDARD	INITIAL READING	ADJUSTED READING	TIME	NOTES
Ph	4.00	3.87	4.00	1052	
	7.00	7.20	7.00	1050	
	10.00	10.02	10.00	1054	
Conductivity	1413	1421	1413	1055	
Turbidity	<0.10	0.12	<0.10	1055	
	15	15.3	15	1056	
	100	97	100	1057	
	750	741	750	1058	

NOTES:



# SAMPLE RECEIPT



# SAMPLE RECEIPT REPORT

## 15050173

**Pace Analytical Services, Inc.**  
 2190 Technology Drive  
 Schenectady, NY 12308  
 Phone: 518.346.4592  
 Fax: 518.381.6055

**CLIENT:** LEADER CONSULTING SERVICES, INC.  
**PROJECT:** VAILS GATE MANUFACTURING  
**LRF:** 15050173  
**REPORT:** DATA PACKAGE  
**EDD:** YES  
**LRF TAT:** 2 WEEK

**RECEIVED DATE:** 05/11/2015 16:30  
**SHIPPED VIA:** PICK UP <sup>1</sup>  
**SHIPPING ID:**  
**NUMBER OF COOLERS:** 1  
**CUSTODY SEAL INTACT:** NA  
**COOLER STATUS:** CHILLED  
**TEMPERATURE(S):** 5.6 (IR) °C

**SAMPLE SEALS INTACT:** NA  
**SAMPLES PRESERVED PER METHOD GUIDANCE:** YES  
<sup>3</sup> **SAMPLES REC'D IN HOLDTIME:** YES  
**DISPOSAL:** BY LAB (45 DAYS)  
**COC DISCREPANCY:** NO

**COMMENTS:**

CLIENT ID (LAB ID)	TAT-DUE Date <sup>4</sup>	DATE-TIME SAMPLED	MATRIX	METHOD	TEST DESCRIPTION	QC REQUEST
FIELD DUPLICATE-01 (AS08975)	2 WEEK 05-27-15	05/11/2015 12:15	Water		Sulfate - Sub	
	2 WEEK 05-27-15	05/11/2015 12:15	Water	200.7	Dissolved Metals 200.7 - Sub - NY-LI	
	2 WEEK 05-27-15	05/11/2015 12:15	Water	E8260C	EPA Method 8260C	
	2 WEEK 05-27-15	05/11/2015 12:15	Water	SM 5310B-00,-11	Total Organic Carbon	
MW-5A/AR (AS08976)	2 WEEK 05-27-15	05/11/2015 12:15	Water		Sulfate - Sub	
	2 WEEK 05-27-15	05/11/2015 12:15	Water	200.7	Dissolved Metals 200.7 - Sub - NY-LI	
	2 WEEK 05-27-15	05/11/2015 12:15	Water	E8260C	EPA Method 8260C	
	2 WEEK 05-27-15	05/11/2015 12:15	Water	Misc Field Analysis	Misc Field Analysis	
	2 WEEK 05-27-15	05/11/2015 12:15	Water	SM 5310B-00,-11	Total Organic Carbon	
MW-14 (AS08977)	2 WEEK 05-27-15	05/11/2015 11:45	Water		Sulfate - Sub	
	2 WEEK 05-27-15	05/11/2015 11:45	Water	200.7	Dissolved Metals 200.7 - Sub - NY-LI	
	2 WEEK 05-27-15	05/11/2015 11:45	Water	E8260C	EPA Method 8260C	
	2 WEEK 05-27-15	05/11/2015 11:45	Water	Misc Field Analysis	Misc Field Analysis	
	2 WEEK 05-27-15	05/11/2015 11:45	Water	SM 5310B-00,-11	Total Organic Carbon	
MW-16 (AS08978)	2 WEEK 05-27-15	05/11/2015 11:30	Water		Sulfate - Sub	
	2 WEEK 05-27-15	05/11/2015 11:30	Water	200.7	Dissolved Metals 200.7 - Sub - NY-LI	
	2 WEEK 05-27-15	05/11/2015 11:30	Water	E8260C	EPA Method 8260C	
	2 WEEK 05-27-15	05/11/2015 11:30	Water	Misc Field Analysis	Misc Field Analysis	
	2 WEEK 05-27-15	05/11/2015 11:30	Water	SM 5310B-00,-11	Total Organic Carbon	
MW-CHA-RFI-7 (AS08979)	2 WEEK 05-27-15	05/11/2015 13:30	Water		Sulfate - Sub	MS, MSD
	2 WEEK 05-27-15	05/11/2015 13:30	Water	200.7	Dissolved Metals 200.7 - Sub - NY-LI	MS, MSD
	2 WEEK 05-27-15	05/11/2015 13:30	Water	E8260C	EPA Method 8260C	MS, MSD
	2 WEEK 05-27-15	05/11/2015 13:30	Water	Misc Field Analysis	Misc Field Analysis	
	2 WEEK 05-27-15	05/11/2015 13:30	Water	SM 5310B-00,-11	Total Organic Carbon	MS, MSD
TRIP BLANK-01 (AS08980)	2 WEEK 05-27-15	05/11/2015	Water	E8260C	EPA Method 8260C	

<sup>1</sup>The pH preservation check of Oil and Grease (Method 1664) and Total Organic Carbon (Method 5310B) are performed as soon as possible after sample receipt and may not be included in this report.  
<sup>2</sup>The pH preservation check of aqueous volatile samples is not performed until after the analysis of the sample to maintain zero headspace and is not included in this report.  
<sup>3</sup>Samples received for pH analysis are not marked as a hold time exceedance here. SW-846 methods suggests analysis to be done within 15 minutes of sample collection. Because of transportation time it is not possible for the laboratory to perform the test in that time. Sample Certificates of Analysis reports are noted as such.  
<sup>4</sup>Samples arriving at the laboratory after 4:00 pm are assigned a due date as if they arrived the following business day unless other arrangements have been made. The due date represents the date the lab report is expected to be completed on or before 5:00 pm (EST) for the date specified.  
<sup>5</sup>All samples which require thermal preservation shall be considered acceptable when received greater than 6 degrees Celsius if they are collected on the same day as received and there is evidence that the chilling process has begun, such as arrival on ice. Control limits are between 0-6 Degrees Celsius. Control limits do not apply for metals analysis.  
<sup>6</sup>Samples requesting analysis for Orthophosphate (SM 4500-P E-99,-11) require the samples to be filtered in the field within 15 minutes of the sampling event. Samples that are received unfiltered will be noted as not method compliant on the Certificates of Analysis.

### Reporting Parameters and Lists

Misc Field Analysis - Misc Field Analysis - (mg/L)

Dissolved Oxygen  
 pH  
 Reduction Potential  
 Specific Conductance  
 Static Water Level

Misc Field Analysis - Misc Field Analysis - (mg/L)

Temperature  
 Turbidity

SM 5310B-00,-11 - Total Organic Carbon - (mg/L)

Total Organic Carbon



# Wet Chemistry - TOC/DTOC



**Analytical Sample Results**

**Job Number:** 15050173

**Pace Analytical Services, Inc.**  
 2190 Technology Drive  
 Schenectady, NY 12308  
 Phone: 518.346.4592  
 Fax: 518.381.6055

**Client:** Leader Consulting Services, Inc.  
**Project:** VAILS GATE MANUFACTURING  
**Client Sample ID:** FIELD DUPLICATE-01  
**Lab Sample ID:** 15050173-01 (AS08975)

**Collection Date:** 05/11/2015 12:15  
**Sample Matrix:** WATER  
**Received Date:** 05/11/2015 16:30  
**Percent Solid:** N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1: 786	SM 5310B	05/20/2015 09:56	JLM	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Organic Carbon	OC002	44.7	0.500	1.00		786

ND: Denotes analyte not detected at a concentration greater than the PQL.  
 PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.



**Analytical Sample Results**

**Job Number:** 15050173

**Pace Analytical Services, Inc.**  
 2190 Technology Drive  
 Schenectady, NY 12308  
 Phone: 518.346.4592  
 Fax: 518.381.6055

**Client:** Leader Consulting Services, Inc.  
**Project:** VAILS GATE MANUFACTURING  
**Client Sample ID:** MW-5A/AR  
**Lab Sample ID:** 15050173-02 (AS08976)

**Collection Date:** 05/11/2015 12:15  
**Sample Matrix:** WATER  
**Received Date:** 05/11/2015 16:30  
**Percent Solid:** N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1: 786	SM 5310B	05/20/2015 10:11	JLM	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Organic Carbon	OC002	48.9	0.500	1.00		786

ND: Denotes analyte not detected at a concentration greater than the PQL.  
 PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.



**Analytical Sample Results**

**Job Number:** 15050173

**Pace Analytical Services, Inc.**  
 2190 Technology Drive  
 Schenectady, NY 12308  
 Phone: 518.346.4592  
 Fax: 518.381.6055

**Client:** Leader Consulting Services, Inc.  
**Project:** VAILS GATE MANUFACTURING  
**Client Sample ID:** MW-14  
**Lab Sample ID:** 15050173-03 (AS08977)

**Collection Date:** 05/11/2015 11:45  
**Sample Matrix:** WATER  
**Received Date:** 05/11/2015 16:30  
**Percent Solid:** N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1: 786	SM 5310B	05/20/2015 10:28	JLM	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Organic Carbon	OC002	39.8	0.500	1.00		786

ND: Denotes analyte not detected at a concentration greater than the PQL.  
 PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.



**Analytical Sample Results**

**Job Number:** 15050173

**Pace Analytical Services, Inc.**  
 2190 Technology Drive  
 Schenectady, NY 12308  
 Phone: 518.346.4592  
 Fax: 518.381.6055

**Client:** Leader Consulting Services, Inc.  
**Project:** VAILS GATE MANUFACTURING  
**Client Sample ID:** MW-16  
**Lab Sample ID:** 15050173-04 (AS08978)

**Collection Date:** 05/11/2015 11:30  
**Sample Matrix:** WATER  
**Received Date:** 05/11/2015 16:30  
**Percent Solid:** N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1: 786	SM 5310B	05/20/2015 10:41	JLM	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Organic Carbon	OC002	11.7	0.500	1.00		786

ND: Denotes analyte not detected at a concentration greater than the PQL.  
 PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.



**Analytical Sample Results**

**Job Number:** 15050173

**Pace Analytical Services, Inc.**  
 2190 Technology Drive  
 Schenectady, NY 12308  
 Phone: 518.346.4592  
 Fax: 518.381.6055

**Client:** Leader Consulting Services, Inc.  
**Project:** VAILS GATE MANUFACTURING  
**Client Sample ID:** MW-CHA-RFI-7  
**Lab Sample ID:** 15050173-05 (AS08979)

**Collection Date:** 05/11/2015 13:30  
**Sample Matrix:** WATER  
**Received Date:** 05/11/2015 16:30  
**Percent Solid:** N/A

	Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:	786	SM 5310B	05/20/2015 10:57	JLM	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Organic Carbon	OC002	1.20	0.500	1.00		786

ND: Denotes analyte not detected at a concentration greater than the PQL.  
 PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.

# Field Analysis



**Analytical Sample Results**

**Job Number:** 15050173

**Pace Analytical Services, Inc.**  
 2190 Technology Drive  
 Schenectady, NY 12308  
 Phone: 518.346.4592  
 Fax: 518.381.6055

**Client:** Leader Consulting Services, Inc.  
**Project:** VAILS GATE MANUFACTURING  
**Client Sample ID:** MW-5A/AR  
**Lab Sample ID:** 15050173-02 (AS08976)

**Collection Date:** 05/11/2015 12:15  
**Sample Matrix:** WATER  
**Received Date:** 05/11/2015 16:30  
**Percent Solid:** N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:	Field Test	Field Analysis	05/11/2015 12:15	MEB	NA	NA

Analyte	CAS No.	Result	PQL	Dilution Factor	Flags	File ID
Dissolved Oxygen	7782-44-7	0.910 (mg/L)	0.00	1.00		Field Test
pH	NA	6.43 (pH)	0.00	1.00		Field Test
Reduction Potential	NA	-73.0 (mV)	0.00	1.00		Field Test
Specific Conductance	NA	1090 (umhos/cm)	0.00	1.00		Field Test
Static Water Level	NA	0.800 (ft)	0.00	1.00		Field Test
Temperature	NA	17.8 (°C)	0.00	1.00		Field Test
Turbidity	NA	71.8 (NTU)	0.00	1.00		Field Test

ND: Denotes analyte not detected at a concentration greater than the PQL.  
 PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.  
 Note: This is field generated data. NYS-DOH ELAP/NELAC laboratory certification is not available for these field parameters.





**Analytical Sample Results**

**Job Number:** 15050173

**Pace Analytical Services, Inc.**  
 2190 Technology Drive  
 Schenectady, NY 12308  
 Phone: 518.346.4592  
 Fax: 518.381.6055

**Client:** Leader Consulting Services, Inc.  
**Project:** VAILS GATE MANUFACTURING  
**Client Sample ID:** MW-14  
**Lab Sample ID:** 15050173-03 (AS08977)

**Collection Date:** 05/11/2015 11:45  
**Sample Matrix:** WATER  
**Received Date:** 05/11/2015 16:30  
**Percent Solid:** N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:	Field Test	Field Analysis	05/11/2015 11:45	MEB	NA	NA

Analyte	CAS No.	Result	PQL	Dilution Factor	Flags	File ID
Dissolved Oxygen	7782-44-7	1.28 (mg/L)	0.00	1.00		Field Test
pH	NA	6.58 (pH)	0.00	1.00		Field Test
Reduction Potential	NA	0.00 (mV)	0.00	1.00		Field Test
Specific Conductance	NA	1450 (umhos/cm)	0.00	1.00		Field Test
Static Water Level	NA	4.20 (ft)	0.00	1.00		Field Test
Temperature	NA	22.6 (°C)	0.00	1.00		Field Test
Turbidity	NA	>1000 (NTU)	0.00	1.00		Field Test

ND: Denotes analyte not detected at a concentration greater than the PQL.  
 PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.  
 Note: This is field generated data. NYS-DOH ELAP/NELAC laboratory certification is not available for these field parameters.



**Analytical Sample Results**

**Job Number:** 15050173

**Pace Analytical Services, Inc.**  
 2190 Technology Drive  
 Schenectady, NY 12308  
 Phone: 518.346.4592  
 Fax: 518.381.6055

**Client:** Leader Consulting Services, Inc.  
**Project:** VAILS GATE MANUFACTURING  
**Client Sample ID:** MW-16  
**Lab Sample ID:** 15050173-04 (AS08978)

**Collection Date:** 05/11/2015 11:30  
**Sample Matrix:** WATER  
**Received Date:** 05/11/2015 16:30  
**Percent Solid:** N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:	Field Test	Field Analysis	05/11/2015 11:30	MEB	NA	NA

Analyte	CAS No.	Result	PQL	Dilution Factor	Flags	File ID
Dissolved Oxygen	7782-44-7	2.15 (mg/L)	0.00	1.00		Field Test
pH	NA	6.66 (pH)	0.00	1.00		Field Test
Reduction Potential	NA	151 (mV)	0.00	1.00		Field Test
Specific Conductance	NA	1180 (umhos/cm)	0.00	1.00		Field Test
Static Water Level	NA	3.96 (ft)	0.00	1.00		Field Test
Temperature	NA	17.6 (°C)	0.00	1.00		Field Test
Turbidity	NA	287 (NTU)	0.00	1.00		Field Test

ND: Denotes analyte not detected at a concentration greater than the PQL.

PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.

Note: This is field generated data. NYS-DOH ELAP/NELAC laboratory certification is not available for these field parameters.



**Analytical Sample Results**

**Job Number:** 15050173

**Pace Analytical Services, Inc.**  
 2190 Technology Drive  
 Schenectady, NY 12308  
 Phone: 518.346.4592  
 Fax: 518.381.6055

**Client:** Leader Consulting Services, Inc.  
**Project:** VAILS GATE MANUFACTURING  
**Client Sample ID:** MW-CHA-RFI-7  
**Lab Sample ID:** 15050173-05 (AS08979)

**Collection Date:** 05/11/2015 13:30  
**Sample Matrix:** WATER  
**Received Date:** 05/11/2015 16:30  
**Percent Solid:** N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:	Field Test	Field Analysis	05/11/2015 13:30	MEB	NA	NA

Analyte	CAS No.	Result	PQL	Dilution Factor	Flags	File ID
Dissolved Oxygen	7782-44-7	1.66 (mg/L)	0.00	1.00		Field Test
pH	NA	7.01 (pH)	0.00	1.00		Field Test
Reduction Potential	NA	35.0 (mV)	0.00	1.00		Field Test
Specific Conductance	NA	1470 (umhos/cm)	0.00	1.00		Field Test
Static Water Level	NA	0.00 (ft)	0.00	1.00		Field Test
Temperature	NA	18.0 (°C)	0.00	1.00		Field Test
Turbidity	NA	4.54 (NTU)	0.00	1.00		Field Test

ND: Denotes analyte not detected at a concentration greater than the PQL.  
 PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.  
 Note: This is field generated data. NYS-DOH ELAP/NELAC laboratory certification is not available for these field parameters.

5

# Quality Control Samples (Field)



**Quality Control Results  
Matrix Spike Sample (MS)**  
Job Number: 15050173

**Pace Analytical Services, Inc.**  
2190 Technology Drive  
Schenectady, NY 12308  
Phone: 518.346.4592  
Fax: 518.381.6055

**Client:** Leader Consulting Services, Inc.  
**Project:** VAILS GATE MANUFACTURING  
**Client Sample ID:** MW-CHA-RFI-7 MS  
**Lab Sample ID:** 15050173-05M (AS08979M)

**Collection Date:** N/A  
**Sample Matrix:** WATER  
**Received Date:** N/A  
**Percent Solid:** N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1: 786	SM 5310B	05/20/2015 11:12	JLM	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Organic Carbon	OC002	10.7	0.500	1.00		786

Analyte Spiked	CAS No.	Sample (mg/L)	Added (mg/L)	MS (mg/L)	MS % Rec.	Q <sup>1</sup>	Limits (%)
Total Organic Carbon	OC002	1.20	10.1	10.7	93.7		80.0-120

<sup>1</sup>Qualifier column where '\*' denotes value outside the control limits. Note: RPD criteria does not apply if either the sample and duplicate sample are not detected.

ND: Denotes analyte not detected at a concentration greater than the PQL.  
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.



**Quality Control Results  
Matrix Spike Duplicate (MSD)**

**Job Number:** 15050173

**Pace Analytical Services, Inc.**  
2190 Technology Drive  
Schenectady, NY 12308  
Phone: 518.346.4592  
Fax: 518.381.6055

**Client:** Leader Consulting Services, Inc.  
**Project:** VAILS GATE MANUFACTURING  
**Client Sample ID:** MW-CHA-RFI-7 MSD  
**Lab Sample ID:** 15050173-05K (AS08979K)

**Collection Date:** N/A  
**Sample Matrix:** WATER  
**Received Date:** N/A  
**Percent Solid:** N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1: 786	SM 5310B	05/20/2015 11:53	JLM	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Organic Carbon	OC002	9.12	0.500	1.00		786

Analyte Spiked	CAS No.	Sample (mg/L)	Added (mg/L)	MSD (mg/L)	MSD % Rec.	Q <sup>1</sup>	Limits (%)	Precision			
								MS % Rec.	RPD	Q <sup>1</sup>	Limits (%)
Total Organic Carbon	OC002	1.20	10.1	9.12	78.4	*	80.0-120	93.7	17.8		20

<sup>1</sup>Qualifier column where '\*' denotes value outside the control limits. Note: RPD criteria does not apply if either the sample and duplicate sample are not detected.

ND: Denotes analyte not detected at a concentration greater than the PQL.  
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.

# Quality Control Samples (Lab)



**Quality Control Results  
Method Blank**

**Job Number:** 15050173

**Pace Analytical Services, Inc.**  
2190 Technology Drive  
Schenectady, NY 12308  
Phone: 518.346.4592  
Fax: 518.381.6055

**Client:** Leader Consulting Services, Inc.  
**Project:** VAILS GATE MANUFACTURING  
**Client Sample ID:** Method Blank (AS08705B)  
**Lab Sample ID:** BLANK-01

**Collection Date:** N/A  
**Sample Matrix:** WATER  
**Received Date:** N/A  
**Percent Solid:** N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1: 786	SM 5310B	05/20/2015 09:08	JLM	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Organic Carbon	OC002	ND	0.500	1.00	U	786

ND: Denotes analyte not detected at a concentration greater than the PQL.  
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.





**Quality Control Results**  
**Lab Control Sample (LCS)**  
**Job Number: 15050173**

**Pace Analytical Services, Inc.**  
 2190 Technology Drive  
 Schenectady, NY 12308  
 Phone: 518.346.4592  
 Fax: 518.381.6055

**Client:** Leader Consulting Services, Inc.  
**Project:** VAILS GATE MANUFACTURING  
**Client Sample ID:** Lab Control Sample (AS08705L)  
**Lab Sample ID:** LCS-01

**Collection Date:** N/A  
**Sample Matrix:** WATER  
**Received Date:** N/A  
**Percent Solid:** N/A

	Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:	786	SM 5310B	05/20/2015 09:22	JLM	NA	NA	NA

Analyte Spiked	CAS No.	Added (mg/L)	LCS (mg/L)	LCS % Rec.	Q <sup>1</sup>	Limits (%)
Total Organic Carbon	OC002	10.0	9.17	91.7		80.0-120

<sup>1</sup>Qualifier column where '\*' denotes value outside the control limits. Note: RPD criteria does not apply if either the sample and duplicate sample are not detected.

ND: Denotes analyte not detected at a concentration greater than the PQL.  
 PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.

# Subcontract Analysis



575 Broad Hollow Road, Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478 [www.pacelabs.com](http://www.pacelabs.com)

**Pace Analytical Services Inc.**

2190 Technology Drive  
 Schenectady, NY 12308

Attn To : William A. Kotas

Collected : 5/11/2015 12:15:00 PM

Received : 5/11/2015 9:15:00 PM AS08975

Collected By : CLIENT

**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Sample Information:**

Type : Aqueous

Origin:

Lab No. : 1505771-001

Client Sample ID: FIELD DUPLICATE-01

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,1,1-Trichloroethane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,1,2-Trichloroethane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,1-Dichloroethane	42		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,1-Dichloroethene	1.9		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,1-Dichloropropene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,2,3-Trichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,2,3-Trichloropropane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,2,4-Trichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,2,4-Trimethylbenzene	1.8		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,2-Dibromo-3-chloropropane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,2-Dibromoethane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,2-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,2-Dichloroethane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,2-Dichloropropane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,3,5-Trimethylbenzene/P-ethyltoluene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,3-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,3-Dichloropropane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
1,4-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
2,2-Dichloropropane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
2-Butanone	4.1	Jc	1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
2-Chloroethylvinyl ether	< 10		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
2-Chlorotoluene/4-Chlorotoluene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
2-Hexanone	< 5.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
4-Isopropyltoluene	< 1.0	S	1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
4-Methyl-2-pentanone	< 5.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Acetone	68	c	1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Benzene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Bromobenzene	< 1.0	c	1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Bromochloromethane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03

Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Carsten P. Steinhilber*

Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :

Page 1 of 20



575 Broad Hollow Road, Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478 www.pacelabs.com

**Pace Analytical Services Inc.**  
 2190 Technology Drive  
 Schenectady, NY 12308

Attn To : William A. Kotas

Collected : 5/11/2015 12:15:00 PM

Received : 5/11/2015 9:15:00 PM AS08975

Collected By : CLIENT

## LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

Lab No. : 1505771-001

Client Sample ID: FIELD DUPLICATE-01

**Sample Information:**

Type : Aqueous

Origin:

Analytical Method: SW8260C :

Prep Method: 5030C

Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromodichloromethane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Bromoform	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Bromomethane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Carbon disulfide	< 10		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Carbon tetrachloride	< 1.0	S	1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Chlorobenzene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Chloroethane	480	D	5	µg/L	05/15/2015 3:10 PM	Container-01 of 03
Chloroform	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Chloromethane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
cis-1,2-Dichloroethene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
cis-1,3-Dichloropropene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Dibromochloromethane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Dibromomethane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Dichlorodifluoromethane	< 1.0	cS	1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Ethylbenzene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Hexachlorobutadiene	< 1.0	S	1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Isopropylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
m,p-Xylene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Methyl tert-butyl ether	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Methylene chloride	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Naphthalene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
n-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
n-Propylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
o-Xylene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
sec-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Styrene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
tert-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Tetrachloroethene	< 1.0	S	1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Toluene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
trans-1,2-Dichloroethene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
trans-1,3-Dichloropropene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Trichloroethene	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03

Qualifiers: E = Value above quantitation range, Value estimated.

B = Found in Blank

D.F. = Dilution Factor D = Results for Dilution

H = Received/analyzed outside of analytical holding time

+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

c = Calibration acceptability criteria exceeded for this analyte

r = Reporting limit > MDL and < LOQ, Value estimated.

J = Estimated value - below calibration range

S = Recovery exceeded control limits for this analyte

N = Indicates presumptive evidence of compound

Date Reported :

Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Page 2 of 20



**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Pace Analytical Services Inc.**  
**2190 Technology Drive**  
**Schenectady, NY 12308**

**Lab No. : 1505771-001**  
**Client Sample ID: FIELD DUPLICATE-01**

**Sample Information:**

Type : Aqueous

Origin:

**Attn To :** William A. Kotas  
 Collected : 5/11/2015 12:15:00 PM  
 Received : 5/11/2015 9:15:00 PM AS08975  
 Collected By : CLIENT

Analytical Method: SW8260C :		Prep Method: 5030C			Analyst: KG	
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Trichlorofluoromethane	< 1.0		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Vinyl acetate	< 10		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Vinyl chloride	2.2		1	µg/L	05/15/2015 2:28 PM	Container-01 of 03
Surr: 1,2-Dichloroethane-d4	94.8		1	%REC Limit 53-183	05/15/2015 2:28 PM	Container-01 of 03
Surr: 4-Bromofluorobenzene	106		1	%REC Limit 63-140	05/15/2015 2:28 PM	Container-01 of 03
Surr: Toluene-d8	83.3		1	%REC Limit 60-135	05/15/2015 2:28 PM	Container-01 of 03

Analytical Method: E300.0 :					Analyst: bka	
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Sulfate	0.63	J	1	mg/L	05/26/2015 10:45 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Cadence Peterson*  
 Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Date Reported :



### LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Pace Analytical Services Inc.**

2190 Technology Drive  
Schenectady, NY 12308

Attn To : William A. Kotas

Collected : 5/11/2015 12:15:00 PM

Received : 5/11/2015 9:15:00 PM AS08976

Collected By : CLIENT

Lab No. : 1505771-002

Client Sample ID: MW-5A/AR

**Sample Information:**

Type : Aqueous

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,1,1-Trichloroethane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,1,2-Trichloroethane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,1-Dichloroethane	41		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,1-Dichloroethene	1.9		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,1-Dichloropropene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,2,3-Trichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,2,3-Trichloropropane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,2,4-Trichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,2,4-Trimethylbenzene	2.1		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,2-Dibromo-3-chloropropane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,2-Dibromoethane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,2-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,2-Dichloroethane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,2-Dichloropropane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,3,5-Trimethylbenzene/P-ethyltoluene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,3-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,3-Dichloropropane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
1,4-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
2,2-Dichloropropane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
2-Butanone	4.5	Jc	1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
2-Chloroethylvinyl ether	< 10		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
2-Chlorotoluene/4-Chlorotoluene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
2-Hexanone	< 5.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
4-Isopropyltoluene	< 1.0	S	1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
4-Methyl-2-pentanone	< 5.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Acetone	77	c	1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Benzene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Bromobenzene	< 1.0	c	1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Bromochloromethane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03

Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Cadman P. Korman*  
Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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### LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Pace Analytical Services Inc.**  
**2190 Technology Drive**  
**Schenectady, NY 12308**

**Lab No. : 1505771-002**  
**Client Sample ID: MW-5A/AR**

**Sample Information:**

Type : Aqueous

Attn To : William A. Kotas  
 Collected : 5/11/2015 12:15:00 PM  
 Received : 5/11/2015 9:15:00 PM AS08976  
 Collected By : CLIENT

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromodichloromethane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Bromoform	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Bromomethane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Carbon disulfide	< 10		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Carbon tetrachloride	< 1.0	S	1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Chlorobenzene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Chloroethane	470	D	5	µg/L	05/15/2015 3:31 PM	Container-02 of 03
Chloroform	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Chloromethane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
cis-1,2-Dichloroethene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
cis-1,3-Dichloropropene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Dibromochloromethane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Dibromomethane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Dichlorodifluoromethane	< 1.0	cS	1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Ethylbenzene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Hexachlorobutadiene	< 1.0	S	1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Isopropylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
m,p-Xylene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Methyl tert-butyl ether	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Methylene chloride	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Naphthalene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
n-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
n-Propylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
o-Xylene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
sec-Butylbenzene	1.1	S	1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Styrene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
tert-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Tetrachloroethene	< 1.0	S	1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Toluene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
trans-1,2-Dichloroethene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
trans-1,3-Dichloropropene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Trichloroethene	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03

Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Caitlin P. DeSimone*  
 Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :



575 Broad Hollow Road, Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478 [www.pacelabs.com](http://www.pacelabs.com)

**Pace Analytical Services Inc.**  
**2190 Technology Drive**  
**Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 5/11/2015 12:15:00 PM  
 Received : 5/11/2015 9:15:00 PM AS08976  
 Collected By : CLIENT

**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Sample Information:**

Type : Aqueous

Origin:

Lab No. : 1505771-002

Client Sample ID: MW-5A/AR

<u>Analytical Method:</u> SW8260C :		<u>Prep Method:</u> 5030C			<u>Analyst:</u> KG	
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Analyzed:</u>	<u>Container:</u>
Trichlorofluoromethane	< 1.0		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Vinyl acetate	< 10		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Vinyl chloride	2.4		1	µg/L	05/15/2015 2:50 PM	Container-01 of 03
Surr: 1,2-Dichloroethane-d4	93.7		1	%REC Limit 53-183	05/15/2015 2:50 PM	Container-01 of 03
Surr: 4-Bromofluorobenzene	104		1	%REC Limit 63-140	05/15/2015 2:50 PM	Container-01 of 03
Surr: Toluene-d8	83.3		1	%REC Limit 60-135	05/15/2015 2:50 PM	Container-01 of 03

<u>Analytical Method:</u> E300.0 :					<u>Analyst:</u> bka	
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Analyzed:</u>	<u>Container:</u>
Sulfate	0.70	J	1	mg/L	05/26/2015 10:59 PM	Container-01 of 01

- Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Caitlin P. Keenan*  
 Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :





575 Broad Hollow Road, Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478 www.pacelabs.com

**Pace Analytical Services Inc.**  
**2190 Technology Drive**  
**Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 5/11/2015 11:45:00 AM  
 Received : 5/11/2015 9:15:00 PM AS08977  
 Collected By : CLIENT

## LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

### Sample Information:

Type : Aqueous

Origin:

Lab No. : 1505771-003

Client Sample ID: MW-14

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,1,1-Trichloroethane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,1,2-Trichloroethane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,1-Dichloroethane	48		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,1-Dichloroethene	3.1		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,1-Dichloropropene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,2,3-Trichlorobenzene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,2,3-Trichloropropane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,2,4-Trichlorobenzene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,2,4-Trimethylbenzene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,2-Dibromo-3-chloropropane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,2-Dibromoethane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,2-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,2-Dichloroethane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,2-Dichloropropane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,3,5-Trimethylbenzene/P-ethyltoluene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,3-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,3-Dichloropropane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
1,4-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
2,2-Dichloropropane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
2-Butanone	2.2	Jc	1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
2-Chloroethylvinyl ether	< 10		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
2-Chlorotoluene/4-Chlorotoluene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
2-Hexanone	< 5.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
4-Isopropyltoluene	< 1.0	S	1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
4-Methyl-2-pentanone	< 5.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Acetone	16	c	1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Benzene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Bromobenzene	< 1.0	c	1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Bromochloromethane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03

Qualifiers: E = Value above quantitation range, Value estimated.

B = Found in Blank

D.F. = Dilution Factor D = Results for Dilution

H = Received/analyzed outside of analytical holding time

+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

c = Calibration acceptability criteria exceeded for this analyte

r = Reporting limit > MDL and < LOQ, Value estimated.

J = Estimated value - below calibration range

S = Recovery exceeded control limits for this analyte

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Date Reported :

Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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### LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Pace Analytical Services Inc.**

2190 Technology Drive  
 Schenectady, NY 12308

Attn To : William A. Kotas

Collected : 5/11/2015 11:45:00 AM  
 Received : 5/11/2015 9:15:00 PM AS08977  
 Collected By : CLIENT

Lab No. : 1505771-003

Client Sample ID: MW-14

**Sample Information:**

Type : Aqueous

Origin:

Analytical Method: SW8260C :

Prep Method: 5030C

Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromodichloromethane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Bromoform	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Bromomethane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Carbon disulfide	< 10		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Carbon tetrachloride	< 1.0	S	1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Chlorobenzene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Chloroethane	2.1		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Chloroform	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Chloromethane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
cis-1,2-Dichloroethene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
cis-1,3-Dichloropropene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Dibromochloromethane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Dibromomethane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Dichlorodifluoromethane	< 1.0	cS	1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Ethylbenzene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Hexachlorobutadiene	< 1.0	S	1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Isopropylbenzene	< 1.0	S	1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
m,p-Xylene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Methyl tert-butyl ether	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Methylene chloride	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Naphthalene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
n-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
n-Propylbenzene	< 1.0	S	1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
o-Xylene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
sec-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Styrene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
tert-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Tetrachloroethene	< 1.0	S	1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Toluene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
trans-1,2-Dichloroethene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
trans-1,3-Dichloropropene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Trichloroethene	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03

Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Carolein Robinson*  
 Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :

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**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Pace Analytical Services Inc.**

2190 Technology Drive  
Schenectady, NY 12308

Attn To : William A. Kotas

Collected : 5/11/2015 11:45:00 AM

Received : 5/11/2015 9:15:00 PM AS08977

Collected By : CLIENT

Lab No. : 1505771-003

Client Sample ID: MW-14

**Sample Information:**

Type : Aqueous

Origin:

<u>Analytical Method:</u> SW8260C :		<u>Prep Method:</u> 5030C			<u>Analyst:</u> KG	
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Analyzed:</u>	<u>Container:</u>
Trichlorofluoromethane	< 1.0		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Vinyl acetate	< 10		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Vinyl chloride	2.8		1	µg/L	05/15/2015 3:51 PM	Container-01 of 03
Surr: 1,2-Dichloroethane-d4	96.3		1	%REC Limit 53-183	05/15/2015 3:51 PM	Container-01 of 03
Surr: 4-Bromofluorobenzene	102		1	%REC Limit 63-140	05/15/2015 3:51 PM	Container-01 of 03
Surr: Toluene-d8	82.1		1	%REC Limit 60-135	05/15/2015 3:51 PM	Container-01 of 03

**NOTES:**

Sample received not preserved to a pH < 2.

<u>Analytical Method:</u> E300.0 :					<u>Analyst:</u> bka	
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Analyzed:</u>	<u>Container:</u>
Sulfate	31.0		1	mg/L	05/26/2015 11:12 PM	Container-01 of 01

- Qualifiers: E = Value above quantitation range, Value estimated.  
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 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Carolein Phelan*  
Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :



## LABORATORY RESULTS

Results for the samples and analytes requested

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**Pace Analytical Services Inc.**  
**2190 Technology Drive**  
**Schenectady, NY 12308**

**Lab No. : 1505771-004**  
**Client Sample ID: MW-16**

**Sample Information:**

Type : Aqueous

Origin:

Attn To : William A. Kotas  
 Collected : 5/11/2015 11:30:00 AM  
 Received : 5/11/2015 9:15:00 PM AS08978  
 Collected By : CLIENT

Analytical Method: SW8260C :	Prep Method: 5030C				Analyst: KG	
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Analyzed:</u>	<u>Container:</u>
1,1,1,2-Tetrachloroethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,1,1-Trichloroethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,1,2-Trichloroethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,1-Dichloroethane	14		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,1-Dichloroethene	5.6		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,1-Dichloropropene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,2,3-Trichlorobenzene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,2,3-Trichloropropane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,2,4-Trichlorobenzene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,2,4-Trimethylbenzene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,2-Dibromo-3-chloropropane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,2-Dibromoethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,2-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,2-Dichloroethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,2-Dichloropropane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,3,5-Trimethylbenzene/P-ethyltoluene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,3-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,3-Dichloropropane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
1,4-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
2,2-Dichloropropane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
2-Butanone	< 5.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
2-Chloroethylvinyl ether	< 10		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
2-Chlorotoluene/4-Chlorotoluene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
2-Hexanone	< 5.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
4-Isopropyltoluene	< 1.0	S	1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
4-Methyl-2-pentanone	< 5.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Acetone	4.6	Jc	1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Benzene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Bromobenzene	< 1.0	c	1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Bromochloromethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03

Qualifiers: E = Value above quantitation range, Value estimated.  
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*Cassidy Planchon*

Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Page 10 of 20



575 Broad Hollow Road, Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478 www.pacelabs.com

**Pace Analytical Services Inc.**  
 2190 Technology Drive  
 Schenectady, NY 12308

Attn To : William A. Kotas

Collected : 5/11/2015 11:30:00 AM

Received : 5/11/2015 9:15:00 PM AS08978

Collected By : CLIENT

## LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Sample Information:**

Type : Aqueous

Origin:

Lab No. : 1505771-004

Client Sample ID: MW-16

Analytical Method: SW8260C :

Prep Method: 5030C

Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromodichloromethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Bromoform	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Bromomethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Carbon disulfide	< 10		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Carbon tetrachloride	< 1.0	S	1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Chlorobenzene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Chloroethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Chloroform	4.9		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Chloromethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
cis-1,2-Dichloroethene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
cis-1,3-Dichloropropene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Dibromochloromethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Dibromomethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Dichlorodifluoromethane	< 1.0	cS	1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Ethylbenzene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Hexachlorobutadiene	< 1.0	S	1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Isopropylbenzene	< 1.0	S	1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
m,p-Xylene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Methyl tert-butyl ether	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Methylene chloride	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Naphthalene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
n-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
n-Propylbenzene	< 1.0	S	1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
o-Xylene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
sec-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Styrene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
tert-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Tetrachloroethene	2.2	S	1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Toluene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
trans-1,2-Dichloroethene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
trans-1,3-Dichloropropene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Trichloroethene	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03

Qualifiers: E = Value above quantitation range, Value estimated.

B = Found in Blank

D.F. = Dilution Factor D = Results for Dilution

H = Received/analyzed outside of analytical holding time

+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

c = Calibration acceptability criteria exceeded for this analyte

r = Reporting limit > MDL and < LOQ, Value estimated.

J = Estimated value - below calibration range

S = Recovery exceeded control limits for this analyte

N = Indicates presumptive evidence of compound

Date Reported :

*Carolein P. Robinson*

Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Page 11 of 20



**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Pace Analytical Services Inc.**

2190 Technology Drive  
Schenectady, NY 12308

Attn To : William A. Kotas

Collected : 5/11/2015 11:30:00 AM

Received : 5/11/2015 9:15:00 PM AS08978

Collected By : CLIENT

Lab No. : 1505771-004

Client Sample ID: MW-16

**Sample Information:**

Type : Aqueous

Origin:

Analytical Method: SW8260C :		Prep Method: 5030C			Analyst: KG	
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Trichlorofluoromethane	< 1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Vinyl acetate	< 10		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Vinyl chloride	1.0		1	µg/L	05/15/2015 4:12 PM	Container-01 of 03
Surr: 1,2-Dichloroethane-d4	94.3		1	%REC Limit 53-183	05/15/2015 4:12 PM	Container-01 of 03
Surr: 4-Bromofluorobenzene	103		1	%REC Limit 63-140	05/15/2015 4:12 PM	Container-01 of 03
Surr: Toluene-d8	83.4		1	%REC Limit 60-135	05/15/2015 4:12 PM	Container-01 of 03

Analytical Method: E300.0 :					Analyst: bka	
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Sulfate	20.5		1	mg/L	05/26/2015 11:26 PM	Container-01 of 01

- Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*William A. Kotas*  
Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :

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### LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Pace Analytical Services Inc.**  
**2190 Technology Drive**  
**Schenectady, NY 12308**

Lab No. : **1505771-005**

**Sample Information:**

Type : Aqueous

Client Sample ID: **MW-CHA-RFI-7**

Attn To : William A. Kotas

Origin:

Collected : 5/11/2015 1:30:00 PM

Received : 5/11/2015 9:15:00 PM AS08979

Collected By : CLIENT

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Analyst: KG	Container:
1,1,1,2-Tetrachloroethane	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,1,1-Trichloroethane	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,1,2-Trichloroethane	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,1-Dichloroethane	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,1-Dichloroethene	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,1-Dichloropropene	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,2,3-Trichlorobenzene	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,2,3-Trichloropropane	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,2,4-Trichlorobenzene	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,2,4-Trimethylbenzene	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,2-Dibromo-3-chloropropane	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,2-Dibromoethane	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,2-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,2-Dichloroethane	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,2-Dichloropropane	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,3,5-Trimethylbenzene/P-ethyltoluene	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,3-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,3-Dichloropropane	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
1,4-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
2,2-Dichloropropane	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
2-Butanone	< 5.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
2-Chloroethylvinyl ether	< 10		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
2-Chlorotoluene/4-Chlorotoluene	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
2-Hexanone	< 5.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
4-Isopropyltoluene	< 1.0	S	1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
4-Methyl-2-pentanone	< 5.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
Acetone	2.7	Jc	1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
Benzene	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
Bromobenzene	< 1.0	c	1	µg/L	05/15/2015 4:32 PM		Container-01 of 09
Bromochloromethane	< 1.0		1	µg/L	05/15/2015 4:32 PM		Container-01 of 09

Qualifiers: E = Value above quantitation range, Value estimated.

B = Found in Blank

D.F. = Dilution Factor D = Results for Dilution

H = Received/analyzed outside of analytical holding time

+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

c = Calibration acceptability criteria exceeded for this analyte

r = Reporting limit > MDL and < LOQ, Value estimated.

J = Estimated value - below calibration range

S = Recovery exceeded control limits for this analyte

N = Indicates presumptive evidence of compound

Date Reported :

Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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575 Broad Hollow Road, Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478 [www.pacelabs.com](http://www.pacelabs.com)

**Pace Analytical Services Inc.**

**2190 Technology Drive  
 Schenectady, NY 12308**

**Attn To :** William A. Kotas

Collected : 5/11/2015 1:30:00 PM

Received : 5/11/2015 9:15:00 PM AS08979

Collected By : CLIENT

**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Sample Information:**

Type : Aqueous

Lab No. : 1505771-005

Client Sample ID: MW-CHA-RFI-7

Origin:

Analytical Method: SW8260C :

Prep Method: 5030C

Analyst: KG

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Bromodichloromethane	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Bromoform	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Bromomethane	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Carbon disulfide	< 10		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Carbon tetrachloride	< 1.0	S	1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Chlorobenzene	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Chloroethane	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Chloroform	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Chloromethane	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
cis-1,2-Dichloroethene	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
cis-1,3-Dichloropropene	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Dibromochloromethane	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Dibromomethane	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Dichlorodifluoromethane	< 1.0	cS	1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Ethylbenzene	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Hexachlorobutadiene	< 1.0	S	1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Isopropylbenzene	< 1.0	S	1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
m,p-Xylene	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Methyl tert-butyl ether	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Methylene chloride	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Naphthalene	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
n-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
n-Propylbenzene	< 1.0	S	1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
o-Xylene	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
sec-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Styrene	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
tert-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Tetrachloroethene	< 1.0	S	1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Toluene	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
trans-1,2-Dichloroethene	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
trans-1,3-Dichloropropene	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Trichloroethene	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09

Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Caroline P. Robinson*  
 Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :

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**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Pace Analytical Services Inc.**

**2190 Technology Drive  
 Schenectady, NY 12308**

**Attn To :** William A. Kotas

Collected : 5/11/2015 1:30:00 PM

Received : 5/11/2015 9:15:00 PM AS08979

Collected By : CLIENT

**Sample Information:**

Type : Aqueous

Origin:

**Lab No. : 1505771-005**

**Client Sample ID: MW-CHA-RFI-7**

<u>Analytical Method:</u> SW8260C :		<u>Prep Method:</u> 5030C			<u>Analyst:</u> KG	
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Analyzed:</u>	<u>Container:</u>
Trichlorofluoromethane	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Vinyl acetate	< 10		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Vinyl chloride	< 1.0		1	µg/L	05/15/2015 4:32 PM	Container-01 of 09
Surr: 1,2-Dichloroethane-d4	95.1		1	%REC Limit 53-183	05/15/2015 4:32 PM	Container-01 of 09
Surr: 4-Bromofluorobenzene	102		1	%REC Limit 63-140	05/15/2015 4:32 PM	Container-01 of 09
Surr: Toluene-d8	82.9		1	%REC Limit 60-135	05/15/2015 4:32 PM	Container-01 of 09

<u>Analytical Method:</u> E300.0 :					<u>Analyst:</u> bka	
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Analyzed:</u>	<u>Container:</u>
Sulfate	39.9		1	mg/L	05/26/2015 11:39 PM	Container-01 of 03

- Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Cadellin P. Kachimon*

Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :



## LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Pace Analytical Services Inc.**

**2190 Technology Drive  
Schenectady, NY 12308**

**Attn To : William A. Kotas**

Collected : 5/11/2015

Received : 5/11/2015 9:15:00 PM AS08980

Collected By : CLIENT

**Lab No. : 1505771-006**

**Client Sample ID: TRIP BLANK-01**

**Sample Information:**

Type : Trip Blank

Origin:

Analytical Method: SW8260C :	Prep Method: 5030C			Analyst: KG		
Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,1,1-Trichloroethane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,1,2-Trichloroethane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,1-Dichloroethane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,1-Dichloroethene	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,1-Dichloropropene	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,2,3-Trichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,2,3-Trichloropropane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,2,4-Trichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,2,4-Trimethylbenzene	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,2-Dibromo-3-chloropropane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,2-Dibromoethane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,2-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,2-Dichloroethane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,2-Dichloropropane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,3,5-Trimethylbenzene/P-ethyltoluene	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,3-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,3-Dichloropropane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
1,4-Dichlorobenzene	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
2,2-Dichloropropane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
2-Butanone	< 5.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
2-Chloroethylvinyl ether	< 10		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
2-Chlorotoluene/4-Chlorotoluene	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
2-Hexanone	< 5.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
4-Isopropyltoluene	< 1.0	S	1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
4-Methyl-2-pentanone	< 5.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
Acetone	< 10		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
Benzene	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
Bromobenzene	< 1.0	c	1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
Bromochloromethane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03

Qualifiers: E = Value above quantitation range, Value estimated.

B = Found in Blank

D.F. = Dilution Factor D = Results for Dilution

H = Received/analyzed outside of analytical holding time

+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

c = Calibration acceptability criteria exceeded for this analyte

r = Reporting limit > MDL and < LOQ, Value estimated.

J = Estimated value - below calibration range

S = Recovery exceeded control limits for this analyte

N = Indicates presumptive evidence of compound

Date Reported :

*Caitlin P. Robinson*

Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Page 16 of 20



**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Pace Analytical Services Inc.**

2190 Technology Drive  
 Schenectady, NY 12308

Attn To : William A. Kotas

Collected : 5/11/2015

Received : 5/11/2015 9:15:00 PM AS08980

Collected By : CLIENT

Lab No. : 1505771-006

Client Sample ID: TRIP BLANK-01

**Sample Information:**

Type : Trip Blank

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Analyst: KG	Container:
Bromodichloromethane	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Bromoform	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Bromomethane	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Carbon disulfide	< 10		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Carbon tetrachloride	< 1.0	S	1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Chlorobenzene	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Chloroethane	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Chloroform	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Chloromethane	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
cis-1,2-Dichloroethene	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
cis-1,3-Dichloropropene	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Dibromochloromethane	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Dibromomethane	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Dichlorodifluoromethane	< 1.0	cS	1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Ethylbenzene	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Hexachlorobutadiene	< 1.0	S	1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Isopropylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
m,p-Xylene	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Methyl tert-butyl ether	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Methylene chloride	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Naphthalene	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
n-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
n-Propylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
o-Xylene	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
sec-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Styrene	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
tert-Butylbenzene	< 1.0	S	1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Tetrachloroethene	< 1.0	S	1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Toluene	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
trans-1,2-Dichloroethene	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
trans-1,3-Dichloropropene	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03
Trichloroethene	< 1.0		1	µg/L	05/15/2015 2:09 PM		Container-01 of 03

Qualifiers: E = Value above quantitation range, Value estimated.

B = Found in Blank

D.F. = Dilution Factor D = Results for Dilution

H = Received/analyzed outside of analytical holding time

+ = NYSDOH ELAP does not offer certification for this analyte / matrix / method

c = Calibration acceptability criteria exceeded for this analyte

r = Reporting limit > MDL and < LOQ, Value estimated.

J = Estimated value - below calibration range

S = Recovery exceeded control limits for this analyte

N = Indicates presumptive evidence of compound

Date Reported :

Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of the laboratory.



**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Pace Analytical Services Inc.**

**2190 Technology Drive  
 Schenectady, NY 12308**

**Attn To :** William A. Kotas

Collected : 5/11/2015

Received : 5/11/2015 9:15:00 PM AS08980

Collected By : CLIENT

**Lab No. : 1505771-006**

**Client Sample ID: TRIP BLANK-01**

**Sample Information:**

Type : Trip Blank

Origin:

<u>Analytical Method:</u> SW8260C :		<u>Prep Method:</u> 5030C			<u>Analyst:</u> KG	
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Analyzed:</u>	<u>Container:</u>
Trichlorofluoromethane	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
Vinyl acetate	< 10		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
Vinyl chloride	< 1.0		1	µg/L	05/15/2015 2:09 PM	Container-01 of 03
Surr: 1,2-Dichloroethane-d4	93.0		1	%REC Limit 53-183	05/15/2015 2:09 PM	Container-01 of 03
Surr: 4-Bromofluorobenzene	102		1	%REC Limit 63-140	05/15/2015 2:09 PM	Container-01 of 03
Surr: Toluene-d8	83.1		1	%REC Limit 60-135	05/15/2015 2:09 PM	Container-01 of 03

- Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Cassim Hutchinson*

Project Manager

Test results meet the requirements of NELAC unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Date Reported :

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USEPA - CLP

1A-IN  
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

FIELD DUPLICATE-01

Lab Name: PACE ANALYTICAL

Contract:

Lab Code: 10478

Case No.

NRAS No.:

SDG No.: PACE-NY179

Matrix (soil/water): WATER

Lab Sample ID: 1505771-001

Level (low/med): LOW

Date Received: 05/11/2015

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	5920		*	P

Comments:

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USEPA - CLP

1A-IN  
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-5A/AR

Lab Name: PACE ANALYTICAL

Contract:

Lab Code: 10478

Case No.

NRAS No.:

SDG No.: PACE-NY179

Matrix (soil/water): WATER

Lab Sample ID: 1505771-002

Level (low/med): LOW

Date Received: 05/11/2015

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	5780		*	P

Comments:

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USEPA - CLP

1A-IN  
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-14

Lab Name: PACE ANALYTICAL

Contract:

Lab Code: 10478

Case No.

NRAS No.:

SDG No.: PACE-NY179

Matrix (soil/water): WATER

Lab Sample ID: 1505771-003

Level (low/med): LOW

Date Received: 05/11/2015

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	9130		*	P

Comments:

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USEPA - CLP

1A-IN  
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-16

Lab Name: PACE ANALYTICAL

Contract:

Lab Code: 10478

Case No.

NRAS No.:

SDG No.: PACE-NY179

Matrix (soil/water): WATER

Lab Sample ID: 1505771-004

Level (low/med): LOW

Date Received: 05/11/2015

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	30.9	J	*	P

Comments:

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USEPA - CLP

1A-IN  
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

MW-CHA-RFI-7

Lab Name: PACE ANALYTICAL

Contract:

Lab Code: 10478

Case No.

NRAS No.:

SDG No.: PACE-NY179

Matrix (soil/water): WATER

Lab Sample ID: 1505771-005

Level (low/med): LOW

Date Received: 05/11/2015

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	184		*	P

Comments:

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USEPA - CLP

1A-IN  
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

PBWF1

Lab Name: PACE ANALYTICAL

Contract:

Lab Code: 10478

Case No.

NRAS No.:

SDG No.: PACE-NY179

Matrix (soil/water): WATER

Lab Sample ID: MB1-50082

Level (low/med): LOW

Date Received:

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	100	U		P

Comments:

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575 Broad Hollow Road, Melville, NY 11747  
TEL: (631) 694-3040 FAX: (631) 420-8436  
NYSDOH ID#10478 [www.pacelabs.com](http://www.pacelabs.com)

WorkOrder :  
1505771

## Certifications

---

STATE	CERTIFICATION #
NEW YORK	10478
NEW JERSEY	NY158
CONNECTICUT	PH-0435
MARYLAND	208
MASSACHUSETTS	M-NY026
NEW HAMPSHIRE	2987
RHODE ISLAND	LAO00340
PENNSYLVANIA	68-00350

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**PACE-NY 179**

DISPOSAL REQUIREMENTS: (To be filled in by Client)

- RETURN TO CLIENT
- DISPOSAL BY RECEIVING LAB
- ARCHIVAL BY RECEIVING LAB

Additional charges incurred for disposal (if hazardous) or archival.  
Call for details.

PAGE 1 OF 1

15050173

LRF # 15050173  
(LAB USE ONLY)

**CHAIN OF CUSTODY RECORD**

**Pace Analytical Services, Inc.**

2190 Technology Drive, Schenectady, NY 12308  
Telephone (518) 346-4592 Fax (518) 381-6055  
www.pacelabs.com

CLIENT (REPORTS TO BE SENT TO):

**PACE**  
PROJECT #/PROJECT NAME: 15050173  
LOCATION (CITY/STATE) ADDRESS: NY  
REQUIRED TURN AROUND TIME: 5/26/2015  
NAME OF COURIER (IF USED):

**ENTER ANALYSIS AND METHOD NUMBER REQUESTED**

SAMPLE ID	DATE	TIME	MATRIX	GRAB/COMP	LAB SAMPLE ID (LAB USE ONLY)	PRESERVATIVE KEY		REMARKS:
						BOTTLE TYPE:	BOTTLE SIZE:	
FIELD DUPLICATE-01	5/11/15	1215	L	GRAB	AS08975	X	X	-001
MW-5A/R	5/11/15	1215	L	GRAB	AS08976	X	X	-002
MW-14	5/11/15	1145	L	GRAB	AS08977	X	X	-003
MW-16	5/11/15	1130	L	GRAB	AS08978	X	X	-004
MW-CHA-RF1-7	5/11/15	1330	L	GRAB	AS08979	X	X	-005
TRIP BLANK-01	5/11/15		L	GRAB	AS08980			-006

LAB FILTER METALS SAMPLE PRESERVATION NOT VERIFIED AT SCHENECTADY LAB.

ELECTRONIC RESULTS: NICOLE.JOHNSON@PACELABS.COM

RECEIVED BY	RECEIVED BY	RELINQUISHED BY	RELINQUISHED BY
SIGNATURE: [Signature]	SIGNATURE: [Signature]	SIGNATURE: [Signature]	SIGNATURE: [Signature]
PRINTED NAME: [Name]	PRINTED NAME: [Name]	PRINTED NAME: [Name]	PRINTED NAME: [Name]
COMPANY: [Company]	COMPANY: [Company]	COMPANY: [Company]	COMPANY: [Company]
DATE/TIME: 5/11/15	DATE/TIME: 05-11-15	DATE/TIME: 05-11-15	DATE/TIME: 05/11/15

TEMP: 49  
COC TAPE: Y N  
COC DISCREPANCIES: Y N  
PROPERLY PRESERVED: Y N  
REC'D W/ HOLDING TIMES: Y N

OTHER NOTES: Data Package [LEVEL-4] EDD: EQUIS-DEC-DEE

S:\LOGS\MDL\COCS

9:13 PM

9:15 PM

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

**Pace Analytical Services, Inc.**

2190 Technology Drive, Schenectady, NY 12308  
 Telephone (518) 346-4592 Fax (518) 381-6055  
 www.pacelabs.com

**DISPOSAL REQUIREMENTS: (To be filled in by Client)**

- RETURN TO CLIENT
- DISPOSAL BY RECEIVING LAB
- ARCHIVAL BY RECEIVING LAB

Additional charges incurred for disposal (if hazardous) or archival.  
 Call for details.

LRF # 15050173  
 (LAB USE ONLY)

<b>CLIENT (REPORTS TO BE SENT TO):</b> <b>PACE</b>		<b>PROJECT#PROJECT NAME:</b> 15050173		<b>ENTER ANALYSIS AND METHOD NUMBER REQUESTED</b>	
<b>PROJECT MANAGER:</b> NICHOLAS.NICHOLAS@PACELABS.COM		<b>LOCATION (CITY/STATE) ADDRESS:</b> NY		PRESERVATIVE CODE:	
<b>PROJECT:</b> LEADER: VAILS GATE MANUFACTURING		<b>REQUIRED TURN AROUND TIME:</b> 5/26/2015		BOTTLE TYPE:	
<b>COMMENTS:</b> LAB FILTER METALS SAMPLE PRESERVATION NOT VERIFIED AT SCHEENCTADY LAB.		<b>NAME OF COURIER (IF USED):</b>		BOTTLE SIZE:	
<b>ELECTRONIC RESULTS</b>		<b>NICOLE.JOHNSON@PACELABS.COM</b>		FULL LIST 8260C DISSOLVED FE Sulfate	
SAMPLE ID		DATE		TIME	
FIELD DUPLICATE-01		5/11/15		1215	
MW-5A/AR		5/11/15		1215	
MW-14		5/11/15		1145	
MW-16		5/11/15		1130	
MW-CHA-RF1-7		5/11/15		1330	
TRIP BLANK-01		5/11/15		1145	
GRAB/COMP		MATRIX		LAB SAMPLE ID (LAB USE ONLY)	
GRAB		L		AS08975	
GRAB		L		AS08976	
GRAB		L		AS08977	
GRAB		L		AS08978	
GRAB		L		AS08979	
GRAB		L		AS08980	
NUMBER OF CONTAINERS		X		X	
5		X		X	
5		X		X	
5		X		X	
5		X		X	
15		X		X	
2		X		X	
REMARKS:		REVISIONS		RECEIVED BY	
REVISIONS		RECEIVED BY		SIGNATURE	
RECEIVED FROM PACELABY		RECEIVED BY		SIGNATURE	
CNH		RECEIVED BY		SIGNATURE	
5/15/15		RECEIVED BY		SIGNATURE	
MS/MSD		RECEIVED BY		SIGNATURE	
OTHER NOTES: Data Package [LEVEL-4] EDD: EQUIS-DEC-DIER		RECEIVED BY		SIGNATURE	
PROPERLY PRESERVED: Y N		RECEIVED BY		SIGNATURE	
RECVD W/ HOLDING TIMES: Y N		RECEIVED BY		SIGNATURE	
SIGNATURE		RECEIVED BY		SIGNATURE	
PRINTED NAME		RECEIVED BY		SIGNATURE	
COMPANY		RECEIVED BY		SIGNATURE	
DATE/TIME		RECEIVED BY		SIGNATURE	

SL0GINWML000S





# Sample Receipt Upon Receipt



CLIENT NAME: Leader Professional Services  
 PROJECT: Vails Grade Manufacturing

COURIER: FedEx  UPS  Client  Pace  Other   
 TRACKING # N/A CUSTODY SEAL PRESENT: Yes  No  INTACT: Yes  No  N/A   
 PACKING MATERIAL: Bubble Wrap  Bubble Bags  None  ICE USED: Wet  Blue  None   
 THERMOMETER USED: #164  IR Gun 03  #122087967  COOLER TEMPERATURE (°C): 4.6°C (1A)  
 BIOLOGICAL TISSUE IS FROZEN: Yes  No  N/A  Temp should be above freezing to 6°C

### COMMENTS:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	3.
Sampler Name / Signature on COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	9.
- Pace Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Containers Intact:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	12.
- Includes date/time/ID/Analysis			
All containers needing preservation have been checked:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	13.
All containers needing preservation are in compliance with EPA recommendation:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
- Exceptions that are not checked: VOA			
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes	<input type="checkbox"/> No	14.
Trip Blank Present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	15.
Trip Blank Custody Seals Present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Pace Trip Blank Lot #:	<u>N/A</u>		
Initial when completed:	<u>CDP S/L/K</u>	Lot # of added preservative:	<u>CDP S/L/K</u>
	<u>N/A</u>		<u>CDP S/L/K</u>

Sample Receipt form filled in: CDP S/L/K Line-Out (Includes Copying Shipping Documents and verifying sample pH): CDP S/L/K  
 Log In (Includes notifying PM of any discrepancies and documenting in LIMS): CDP S/L/K  
 Labeling (Includes Scanning Bottles and entering LAB IDs into pH logbook): CDP S/L/K





# **Attachment B**

## **Data Validation Summary**



**Data Usability Summary Report – July 2015**  
**Vails Gate**  
**737.002**

**Data Usability**

The Quality Assurance Project Plan (“QAPP”) prepared for this project, by ME Holvey Consulting, LLC (“MEHC”), presents the policies, organization, objectives, functional activities, and specific Quality Assurance (“QA”) and Quality Control (“QC”) measures designed to achieve the data quality goals associated with this investigation. The QAPP identifies procedures for sample preparation and handling, sample chain-of-custody, laboratory analyses, and reporting that were implemented during this investigation to ensure the accuracy and integrity of the data generated during the investigation.

Leader Consulting Services, Inc. conducted the Site Investigation and Remedial Activities of the Vails Gate site.

**Data Summary**

The Data Usability Review and Data Validation Compliance Chart has been completed for the laboratory deliverable packages generated by Pace Analytical Laboratories, Inc. (“Pace”), pertaining to samples collected at the Vails Gate Site on May 11, 2015. A total of six (6) samples were collected during the May 2015 sampling event and analyzed for VOCs, metals, and wet chemistry. The following USEPA Methodologies were used to analyze these samples for the following analytes:

- Volatiles (VOCs)                      USEPA Method 8260
- Dissolved Iron by ICP                USEPA Method 200.7 Rev. 4.4
- Miscellaneous Field Analysis      Dissolved Oxygen, pH, Reduction Potential, Temperature, Turbidity
- Total Organic Carbon (“TOC”)    USEPA SM 5310B-00.11
- Sulfate                                    USEPA 300.0

Trip/Holding blanks, field duplicate, surrogates, internal standards, reference samples, matrix spikes, and matrix spike duplicates were also processed.

Samples were collected and received on the following schedule:

Sample Package ID	Date Collected	Date Received by Pace	Sample Matrix	Requested Analyses	Sample Temperature (°C)
15050173	05/11/2025	05/11/2015 (Schenectady) 05/15/2105 (Long Island)	Water	TCL 8260 Metals Misc. Field Analysis Nitrate TOC Sulfate	4.6

Data usability and validation was performed with guidance from the most current editions of the USEPA CLP National Functional Guidelines for Inorganic and Organic Data Review. The following items were reviewed:

- Data Completeness;
- Custody Documentation;
- Holding Times;
- Sample Blanks Review;
- Field Duplicate Samples;
- Matrix Spike Samples and Duplicates; and
- Control Spike/Laboratory Control Samples.

Those items showing deficiencies are discussed in the attached Data Validation Compliance Chart. All others were found to be acceptable as outlined in the above-mentioned usability procedures, and as applicable for the methodology. Unless noted specifically in the following text, reported results are substantiated by the reported data, and generated in compliance with protocol requirements.

In summary, sample processing was conducted with compliance to protocol requirements and with adherence to quality criteria and the reported results are considered “usable”.

The Data Validation Compliance Chart is also included with this report.

### **Accuracy, Precision, and Sensitivity of Analyses**

The fundamental QA objective with respect to the accuracy, precision, and sensitivity of analytical data is to achieve the QC acceptance of each analytical protocol. Accuracy and precision are determined using matrix spike (“MS”) and matrix spike duplicate (“MSD”) samples.

Accuracy is a measure of the difference of a set of analytical results to the accepted or expected values. Accuracy was assessed by using the MS/MSD and surrogate spike recovery data. Recovery values were reported within the QC limits for each analytical parameter group.

Precision is a measure of the mutual agreement between measurements of the same parameter.

The sample results for the Vails Gate Project are considered “usable”.

### **Completeness, Representativeness, and Comparability of Data**

Completeness is the measure of the amount of valid data obtained from a measurement system compared with the amount that was expected to be obtained under normal conditions. Review of the analytical data packages provided by Pace indicates that the requested parameters were analyzed for and reported by the laboratory for each sample submitted under proper chain-of-custody procedures. Based upon MEHC’s review of the laboratory data, a usable data level was achieved.

Representativeness of the data is obtained through the design of the sampling program and the adherence to established sample collection procedures, sample-handling SOPs, and analytical procedures. The sampling program outlined in the Work Plan was designed to provide for data representative of site conditions taking into consideration past disposal practices, existing data

from past studies, and the physical site setting. Each of the soil borings and monitoring wells were installed in accordance with established industry and regulatory protocols. The laboratory maintained all holding times for the specific analytical protocols.

Comparability of the data is derived from the evaluation of field duplicate samples and the adherence to established sampling and analytical procedures. A field duplicate is an independent sample collected as close as possible to the original aliquot from the same sampling point. All of the groundwater samples were analyzed utilizing standardized USEPA methodologies performed in accordance with the latest version of the NYSDEC ASP protocols.

## **Quality Control Checks**

### **Holding/Storage Blanks**

Holding blanks are samples of reagent water prepared by the laboratory and carried through the field sampling and sample handling and shipping process. Holding blanks are analyzed as separate samples to evaluate the level of contamination associated with the collection, handling, and/or shipping of the VOC sample aliquots.

For this investigation, a holding blank was not submitted with samples collected on May 11, 2015.

### **Trip Blanks**

A trip blank is provided with each shipping container of samples to be analyzed for volatile organic compounds (VOCs). Analysis of trip blanks determines whether a sample bottle was contaminated during shipment from the manufacturer, while in bottle storage, in shipment to the laboratory, or during analysis at a laboratory. Trip blanks consist of an aliquot of distilled water sealed in a sample bottle, prepared by the analytical laboratory prior to shipping the sample bottles. A Trip blank was included with the shipment of aqueous samples for VOC analysis.

For this investigation, a trip blank was submitted with the VOC aliquot of the groundwater samples collected on May 11, 2015. No VOC compounds were detected in the trip blank analyzed during this investigation.

### **Field Blanks**

Given that dedicated sampling equipment was utilized for the collection of each groundwater sample, field blanks were not collected or analyzed during this sampling event.

### **Method Blanks**

A method blank is a sample of reagent water, which is carried through the analytical procedure alongside the project samples to determine the level of laboratory background and reagent contamination.

For this investigation, a method blank was submitted with the VOC aliquot of the groundwater samples collected on May 11, 2015. No VOC compounds were detected in the method blank analyzed during this investigation.

### **Matrix Spike/Matrix Spike Duplicate Samples**

For the Vails Gate project, one (1) MS/MSD was collected and analyzed. The following sample results are mostly acceptable but positive results may be considered estimated due to the MS/MSD data being outside acceptable limits:

- Sample MW-CHA-RFI-7 was analyzed as the matrix spike/matrix spike duplicate (MS/MSD). 15 out of 132 analyte recoveries were outside of QC limits. 13 out of 66 recoveries were outside of QC limits.
- Sample MW-CHA-RFI-7 was analyzed as the matrix spike/matrix spike duplicate. The duplicate analysis results did not meet acceptance criteria for iron.

These results are detailed in the Data Validation Compliance Chart.

### **Surrogate Analyses**

Surrogates are compounds added directly to every standard, blank, MS/MSD, and sample at a known concentration, prior to extraction or analysis; and used to evaluate the analytical efficiency by measuring percent recovery of those compounds upon analysis. The laboratory reported surrogate recoveries were within established QC limits for the surrogates in each analyzed sample.

The sample results for the Vails Gate Project are considered “usable”.

**Data Validation Compliance Chart  
Vails Gate**

**May 11, 2015 Sampling Event**

Sample ID	15050173			
Matrix	Water			
Analysis	TCL 8260	Metals (Dissolved Iron Only)	Miscellaneous Field Parameters	Wet Chemistry
<b>Holding Times</b>	Samples were analyzed within USEPA holding times.	Samples were analyzed within USEPA holding times	Samples were analyzed in the field.	Samples were analyzed within USEPA holding times
<b>Calibration</b>	In the initial calibrations, average response factors were employed as applicable, and regression functions were used for the compounds with an RSD above 20%. In the continuing calibration verification(s) (CCV), the variability for some compounds was above 20%. Results for acetone and MEK are flagged with a "Z" qualifier, indicating that they are regarded estimated.  All data quality objectives were satisfied.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.	Total Organic Carbon was observed in the continuing calibration blanks  All quality assurance parameters were met for these analyses.
<b>Method Blanks</b>	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.
<b>Matrix Spike/Matrix Spike Duplicate</b>	Sample MW-CHA-RFI-7 was analyzed as the matrix spike/matrix spike duplicate (MS/MSD) - 15 out of 132 analyte recoveries were outside of QC limits. 13 out of 66 recoveries were outside of QC limits.  All data quality objectives were satisfied.	Sample MW-CHA-RFI-7 was analyzed as the matrix spike/matrix spike duplicate. The duplicate analysis results did not meet acceptance criteria for iron.  All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.	The percent recovery for the matrix spike duplicate sample (LAB ID: AS08979K) was outside quality acceptance limits.  All quality assurance parameters were met for these analyses.
<b>Surrogates</b>	All data quality objectives were satisfied.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.

**Data Validation Compliance Chart  
Vails Gate**

<b>Sample ID</b>	<b>15050173</b>			
<b>Matrix</b>	<b>Water</b>			
<b>Internal Standards</b>	All data quality objectives were satisfied.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.
<b>Reference Sample</b>	All laboratory internal quality control samples were within acceptable ranges.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.
<b>Data Usability</b>	Data is acceptable.	Data is acceptable.	Data is acceptable.	Data is acceptable.