



April 8, 2016

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**

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 sixth Quarterly Monitoring Report required under the Remedial Action Work Plan ("RAWP"). It includes the field and laboratory results from the sixth 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 sixth 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 sixth quarterly sampling event of the bioremediation program was conducted on February 12, 2016. 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 1,200 parts per billion (“ppb”) to 2,800 ppb. The pH levels within the samples collected from the four (4) wells ranged from 6.43 standard units (“SUs”) to 7.12 SUs. Redox values of the samples collected from the four (4) wells ranged from -124 milliVolts (“mVs”) to 45 mVs. Data interpretation is discussed in Section 4.0.

4.2 GROUNDWATER SAMPLE LABORATORY ANALYTICAL DATA RESULTS

GWM Well MW-5A/AR

Acetone concentrations increased from non-detect (“ND”) in November 2015 to a value of 6.1 ppb in February 2016, remaining below the Class GA groundwater standard of 50 ppb. Chloroethane concentrations decreased from 290 ppb in November 2015 to a value of 68 ppb in February 2016, which is above the Class GA groundwater standard of 5 ppb. 1,1- dichloroethene decreased from 1.1 ppb in November 2015, to ND in February 2016, remaining below the Class GA standard of 5 ppb. 2-butanone concentrations increased from ND in November 2015 to 8.6 ppb in February 2016, while remaining below the Class GA groundwater standard of 50 ppb. 1,2,4 trimethylbenzene concentrations decreased from 5.4 ppb in November 2015 to 2.5 ppb in February 2016, below the Class GA groundwater standard of 5 ppb. The remaining VOC analytes were not detected within the February 2016 sample.

GWM Well MW-14

Acetone was detected within the 6th Quarter (February 2016) sample from MW-14 at 12 ppb, unchanged from the 5th Quarter (November 2015) sampling event, and remains below the Class GA groundwater standard of 50 ppb. Chloroethane concentrations decreased slightly from 7.3 ppb in November 2015 to 6.6 ppb in February, remaining slightly above the Class GA groundwater standard of 5 ppb. 1,1- dichloroethane concentrations decreased from 22 ppb in November to 16 ppb in February 2016, but remain above the Class GA standard of 5 ppb. 1,1- dichloroethene concentrations decreased from 3.5 ppb in November 2015 to 1.7 ppb in February, and continue to be below the Class GA standard. Vinyl chloride concentrations decreased from 2.7 ppb in November 2015 to 1.6 ppb in February 2016, now below the Class GA groundwater



standard of 2 ppb. The remaining VOC analytes were not detected within the February 2016 sample.

GWM Well MW-16

1,1- dichloroethane concentrations decreased from 8.4 ppb in November 2015 to 5.2 ppb in February 2016, but remain slightly above the Class GA standard of 5 ppb. 1,1- dichloroethene concentrations also decreased, from 4.2 ppb in November to 1.8 ppb in February, and remain below the Class GA groundwater standard of 5 ppb. Tetrachloroethene concentrations decreased from 4.5 ppb in November to 2.5 ppb in February, and remain below the Class GA groundwater standard of 5 ppb. The remaining VOC analytes were not detected within the February 2016 sample.

GWM Well MW-CHA-RFI-7

Each of the VOC concentrations from the sample collected from MW-CHA-RFI-7 during the February 2016 sampling event were non-detectable.

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 wells MW-5A/AR and MW-16 each exhibit decreases in the number of VOC analytes detected, and in the concentrations of the detected VOCs, indicating that biodegradation is progressing. Well MW-5A/AR currently exhibits only one (1) analyte concentration (chloroethane) above Class GA groundwater standards, as opposed to seven (7) analytes, with significantly higher concentrations during the February 2015 sampling event. Chloroethane and 1,1-dichloroethane concentrations within MW-14 are the only two (2) analytes detected above the Class GA groundwater standard, but the concentrations are decreasing over time, as are the concentrations of 1,1-dichloroethene and vinyl chloride. Well MW-16 exhibits only one (1) analyte concentration (1,1-dichloroethane) above the Class GA groundwater standard, compared to six (6) analytes during the August 2015 sampling event. 1,1-dichloroethene and tetrachloroethene concentrations within Well MW-16 are decreasing, and remain below the Class GA groundwater standard.

As anticipated, as the VOC concentrations within MW-5A/AR decrease, the concentrations of VOC daughter products within MW-16 are also decreasing over time.



There were no detected VOC analytes within the groundwater sample collected in February 2016 from 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". The signature is written in a cursive style with a large initial "K".

Keith D. Keller
Project Manager

A handwritten signature in black ink that reads "Jeffrey A. Wittlinger". The signature is written in a cursive style with a large initial "J".

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

Attachment A

Analytical Laboratory Results and Summary Tables

TABLE 1a - MW-5A/AR

GROUNDWATER MONITORING WELL SAMPLE LABORATORY ANALYTICAL DATA SUMMARY - DETECTED PARAMETERS

MW-5A/AR												Class GA Groundwater Standard (ppb) (3)
Analyte (1)	June 2011	November 2011	July 2012	January 2013	August 2014 (6)	November 2014 (7)	February 2015	May 2015	August 2015	November 2015	February 2016	
Quarterly Sampling Parameters												
Volatiles												
acetone	ND	ND	ND	ND	ND	440 ⁽⁹⁾	407	77 ⁽¹¹⁾	110	ND	6.1	50 ⁽⁴⁾
chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
chloroethane	280	290	520	150	250 ⁽⁹⁾	590 ⁽⁹⁾⁽¹⁰⁾	1010	470 ⁽¹¹⁾	540 ⁽¹¹⁾	290 ⁽¹¹⁾	68	5
1,1-dichloroethane	650	1000	830	280	660 ⁽⁹⁾	110	325	41	3.5	ND	ND	5
1,1-dichloroethene	ND	110 ⁽²⁾	29 ⁽²⁾	11 ⁽²⁾	22	ND	8.62	1.9	ND	1.1	ND	5
cis-1,2 dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,4-dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5 ⁽⁵⁾
tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
toluene	ND	ND	ND	ND	ND	ND	ND	ND	2.8	2.6	ND	5
1,1,1-trichloroethane	890	3000	440	210	750 ⁽⁹⁾	33	200	ND	ND	ND	ND	5
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
vinyl chloride	ND	ND	15 ⁽²⁾	ND	14	6 ⁽²⁾⁽¹⁰⁾	3.59	2.4	ND	ND	ND	2
2-butanone (MEK)	ND	ND	ND	ND	ND	190 ⁽¹⁰⁾	82.1	4.5 ⁽²⁾	ND	ND	8.6	50 ⁽⁴⁾
4-methyl-2-pentanone	ND	ND	ND	ND	ND	3 ⁽²⁾	ND	ND	ND	ND	ND	5 ⁽⁵⁾
naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	2.7	2.2	ND	10 ⁽⁴⁾
n-propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.5	1.4	ND	5
1,2,3 trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5 ⁽⁴⁾
1,2,4 trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2,4 trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	2.1	5.1	5.4	2.5	5
1,3,5 trimethylbenzene/P ethyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND	ND	5
sec-butylbenzene	ND	ND	ND	ND	ND	ND	ND	1.1	1.2	1.3	ND	5
1,2-dichloroethane	ND	ND	ND	ND	1 ⁽²⁾	2 ⁽²⁾	ND	ND	ND	1.8	ND	0.6
trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7
Wet Chemistry and Dissolved Metals												
sulfate	NA	NA	NA	NA	31,500	<5,000	<5,000	700 ⁽²⁾	<5,000	<5,000	3,240	250,000
total organic carbon (TOC)	NA	NA	NA	NA	3,410	288,000	95,400	48,900	30,200	25,600	14,600	NS
dissolved iron	NA	NA	NA	NA	ND	50,600	42,900	5,780	6,050	30,700	14,400	as low as possible, NTE 500,000

NOTES:

- (1) All analyte values expressed as parts per billion ("ppb").
 - (2) The analyte was "J" flagged, indicating that it was detected below the laboratory quantification limits, and should be considered estimated.
 - (3) Standard is identified in 6 NYCRR, Part 703.5, Table 1, Water Quality Standards Surface Waters and Groundwater.
 - (4) Standard is not identified in 6 NYCRR, Part 703.5, Table 1. NYSDEC TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations has been used.
 - (5) Analyte Standard does not exist in Part 703.5, Table 1. Analyte is identified in TOGS 1.1.1, Table 3 as unregulated.
 - (6) Sampling date of August 11, 2014, reflects pre-bioremediation injection date of August 13 and 14, 2014.
 - (7) November 2014 sampling event reflects first post-bioremediation data.
 - (8) The analyte was "B" flagged, indicating that it was detected in the laboratory method blank, and should be considered estimated.
 - (9) The analyte was "E" flagged, indicating that the concentration exceeded the calibration range of the laboratory instrument, and should be considered an estimate.
 - (10) The analyte was "Z" flagged, indicating that it did not meet the variability criteria for the continuous calibration check (CCV) of 20%, and the value should be considered estimated.
 - (11) The analyte was "D" flagged, indicating that the surrogate concentration was diluted outside the laboratory acceptance criteria.
 - (12) The analyte was "U" flagged, indicating that the analyte was not detected at concentration greater than the Practical Quantitation Limit (PQL) or the Reporting Limit (RL) or the Method Detection Limit (MDL) as applicable.
- the Reporting Limit (RL) or the Method Detection Limit (MDL) as applicable.
- NA -Contaminant was not included for analysis during RFI.
- A value identified in red indicates a concentration of the analyte in excess of the 6 NYCRR, Part 703.5 Table 1 standard or NYSDEC TOGS 1.1.1 guidance value.

GROUNDWATER MONITORING WELL SAMPLE LABORATORY ANALYTICAL DATA SUMMARY - DETECTED PARAMETERS

MW-14												Class GA Groundwater Standard (ppb) ⁽³⁾
Analyte ⁽¹⁾	June 2011	November 2011	July 2012	January 2013	August 2014 ⁽⁶⁾	November 2014 ⁽⁷⁾	February 2015	May 2015	August 2015	November 2015	February 2016	
Quarterly Sampling Parameters												
Volatiles												
acetone	19	45	35	11	19 ⁽⁹⁾	ND	27.3	16.0	12.0	12.0	12.0	50 ⁽⁴⁾
chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
chloroethane	ND	ND	ND	ND	1 ⁽²⁾	ND	ND	2.1	8.0	7.3	6.6	5
1,1-dichloroethane	86	79	67	53	47	1 ⁽²⁾	43	48	31	22	16	5
1,1-dichloroethene	5.2	3.1 ⁽²⁾	4.6 ⁽²⁾	2.7 ⁽²⁾	3 ⁽²⁾	2 ⁽²⁾	3.51	3.1	3.6	3.5	1.7	5
cis-1,2 dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,4-dioxane	420	620	490	270	ND	ND	ND	ND	ND	ND	ND	5 ⁽⁵⁾
tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1,1-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
vinyl chloride	5.2	4.6 ⁽²⁾	2.3 ⁽²⁾	2.1 ⁽²⁾	3 ⁽²⁾	2 ⁽²⁾⁽¹⁰⁾	2.79	2.8	3.1	2.7	1.6	2
2-butanone (MEK)	ND	ND	ND	ND	2 ⁽²⁾	3 ⁽²⁾⁽¹⁰⁾	ND	2.2 ⁽²⁾	ND	ND	ND	50 ⁽⁴⁾
4-methyl-2-pentanone	ND	ND	ND	ND	1 ⁽²⁾	ND	ND	ND	ND	ND	ND	5 ⁽⁵⁾
naphthalene	ND	ND	ND	ND	2 ⁽²⁾⁽⁸⁾	ND	ND	ND	ND	ND	ND	10 ⁽⁴⁾
n-propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2,3 trichlorobenzene	ND	ND	ND	ND	2 ⁽²⁾⁽⁸⁾	ND	ND	ND	ND	ND	ND	5
hexachlorobutadiene	ND	ND	ND	ND	4 ⁽²⁾⁽⁸⁾	ND	ND	ND	ND	ND	ND	0.5 ⁽⁴⁾
1,2,4 trichlorobenzene	ND	ND	ND	ND	1 ⁽²⁾⁽⁸⁾	ND	ND	ND	ND	ND	ND	5
1,2,4 trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,3,5 trimethylbenzene/P ethyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
sec-butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6
trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7
Wet Chemistry and Dissolved Metals												
sulfate	NA	NA	NA	NA	14,900	25,700	31,200	31,000	<5,000	18,000	13,600	250,000
total organic carbon (TOC)	NA	NA	NA	NA	4,150	45,900	35,800	39,800	50,300	47,400	40,200	NS
dissolved iron	NA	NA	NA	NA	6,130	16,200	8,410	9,130	9,920	19,500	21,900	as low as possible, NTE 500,000

NOTES:

- (1) All analyte values expressed as parts per billion ("ppb").
 - (2) The analyte was "I" flagged, indicating that it was detected below the laboratory quantification limits, and should be considered estimated.
 - (3) Standard is identified in 6 NYCRR, Part 703.5, Table 1, Water Quality Standards Surface Waters and Groundwater.
 - (4) Standard is not identified in 6 NYCRR, Part 703.5, Table 1. NYSDEC TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations has been used.
 - (5) Analyte Standard does not exist in Part 703.5, Table 1. Analyte is identified in TOGS 1.1.1, Table 3 as unregulated.
 - (6) Sampling date of August 11, 2014, reflects pre-bioremediation injection date of August 13 and 14, 2014.
 - (7) November 2014 sampling event reflects first post-bioremediation data.
 - (8) The analyte was "B" flagged, indicating that it was detected in the laboratory method blank, and should be considered estimated.
 - (9) The analyte was "E" flagged, indicating that the concentration exceeded the calibration range of the laboratory instrument, and should be considered an estimate.
 - (10) The analyte was "Z" flagged, indicating that it did not meet the variability criteria for the continuous calibration check (CCV) of 20%, and the value should be considered estimated.
 - (11) The analyte was "D" flagged, indicating that the surrogate concentration was diluted outside the laboratory acceptance criteria.
 - (12) The analyte was "U" flagged, indicating that the analyte was not detected at concentration greater than the Practical Quantitation Limit (PQL) or the Reporting Limit (RL) or the Method Detection Limit (MDL) as applicable.
- the Reporting Limit (RL) or the Method Detection Limit (MDL) as applicable.
 NA -Contaminant was not included for analysis during RFI.
 A value identified in red indicates a concentration of the analyte in excess of the 6 NYCRR, Part 703.5 Table 1 standard or NYSDEC TOGS 1.1.1 guidance value.

TABLE 1c - MW-16

GROUNDWATER MONITORING WELL SAMPLE LABORATORY ANALYTICAL DATA SUMMARY - DETECTED PARAMETERS

MW-16											Class GA Groundwater Standard (ppb) ⁽³⁾	
Analyte ⁽¹⁾	June 2011	November 2011	July 2012	January 2013	August 2014 ⁽⁶⁾	November 2014 ⁽⁷⁾	February 2015	May 2015	August 2015	November 2015	February 2016	
Quarterly Sampling Parameters												
Volatiles												
acetone	ND	ND	ND	ND	2 ⁽²⁾⁽⁸⁾	ND	ND	4.6 ⁽²⁾	ND	ND	ND	50 ⁽⁴⁾
chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	3.7	ND	ND	5
1,1-dichloroethane	17	7.9	33	14	14	19	7.18	14	73	8.4	5.2	5
1,1-dichloroethene	3 ⁽²⁾	2.4 ⁽²⁾	8.7	5.6	7	9 ⁽²⁾	1.73	5.6	33	4.2	1.8	5
cis-1,2 dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	3.4	ND	ND	5
1,4-dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5 ⁽⁵⁾
tetrachloroethene	ND	ND	3.2 ⁽²⁾	3.9 ⁽²⁾	2 ⁽²⁾	3 ⁽²⁾⁽¹⁰⁾	1.42	2.2	11	4.5	2.5	5
toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1,1-trichloroethane	ND	13	2.2 ⁽²⁾	ND	1 ⁽²⁾	2 ⁽²⁾	ND	ND	5.6	ND	ND	5
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND	ND	1
vinyl chloride	ND	ND	ND	ND	ND	ND	ND	1	7.6	ND	ND	2
2-butanone (MEK)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50 ⁽⁴⁾
4-methyl-2-pentanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5 ⁽⁵⁾
naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10 ⁽⁴⁾
n-propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2,3 trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5 ⁽⁴⁾
1,2,4 trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2,4 trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,3,5 trimethylbenzene/p ethyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
sec-butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6
trichloroethene	ND	ND	ND	ND	ND	3 ⁽²⁾	ND	ND	1.2	ND	ND	5
chloroform	ND	ND	ND	ND	ND	ND	1.85	4.9	ND	ND	ND	7
Wet Chemistry and Dissolved Metals												
sulfate	NA	NA	NA	NA	14,400	17,900	18,800	20,500	25,300	13,000	10,900	250,000
total organic carbon (TOC)	NA	NA	NA	NA	8,650	10,800	4,220	11,700	28,000	6,180	4,940	NS
dissolved iron	NA	NA	NA	NA	ND	231	1,470	30.9 ⁽²⁾	12.2 ⁽²⁾	1,460	1,250	as low as possible, NTE 500,000

NOTES:

- (1) All analyte values expressed as parts per billion ("ppb").
 - (2) The analyte was "J" flagged, indicating that it was detected below the laboratory quantification limits, and should be considered estimated.
 - (3) Standard is identified in 6 NYCRR, Part 703.5, Table 1, Water Quality Standards Surface Waters and Groundwater.
 - (4) Standard is not identified in 6 NYCRR, Part 703.5, Table 1. NYSDEC TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations has been used.
 - (5) Analyte Standard does not exist in Part 703.5, Table 1. Analyte is identified in TOGS 1.1.1, Table 3 as unregulated.
 - (6) Sampling date of August 11, 2014, reflects pre-bioremediation injection date of August 13 and 14, 2014.
 - (7) November 2014 sampling event reflects first post-bioremediation data.
 - (8) The analyte was "B" flagged, indicating that it was detected in the laboratory method blank, and should be considered estimated.
 - (9) The analyte was "E" flagged, indicating that the concentration exceeded the calibration range of the laboratory instrument, and should be considered an estimate.
 - (10) The analyte was "Z" flagged, indicating that it did not meet the variability criteria for the continuous calibration check (CCV) of 20%, and the value should be considered estimated.
 - (11) The analyte was "D" flagged, indicating that the surrogate concentration was diluted outside the laboratory acceptance criteria.
 - (12) The analyte was "U" flagged, indicating that the analyte was not detected at concentration greater than the Practical Quantitation Limit (PQL) or the Reporting Limit (RL) or the Method Detection Limit (MDL) as applicable.
- the Reporting Limit (RL) or the Method Detection Limit (MDL) as applicable.
 NA - Contaminant was not included for analysis during RFI.
 A value identified in red indicates a concentration of the analyte in excess of the 6 NYCRR, Part 703.5 Table 1 standard or NYSDEC TOGS 1.1.1 guidance value.

TABLE 1d - MW-CHA-RFI-7

GROUNDWATER MONITORING WELL SAMPLE LABORATORY ANALYTICAL DATA SUMMARY - DETECTED PARAMETERS

MW-CHA-RFI-7										Class GA Groundwater Standard (ppb) ⁽³⁾
Analyte ⁽¹⁾	June 2011	November 2011	August 2014 ⁽⁶⁾	November 2014 ⁽⁷⁾	February 2015	May 2015	August 2015	November 2015	February 2016	
Quarterly Sampling Parameters										
Volatiles										
acetone	ND	ND	1 ⁽²⁾⁽⁸⁾	ND	ND	2.7 ⁽²⁾	ND	ND	ND	50 ⁽⁴⁾
chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
cis-1,2 dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,4-dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	5 ⁽⁵⁾
tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1,1-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
2-butanone (MEK)	ND	ND	ND	ND	ND	ND	ND	ND	ND	50 ⁽⁴⁾
4-methyl-2-pentanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	5 ⁽⁵⁾
naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	10 ⁽⁴⁾
n-propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2,3 trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5 ⁽⁴⁾
1,2,4 trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2,4 trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,3,5 trimethylbenzene/p ethyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
sec-butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6
trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	7
Wet Chemistry and Dissolved Metals										
sulfate	NA	NA	38,100	42,800	39,900	39,900	32,700	39,600	39,800	250,000
total organic carbon (TOC)	NA	NA	938	42,800	746	1,200	584	550	843	NS
dissolved iron	NA	NA	ND	1,450	124	184	100 ⁽¹²⁾	215	247	as low as possible, NTE 500,000

NOTES:

- All analyte values expressed as parts per billion ("ppb").
 - The analyte was "J" flagged, indicating that it was detected below the laboratory quantification limits, and should be considered estimated.
 - Standard is identified in 6 NYCRR, Part 703.5, Table 1, Water Quality Standards Surface Waters and Groundwater.
 - Standard is not identified in 6 NYCRR, Part 703.5, Table 1. NYSDEC TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations has been used.
 - Analyte Standard does not exist in Part 703.5, Table 1. Analyte is identified in TOGS 1.1.1, Table 3 as unregulated.
 - Sampling date of August 11, 2014, reflects pre-bioremediation injection date of August 13 and 14, 2014.
 - November 2014 sampling event reflects first post-bioremediation data.
 - The analyte was "B" flagged, indicating that it was detected in the laboratory method blank, and should be considered estimated.
 - The analyte was "E" flagged, indicating that the concentration exceeded the calibration range of the laboratory instrument, and should be considered an estimate.
 - The analyte was "Z" flagged, indicating that it did not meet the variability criteria for the continuous calibration check (CCV) of 20%, and the value should be considered estimated.
 - The analyte was "D" flagged, indicating that the surrogate concentration was diluted outside the laboratory acceptance criteria.
 - The analyte was "U" flagged, indicating that the analyte was not detected at concentration greater than the Practical Quantitation Limit (PQL) or the Reporting Limit (RL) or the Method Detection Limit (MDL) as applicable.
- the Reporting Limit (RL) or the Method Detection Limit (MDL) as applicable.
 NA - Contaminant was not included for analysis during RFI.
 A value identified in red indicates a concentration of the analyte in excess of the 6 NYCRR, Part 703.5 Table 1 standard or NYSDEC TOGS 1.1.1 guidance value.

TABLE 2
GROUNDWATER MONITORING WELL SAMPLE FIELD DATA

MW-5A/AR							
Analyte	August 2014⁽⁴⁾	November 2014⁽⁵⁾	February 2015	May 2015	August 2015	November 2015	February 2016
dissolved oxygen ⁽¹⁾	1,150	1,860	1,910	910	300	500	1,500
pH ⁽²⁾	7.66	7.07	6.74	6.43	6.61	6.63	6.43
redox ⁽³⁾	-137	-90	-42	-73	-88	-44	-124

MW-14							
Analyte	August 2014⁽⁴⁾	November 2014⁽⁵⁾	February 2015	May 2015	August 2015	November 2015	February 2016
dissolved oxygen ⁽¹⁾	1,940	2,110	1,720	1,280	1,100	700	2,700
pH ⁽²⁾	7.19	7.41	6.98	6.58	6.68	6.65	6.45
redox ⁽³⁾	7	-1	47	0	0	-7	-44

MW-16							
Analyte	August 2014⁽⁴⁾	November 2014⁽⁵⁾	February 2015	May 2015	August 2015	November 2015	February 2016
dissolved oxygen ⁽¹⁾	990	2,210	2,750	2,150	400	2,200	2,800
pH ⁽²⁾	7.12	6.86	6.94	6.66	6.28	6.92	6.74
redox ⁽³⁾	24	-14	12	151	49	48	45

MW-CHA-RFI-7							
Analyte	August 2014⁽⁴⁾	November 2014⁽⁵⁾	February 2015	May 2015	August 2015	November 2015	February 2016
dissolved oxygen ⁽¹⁾	1,440	1,220	1,760	1,660	600	700	1,200
pH ⁽²⁾	7.55	7.38	7.55	7.01	7.41	7.52	7.12
redox ⁽³⁾	-36	-1	73	35	20	48	-90

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): February 12, 2016

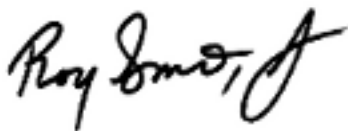
Lab Report ID: 16020343

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

Analysis Included:

Misc Field Analysis
Dissolved Metals 200.7 - Sub Pace LI
VOCs E8260C - Sub Pace LI
Sulfate 300.0 - Sub Pace LI
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)

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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 reanalyzed 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 – Adjusted Method Detection Limit.

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. PQLs are adjusted for sample weight/volume and dilution factors.

RL - Reporting Limit Denotes lowest analyte concentration reportable for the sample based on regulatory or project specific limits.

U - Denotes analyte not detected at concentration greater than the Practical Quantitation Limit (PQL) or the Reporting Limit (RL) or the Method Detection Limit (MDL) as applicable.

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

* - Value not within control limits.

SAMPLE CHAIN OF CUSTODY



Sample Condition Upon Receipt

CLIENT NAME: Leader
PROJECT: rails gate

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): 2.1°C
BIOLOGICAL TISSUE IS FROZEN: Yes No N/A Temp should be above freezing to 6°C
COMMENTS: Temperature is Acceptable? Yes No

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 checked="" 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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: TOC, VOA, Subcontract Analyses		Initial when completed: <u>N/A</u> Lot # of added preservative: <u>N/A</u>
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15. Not custody-created Trip blanks.
Trip Blank Custody Seals Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot #: <u>021216-0813</u>		

Sample Receipt form filled in: ASB 2/13/16
Line-Out (Includes Copying Shipping Documents and verifying sample pH): ASB 2/13/16
Log In (Includes notifying PM of any discrepancies and documenting in LIMS): ASB 2/12/16
Labeling (Includes Scanning Bottles and entering LAB IDs into pH logbook): ASB 2/13/16



PACE ANALYTICAL INC.
FIELD CALIBRATION SHEET

DATE: 2/12/16 **SITE:** Vails Gate Manufacturing
TECHNICIAN: Matt Broker **WEATHER:** -9C 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	4.03	4.00	1025	
	7.00	7.13	7.00	1026	
	10.00	10.22	10.00	1027	
Conductivity	1413	1428	1413	1028	
Turbidity	<0.10	0.11	<0.10	1029	
	15	15.2	15	1030	
	100	102	100	1031	
	750	752	750	1032	

NOTES:

PACE Analytical Services, Inc. Ground water Field Log

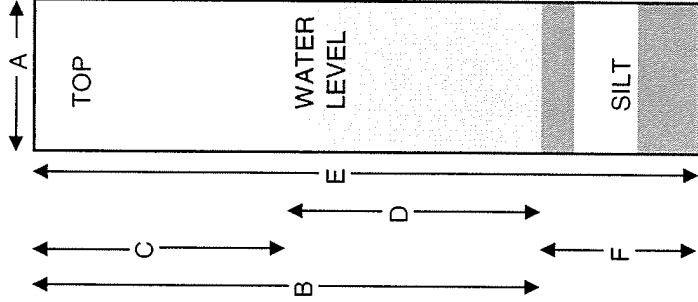
16020343P4



160203434

Client: Leader Consulting PACE ID
 Project: Vails Gate Manufacturing
 Well ID.: MW-5A/AR Field Dupe 1

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 6.50 feet
- C. Depth to Water 0.81 feet
- D. Length of Water Column (calculated) 5.69 feet
- Conversion Factor 0.16 -----
- Well Volume (calculated) 0.91 gallons
- No. of Volumes to be Evacuated 3 -----
- Total Volume to be Evacuated 2.73 gallons
- Actual Volume Evacuated 3.00 gallons
- E. Installed Well Depth (if known) N/A feet
- F. Depth of Silt (calculated) N/A feet

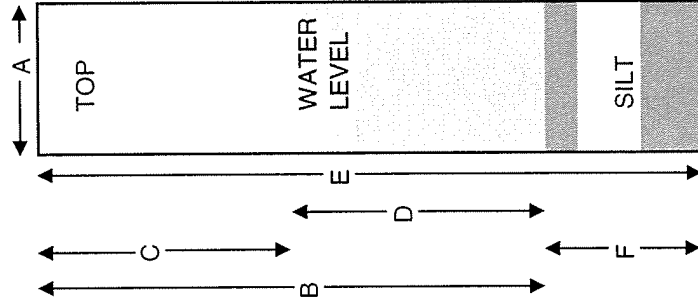
Field Measurements	Initial Evacuation	Final Sampling	% Recharge:
Date	<u>2/12/16</u>	<u>2/12/16</u>	Initial Depth to Water <u>0.81</u> feet
Time	<u>11:02</u>	<u>11:20</u>	Recharge Depth to Water <u>4.27</u> feet
EH	<u>-103</u>	<u>-124</u>	2nd water column height _____ %
Temperature	<u>4.6</u>	<u>5.3</u>	1st water column height _____ %
pH	<u>6.63</u>	<u>6.43</u>	Elevation(Top of Casing) <u>N/A</u> feet
Specific Cond.	<u>2715</u>	<u>1604</u>	G.W. Elevation= <u>N/A</u> feet
Turbidity	<u>394</u>	<u>82</u>	G.W.Elevation = Top of Case Elev-Total Depth
Dissolved Oxygen	<u>1.2</u>	<u>1.5</u>	Sampler: <u>Matt Broker</u>
Appearance	<u>cloudy</u>	<u>cloudy</u>	Signature: <u>[Signature]</u>

Weather: -9C sunny
 Observations: Silty bottom thick grey while purging then cleared up



PACE Analytical Services, Inc. Ground water Field Log
 Client: Leader Consulting
 Project: Vails Gate Manufacturing PACE ID
 Well ID: MW-14

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

Field Measurements	Initial Evacuation	Final Sampling	% Recharge:
Date	2/12/16	2/12/16	Initial Depth to Water <u>4.2</u> feet
Time	10:36	11:57	Recharge Depth to Water <u>9.95</u> feet
EH	-31	-44	2nd water column height _____ %
Temperature	12.1	8.4	1st water column height _____
pH	6.82	6.45	Elevation(Top of Casing) <u>N/A</u> feet
Specific Cond.	1641	1623	G.W. Elevation= <u>N/A</u> feet
Turbidity	112	166	G.W.Elevation = Top of Case Elev-Total Depth
Dissolved Oxygen	3.1	2.7	
Appearance	cloudy	cloudy	

Weather: --9C sunny
 Observations: Well between pillar 2 and 3 slow recharge oily sheen
Well located in Unit 4-5
Solar City

Sampler: Matt Broker
 Signature: [Signature]

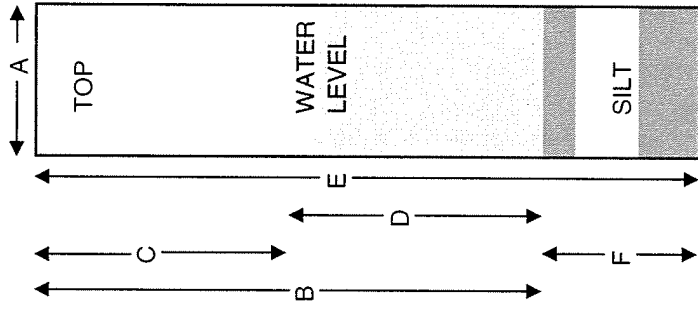
PACE Analytical Services, Inc. Ground water Field Log

<16020343P6>



Client: Leader Consulting PACE ID _____
 Project: Vails Gate Manufacturing
 Well ID: MW-16

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 13.63 feet
- C. Depth to Water 3.51 feet
- D. Length of Water Column (calculated) 10.12 feet
- Conversion Factor 0.16 -----
- Well Volume (calculated) 1.62 gallons
- No. of Volumes to be Evacuated 3 -----
- Total Volume to be Evacuated 4.86 gallons
- Actual Volume Evacuated Dry @ 1.5 gallons
- E. Installed Well Depth (if known) N/A feet
- F. Depth of Silt (calculated) N/A feet

Field Measurements	Initial Evacuation	Final Sampling	% Recharge:
Date	<u>2/12/16</u>	<u>2/12/16</u>	Initial Depth to Water <u>3.51</u> feet
Time	<u>11:32</u>	<u>11:47</u>	Recharge Depth to Water <u>11.36</u> feet
EH	<u>-61</u>	<u>45</u> mV	2nd water column height _____ %
Temperature	<u>7.9</u>	<u>6.2</u> C	1st water column height _____
pH	<u>6.63</u>	<u>6.74</u> SU	Elevation(Top of Casing) <u>N/A</u> feet
Specific Cond.	<u>636.1</u>	<u>641.2</u> uS	G.W. Elevation= <u>N/A</u> feet
Turbidity	<u>46.8</u>	<u>646</u> NTU	G.W.Elevation =Top of Case Elev-Total Depth
Dissolved Oxygen	<u>2.1</u>	<u>2.8</u>	Sampler: _____
Appearance	<u>cloudy</u>	<u>cloudy</u>	Signature: <u>MBC</u>
Weather:	<u>-8C sunny</u>		
Observations:	<u>sample cloudy</u>		

Sampler: _____
 Signature: MBC
 Matt Broker

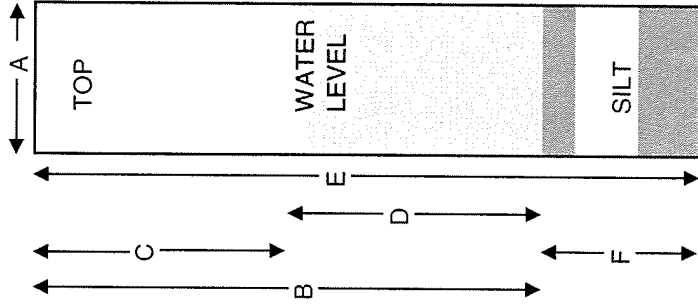
PACE Analytical Services, Inc. Ground water Field Log

<16020343P7>



Client: Leader Consulting PACE ID _____
 Project: Vails Gate Manufacturing
 Well ID: MW-CHA-RFI-7 MS/MSD

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 0.12 feet
- D. Length of Water Column (calculated) 41.55 feet
- Conversion Factor 0.16 -----
- Well Volume (calculated) 6.65 gallons
- No. of Volumes to be Evacuated 3 -----
- Total Volume to be Evacuated 19.92 gallons
- Actual Volume Evacuated 15.00 gallons
- E. Installed Well Depth (if known) N/A feet
- F. Depth of Silt (calculated) N/A feet

Field Measurements	Initial Evacuation	Final Sampling	% Recharge:
Date	<u>2/12/16</u>	<u>2/12/16</u>	Initial Depth to Water <u>0.12</u> feet
Time	<u>12:10</u>	<u>13:10</u>	Recharge Depth to Water <u>24.16</u> feet
EH	<u>-127</u>	<u>-90</u>	2nd water column height _____ %
Temperature	<u>9.1</u>	<u>9.1</u>	1st water column height _____
pH	<u>6.91</u>	<u>7.12</u>	Elevation(Top of Casing) <u>N/A</u> feet
Specific Cond.	<u>1542</u>	<u>1548</u>	G.W. Elevation= <u>N/A</u> feet
Turbidity	<u>21.8</u>	<u>9.07</u>	G.W. Elevation =Top of Case Elev-Total Depth
Dissolved Oxygen	<u>1.7</u>	<u>1.2</u>	Sampler: _____
Appearance	<u>slightly cloudy</u>	<u>clear</u>	Signature: <u>Matt</u>
Weather:	<u>~ 7C sunny</u>		
Observations:	<u>sample clear</u>		

Sampler: Matt Broker

Signature: Matt

SAMPLE RECEIPT



SAMPLE RECEIPT REPORT

16020343

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: 16020343
REPORT: DATA PACKAGE
EDD: YES
LRF TAT: 2 WEEK

RECEIVED DATE: 02/12/2016 15:40
SHIPPED VIA: PICK UP ¹
SHIPPING ID:
NUMBER OF COOLERS: 1
CUSTODY SEAL INTACT: NA
COOLER STATUS: CHILLED
TEMPERATURE(S): 5.1 (IR) °C

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

COMMENTS:
 SAMPLE PRESERVATION OF SUBCONTRACT ANALYSES NOT VERIFIED AT SCHENECTADY LAB.

CLIENT ID (LAB ID)	TAT-DUE Date ⁴	DATE-TIME SAMPLED	MATRIX	METHOD	TEST DESCRIPTION	QC REQUEST
FIELD DUPLICATE-01 (AT03382)	2 WEEK 02-26-16	02/12/2016 11:25	Water		Sulfate 300.0 - Sub Pace LI	
	2 WEEK 02-26-16	02/12/2016 11:25	Water	E200.7	Dissolved Metals 200.7 - Sub Pace LI	
	2 WEEK 02-26-16	02/12/2016 11:25	Water	E8260C	VOCs 8260C - Sub Pace LI	
	2 WEEK 02-26-16	02/12/2016 11:25	Water	SM 5310B-00,-11	Total Organic Carbon	
MW-5A/AR (AT03383)	2 WEEK 02-26-16	02/12/2016 11:20	Water		Sulfate 300.0 - Sub Pace LI	
	2 WEEK 02-26-16	02/12/2016 11:20	Water	E200.7	Dissolved Metals 200.7 - Sub Pace LI	
	2 WEEK 02-26-16	02/12/2016 11:20	Water	E8260C	VOCs 8260C - Sub Pace LI	
	2 WEEK 02-26-16	02/12/2016 11:20	Water	Misc Field Analysis	Misc Field Analysis	
	2 WEEK 02-26-16	02/12/2016 11:20	Water	SM 5310B-00,-11	Total Organic Carbon	
MW-14 (AT03384)	2 WEEK 02-26-16	02/12/2016 11:51	Water		Sulfate 300.0 - Sub Pace LI	
	2 WEEK 02-26-16	02/12/2016 11:51	Water	E200.7	Dissolved Metals 200.7 - Sub Pace LI	
	2 WEEK 02-26-16	02/12/2016 11:51	Water	E8260C	VOCs 8260C - Sub Pace LI	
	2 WEEK 02-26-16	02/12/2016 11:51	Water	Misc Field Analysis	Misc Field Analysis	
	2 WEEK 02-26-16	02/12/2016 11:51	Water	SM 5310B-00,-11	Total Organic Carbon	
MW-16 (AT03385)	2 WEEK 02-26-16	02/12/2016 11:47	Water		Sulfate 300.0 - Sub Pace LI	
	2 WEEK 02-26-16	02/12/2016 11:47	Water	E200.7	Dissolved Metals 200.7 - Sub Pace LI	
	2 WEEK 02-26-16	02/12/2016 11:47	Water	E8260C	VOCs 8260C - Sub Pace LI	
	2 WEEK 02-26-16	02/12/2016 11:47	Water	Misc Field Analysis	Misc Field Analysis	
	2 WEEK 02-26-16	02/12/2016 11:47	Water	SM 5310B-00,-11	Total Organic Carbon	
MW-CHA-RFI-7 MS/MSD (AT03386)	2 WEEK 02-26-16	02/12/2016 13:10	Water		Sulfate 300.0 - Sub Pace LI	MS, MSD
	2 WEEK 02-26-16	02/12/2016 13:10	Water	E200.7	Dissolved Metals 200.7 - Sub Pace LI	MS, MSD
	2 WEEK 02-26-16	02/12/2016 13:10	Water	E8260C	VOCs 8260C - Sub Pace LI	MS, MSD
	2 WEEK 02-26-16	02/12/2016 13:10	Water	Misc Field Analysis	Misc Field Analysis	
	2 WEEK 02-26-16	02/12/2016 13:10	Water	SM 5310B-00,-11	Total Organic Carbon	MS, MSD
TRIP BLANK-01 (AT03387)	2 WEEK 02-26-16	02/12/2016	Water	E8260C	VOCs 8260C - Sub Pace LI	

¹The 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.
²The 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.
³Samples 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.
⁴Samples 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.
⁵All 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.
⁶Samples 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: 16020343

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: 16020343-01 (AT03382)

Collection Date: 02/12/2016 11:25
Sample Matrix: WATER
Received Date: 02/12/2016 15:40
Percent Solid: N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1: 864	SM 5310B	02/24/2016 21:11	JS	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Organic Carbon	OC002	16.7	0.500	1.00		864

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: 16020343

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: 16020343-02 (AT03383)

Collection Date: 02/12/2016 11:20
Sample Matrix: WATER
Received Date: 02/12/2016 15:40
Percent Solid: N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1: 864	SM 5310B	02/24/2016 21:28	JS	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Organic Carbon	OC002	14.6	1.00	2.00		864

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: 16020343

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: 16020343-03 (AT03384)

Collection Date: 02/12/2016 11:51
Sample Matrix: WATER
Received Date: 02/12/2016 15:40
Percent Solid: N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1: 864	SM 5310B	02/24/2016 21:42	JS	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Organic Carbon	OC002	40.2	1.00	2.00		864

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: 16020343

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: 16020343-04 (AT03385)

Collection Date: 02/12/2016 11:47
Sample Matrix: WATER
Received Date: 02/12/2016 15:40
Percent Solid: N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1: 864	SM 5310B	02/24/2016 21:58	JS	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Organic Carbon	OC002	4.94	0.500	1.00		864

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: 16020343

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/MSD
Lab Sample ID: 16020343-05 (AT03386)

Collection Date: 02/12/2016 13:10
Sample Matrix: WATER
Received Date: 02/12/2016 15:40
Percent Solid: N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1: 864	SM 5310B	02/24/2016 22:11	JS	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Organic Carbon	OC002	0.843	0.500	1.00		864

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: 16020343

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: 16020343-02 (AT03383)

Collection Date: 02/12/2016 11:20
Sample Matrix: WATER
Received Date: 02/12/2016 15:40
Percent Solid: N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:	Field Test	Field Analysis	02/12/2016 11:20	MEB	NA	NA

Analyte	CAS No.	Result	PQL	Dilution Factor	Flags	File ID
Dissolved Oxygen (\$)	7782-44-7	1.50 (mg/L)	0.00	1.00		Field Test
pH (\$)	NA	6.43 (pH)	0.00	1.00		Field Test
Reduction Potential (\$)	NA	-124 (mV)	0.00	1.00		Field Test
Specific Conductance (\$)	NA	1600 (umhos/cm)	0.00	1.00		Field Test
Static Water Level (\$)	NA	0.810 (ft)	0.00	1.00		Field Test
Temperature (\$)	NA	5.30 (°C)	0.00	1.00		Field Test
Turbidity (\$)	NA	82.0 (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. (\$) NYSDOH-ELAP does not currently offer NELAC certification for this parameter.

5



Analytical Sample Results

Job Number: 16020343

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: 16020343-03 (AT03384)

Collection Date: 02/12/2016 11:51
Sample Matrix: WATER
Received Date: 02/12/2016 15:40
Percent Solid: N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:	Field Test	Field Analysis	02/12/2016 11:57	MEB	NA	NA

Analyte	CAS No.	Result	PQL	Dilution Factor	Flags	File ID
Dissolved Oxygen (\$)	7782-44-7	2.70 (mg/L)	0.00	1.00		Field Test
pH (\$)	NA	6.45 (pH)	0.00	1.00		Field Test
Reduction Potential (\$)	NA	-44.0 (mV)	0.00	1.00		Field Test
Specific Conductance (\$)	NA	1620 (umhos/cm)	0.00	1.00		Field Test
Static Water Level (\$)	NA	4.20 (ft)	0.00	1.00		Field Test
Temperature (\$)	NA	8.40 (°C)	0.00	1.00		Field Test
Turbidity (\$)	NA	166 (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. (\$) NYSDOH-ELAP does not currently offer NELAC certification for this parameter.

5



Analytical Sample Results

Job Number: 16020343

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: 16020343-04 (AT03385)

Collection Date: 02/12/2016 11:47
Sample Matrix: WATER
Received Date: 02/12/2016 15:40
Percent Solid: N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:	Field Test	Field Analysis	02/12/2016 11:47	MEB	NA	NA

Analyte	CAS No.	Result	PQL	Dilution Factor	Flags	File ID
Dissolved Oxygen (\$)	7782-44-7	2.80 (mg/L)	0.00	1.00		Field Test
pH (\$)	NA	6.74 (pH)	0.00	1.00		Field Test
Reduction Potential (\$)	NA	45.0 (mV)	0.00	1.00		Field Test
Specific Conductance (\$)	NA	641 (umhos/cm)	0.00	1.00		Field Test
Static Water Level (\$)	NA	3.51 (ft)	0.00	1.00		Field Test
Temperature (\$)	NA	6.20 (°C)	0.00	1.00		Field Test
Turbidity (\$)	NA	646 (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. (\$) NYSDOH-ELAP does not currently offer NELAC certification for this parameter.

5



Analytical Sample Results

Job Number: 16020343

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/MSD
Lab Sample ID: 16020343-05 (AT03386)

Collection Date: 02/12/2016 13:10
Sample Matrix: WATER
Received Date: 02/12/2016 15:40
Percent Solid: N/A

Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1: Field Test	Field Analysis	02/12/2016 13:10	MEB	NA	NA	NA

Analyte	CAS No.	Result	PQL	Dilution Factor	Flags	File ID
Dissolved Oxygen (\$)	7782-44-7	1.20 (mg/L)	0.00	1.00		Field Test
pH (\$)	NA	7.12 (pH)	0.00	1.00		Field Test
Reduction Potential (\$)	NA	-90.0 (mV)	0.00	1.00		Field Test
Specific Conductance (\$)	NA	1550 (umhos/cm)	0.00	1.00		Field Test
Static Water Level (\$)	NA	0.120 (ft)	0.00	1.00		Field Test
Temperature (\$)	NA	9.10 (°C)	0.00	1.00		Field Test
Turbidity (\$)	NA	9.07 (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. (\$) NYSDOH-ELAP does not currently offer NELAC certification for this parameter.

5

Quality Control Samples (Lab)



**Quality Control Results
Method Blank**

Job Number: 16020343

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 (AT03311B)
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: 864	SM 5310B	02/24/2016 16:47	JS	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	864

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: 16020343

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 (AT03311L)
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:	864	SM 5310B	02/24/2016 17:00	JS	NA	NA	NA

Analyte Spiked	CAS No.	Added (mg/L)	LCS (mg/L)	LCS % Rec.	Q ¹	Limits (%)
Total Organic Carbon	OC002	10.0	9.81	98.1		80.0-120

¹Qualifier 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

LABORATORY RESULTS

Results are only 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 tests requested.

Pace Analytical Services Inc.

**2190 Technology Drive
 Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 2/12/2016 11:25:00 AM

Received : 2/16/2016 3:45:00 PM AT03382

Collected By : CLIENT

Lab No. : 1602A81-001
Client Sample ID: FIELD DUPLICATE-01

Sample Information:

Type : Aqueous

Origin:

Analytical Method: E200.7 :

Analyst: CM

Parameter(s)	Results	Qualifier	D.F.	Units	PQL	Analyzed:	Container:
Iron	14,500		1	ug/L	100	02/26/16 11:46 AM	Container-01 of 01

Analytical Method: SW8260C :

Prep Method: 5030C

Analyst: BL

Parameter(s)	Results	Qualifier	D.F.	Units	PQL	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,1,1-Trichloroethane	4.4	c	1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,1,2-Trichloroethane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,1-Dichloroethane	5.5		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,1-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,1-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,2,3-Trichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,2,3-Trichloropropane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,2,4-Trichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,2,4-Trimethylbenzene	2.7		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,2-Dibromo-3-chloropropane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,2-Dibromoethane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,2-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,2-Dichloroethane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,2-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,3,5-Trimethylbenzene/P-ethyltoluene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,3-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,3-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
1,4-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
2,2-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
2-Butanone	6.2		1	µg/L	5.0	02/17/16 7:15 PM	Container-01 of 03
2-Chloroethylvinyl ether	< 10	S	1	µg/L	10	02/17/16 7:15 PM	Container-01 of 03
2-Chlorotoluene/4-Chlorotoluene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
2-Hexanone	< 5.0		1	µg/L	5.0	02/17/16 7:15 PM	Container-01 of 03
4-Isopropyltoluene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
4-Methyl-2-pentanone	< 5.0		1	µg/L	5.0	02/17/16 7:15 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

c = Calibration acceptability criteria exceeded for this analyte. Value estimated

H = Received/analyzed outside of analytical holding time

J = Estimated value - below calibration range

M-, M+ = Matrix Spike recovery below / above control limit

N = Indicates presumptive evidence of compound

P = Duplicate RPD outside of control limit

r = Reporting limit below calibration range. Value estimated.

S = Recovery outside of control limits for this analyte

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



Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :

Page 1 of 20

LABORATORY RESULTS

Results are only for the samples and analytes requested.

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Pace Analytical Services Inc.

**2190 Technology Drive
 Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 2/12/2016 11:25:00 AM

Received : 2/16/2016 3:45:00 PM AT03382

Collected By : CLIENT

Lab No. : 1602A81-001
Client Sample ID: FIELD DUPLICATE-01

Sample Information:

Type : Aqueous

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	PQL	Analyzed:	Container:
Acetone	4.5	J	1	µg/L	10	02/17/16 7:15 PM	Container-01 of 03
Benzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Bromobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Bromochloromethane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Bromodichloromethane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Bromoform	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Bromomethane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Carbon disulfide	< 10		1	µg/L	10	02/17/16 7:15 PM	Container-01 of 03
Carbon tetrachloride	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Chlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Chloroethane	92		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Chloroform	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Chloromethane	< 1.0	c	1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
cis-1,2-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
cis-1,3-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Dibromochloromethane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Dibromomethane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Dichlorodifluoromethane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Ethylbenzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Hexachlorobutadiene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Isopropylbenzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
m,p-Xylene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Methyl tert-butyl ether	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Methylene chloride	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Naphthalene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
n-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
n-Propylbenzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
o-Xylene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
sec-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Styrene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
tert-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Tetrachloroethene	< 1.0		1	µg/L	1.0	02/17/16 7:15 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
 c = Calibration acceptability criteria exceeded for this analyte. Value estimated
 H = Received/analyzed outside of analytical holding time
 J = Estimated value - below calibration range
 M-, M+ = Matrix Spike recovery below / above control limit
 N = Indicates presumptive evidence of compound
 P = Duplicate RPD outside of control limit
 r = Reporting limit below calibration range. Value estimated.
 S = Recovery outside of control limits for this analyte
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Caitlin Panzarella

Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :



LABORATORY RESULTS

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Pace Analytical Services Inc.

**2190 Technology Drive
Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 2/12/2016 11:25:00 AM

Received : 2/16/2016 3:45:00 PM AT03382

Collected By CLIENT

Sample Information:

Type : Aqueous

Origin:

Lab No. : 1602A81-001
Client Sample ID: FIELD DUPLICATE-01

<u>Analytical Method:</u> SW8260C :		<u>Prep Method:</u> 5030C				<u>Analyst:</u> BL	
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Toluene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
trans-1,2-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
trans-1,3-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Trichloroethene	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Trichlorofluoromethane	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Vinyl acetate	< 10		1	µg/L	10	02/17/16 7:15 PM	Container-01 of 03
Vinyl chloride	< 1.0		1	µg/L	1.0	02/17/16 7:15 PM	Container-01 of 03
Surr: 1,2-Dichloroethane-d4	121		1	%Rec	Limit 53-183	02/17/16 7:15 PM	Container-01 of 03
Surr: 4-Bromofluorobenzene	113		1	%Rec	Limit 63-140	02/17/16 7:15 PM	Container-01 of 03
Surr: Toluene-d8	99.9		1	%Rec	Limit 60-135	02/17/16 7:15 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>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Sulfate	4.31	J	1	mg/L	5.00	02/24/16 1:18 AM	Container-01 of 01

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

Caitlin Panzarella

Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :

LABORATORY RESULTS

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Pace Analytical Services Inc.

**2190 Technology Drive
 Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 2/12/2016 11:20:00 AM

Received : 2/16/2016 3:45:00 PM AT03383

Collected By : CLIENT

Lab No. : 1602A81-002
Client Sample ID: MW-5A/AR

Sample Information:

Type : Aqueous

Origin:

Analytical Method: E200.7 :

Analyst: CM

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Iron	14,400		1	ug/L	100	02/26/16 11:52 AM	Container-01 of 01

Analytical Method: SW8260C :

Prep Method: 5030C

Analyst: BL

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
1,1,1,2-Tetrachloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,1,1-Trichloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,1,2-Trichloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,1-Dichloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,1-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,1-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,2,3-Trichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,2,3-Trichloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,2,4-Trichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,2,4-Trimethylbenzene	2.5		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,2-Dibromo-3-chloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,2-Dibromoethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,2-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,2-Dichloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,2-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,3,5-Trimethylbenzene/P-ethyltoluene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,3-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,3-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
1,4-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
2,2-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
2-Butanone	8.6		1	µg/L	5.0	02/17/16 8:04 PM	Container-01 of 03
2-Chloroethylvinyl ether	< 10	S	1	µg/L	10	02/17/16 8:04 PM	Container-01 of 03
2-Chlorotoluene/4-Chlorotoluene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
2-Hexanone	< 5.0		1	µg/L	5.0	02/17/16 8:04 PM	Container-01 of 03
4-Isopropyltoluene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
4-Methyl-2-pentanone	< 5.0		1	µg/L	5.0	02/17/16 8:04 PM	Container-01 of 03

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

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

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P = Duplicate RPD outside of control limit

r = Reporting limit below calibration range. Value estimated.

S = Recovery outside of control limits for this analyte

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



Project Manager : Caitlin Panzarella

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LABORATORY RESULTS

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 Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 2/12/2016 11:20:00 AM

Received : 2/16/2016 3:45:00 PM AT03383

Collected By CLIENT

Lab No. : 1602A81-002
Client Sample ID: MW-5A/AR

Sample Information:

Type : Aqueous

Origin:

Analytical Method: SW8260C :	Prep Method: 5030C					Analyst: BL	
Parameter(s)	Results	Qualifier	D.F.	Units	PQL	Analyzed:	Container:
Acetone	6.1	J	1	µg/L	10	02/17/16 8:04 PM	Container-01 of 03
Benzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Bromobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Bromochloromethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Bromodichloromethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Bromoform	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Bromomethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Carbon disulfide	< 10		1	µg/L	10	02/17/16 8:04 PM	Container-01 of 03
Carbon tetrachloride	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Chlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Chloroethane	68		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Chloroform	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Chloromethane	< 1.0	c	1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
cis-1,2-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
cis-1,3-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Dibromochloromethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Dibromomethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Dichlorodifluoromethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Ethylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Hexachlorobutadiene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Isopropylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
m,p-Xylene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Methyl tert-butyl ether	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Methylene chloride	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Naphthalene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
n-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
n-Propylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
o-Xylene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
sec-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Styrene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
tert-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Tetrachloroethene	< 1.0		1	µg/L	1.0	02/17/16 8:04 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

c = Calibration acceptability criteria exceeded for this analyte. Value estimated

H = Received/analyzed outside of analytical holding time

J = Estimated value - below calibration range

M-, M+ = Matrix Spike recovery below / above control limit

N = Indicates presumptive evidence of compound

P = Duplicate RPD outside of control limit

r = Reporting limit below calibration range. Value estimated.

S = Recovery outside of control limits for this analyte

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



Project Manager : Caitlin Panzarella

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Date Reported :

Page 5 of 20

LABORATORY RESULTS

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Received : 2/16/2016 3:45:00 PM AT03383

Collected By CLIENT

Lab No. : 1602A81-002
Client Sample ID: MW-5A/AR

Sample Information:

Type : Aqueous

Origin:

<u>Analytical Method:</u> SW8260C :		<u>Prep Method:</u> 5030C				<u>Analyst:</u> BL	
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Toluene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
trans-1,2-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
trans-1,3-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Trichloroethene	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Trichlorofluoromethane	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Vinyl acetate	< 10		1	µg/L	10	02/17/16 8:04 PM	Container-01 of 03
Vinyl chloride	< 1.0		1	µg/L	1.0	02/17/16 8:04 PM	Container-01 of 03
Surr: 1,2-Dichloroethane-d4	124		1	%Rec	Limit 53-183	02/17/16 8:04 PM	Container-01 of 03
Surr: 4-Bromofluorobenzene	111		1	%Rec	Limit 63-140	02/17/16 8:04 PM	Container-01 of 03
Surr: Toluene-d8	91.0		1	%Rec	Limit 60-135	02/17/16 8:04 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>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Sulfate	3.24	J	1	mg/L	5.00	02/24/16 1:59 AM	Container-01 of 01

Qualifiers: E = Value above quantitation range, Value estimated.
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 c = Calibration acceptability criteria exceeded for this analyte. Value estimated
 H = Received/analyzed outside of analytical holding time
 J = Estimated value - below calibration range
 M-, M+ = Matrix Spike recovery below / above control limit
 N = Indicates presumptive evidence of compound
 P = Duplicate RPD outside of control limit
 r = Reporting limit below calibration range. Value estimated.
 S = Recovery outside of control limits for this analyte
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Caitlin Panzarella
 Project Manager : Caitlin Panzarella

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LABORATORY RESULTS

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**2190 Technology Drive
 Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 2/12/2016 11:51:00 AM

Received : 2/16/2016 3:45:00 PM AT03384

Collected By : CLIENT

Lab No. : 1602A81-003
Client Sample ID: MW-14

Sample Information:

Type : Aqueous

Origin:

Analytical Method: E200.7 :

Analyst: CM

Parameter(s)	Results	Qualifier	D.F.	Units	PQL	Analyzed:	Container:
Iron	21,900		1	ug/L	100	02/26/16 11:58 AM	Container-01 of 01

Analytical Method: SW8260C :

Prep Method: 5030C

Analyst: BL

Parameter(s)	Results	Qualifier	D.F.	Units	PQL	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,1,1-Trichloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,1,2-Trichloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,1-Dichloroethane	16		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,1-Dichloroethene	1.7		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,1-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,2,3-Trichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,2,3-Trichloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,2,4-Trichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,2,4-Trimethylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,2-Dibromo-3-chloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,2-Dibromoethane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,2-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,2-Dichloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,2-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,3,5-Trimethylbenzene/P-ethyltoluene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,3-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,3-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
1,4-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
2,2-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
2-Butanone	< 5.0		1	µg/L	5.0	02/17/16 8:28 PM	Container-01 of 03
2-Chloroethylvinyl ether	< 10	S	1	µg/L	10	02/17/16 8:28 PM	Container-01 of 03
2-Chlorotoluene/4-Chlorotoluene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
2-Hexanone	< 5.0		1	µg/L	5.0	02/17/16 8:28 PM	Container-01 of 03
4-Isopropyltoluene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
4-Methyl-2-pentanone	< 5.0		1	µg/L	5.0	02/17/16 8:28 PM	Container-01 of 03

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

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

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Collected : 2/12/2016 11:51:00 AM

Received : 2/16/2016 3:45:00 PM AT03384

Collected By CLIENT

Lab No. : 1602A81-003
Client Sample ID: MW-14

Sample Information:

Type : Aqueous

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	PQL	Analyzed:	Container:
Acetone	12		1	µg/L	10	02/17/16 8:28 PM	Container-01 of 03
Benzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Bromobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Bromochloromethane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Bromodichloromethane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Bromoform	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Bromomethane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Carbon disulfide	< 10		1	µg/L	10	02/17/16 8:28 PM	Container-01 of 03
Carbon tetrachloride	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Chlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Chloroethane	6.6		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Chloroform	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Chloromethane	< 1.0	c	1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
cis-1,2-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
cis-1,3-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Dibromochloromethane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Dibromomethane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Dichlorodifluoromethane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Ethylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Hexachlorobutadiene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Isopropylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
m,p-Xylene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Methyl tert-butyl ether	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Methylene chloride	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Naphthalene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
n-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
n-Propylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
o-Xylene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
sec-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Styrene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
tert-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Tetrachloroethene	< 1.0		1	µg/L	1.0	02/17/16 8:28 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
 c = Calibration acceptability criteria exceeded for this analyte. Value estimated
 H = Received/analyzed outside of analytical holding time
 J = Estimated value - below calibration range
 M-, M+ = Matrix Spike recovery below / above control limit
 N = Indicates presumptive evidence of compound
 P = Duplicate RPD outside of control limit
 r = Reporting limit below calibration range. Value estimated.
 S = Recovery outside of control limits for this analyte
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Caitlin Panzarella
 Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.
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Date Reported :

LABORATORY RESULTS

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Pace Analytical Services Inc.

**2190 Technology Drive
 Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 2/12/2016 11:51:00 AM

Received : 2/16/2016 3:45:00 PM AT03384

Collected By CLIENT

Lab No. : 1602A81-003
Client Sample ID: MW-14

Sample Information:

Type : Aqueous

Origin:

<u>Analytical Method:</u> SW8260C :		<u>Prep Method:</u> 5030C				<u>Analyst:</u> BL	
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Toluene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
trans-1,2-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
trans-1,3-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Trichloroethene	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Trichlorofluoromethane	< 1.0		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Vinyl acetate	< 10		1	µg/L	10	02/17/16 8:28 PM	Container-01 of 03
Vinyl chloride	1.6		1	µg/L	1.0	02/17/16 8:28 PM	Container-01 of 03
Surr: 1,2-Dichloroethane-d4	135		1	%Rec	Limit 53-183	02/17/16 8:28 PM	Container-01 of 03
Surr: 4-Bromofluorobenzene	105		1	%Rec	Limit 63-140	02/17/16 8:28 PM	Container-01 of 03
Surr: Toluene-d8	90.7		1	%Rec	Limit 60-135	02/17/16 8:28 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>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Sulfate	13.6		1	mg/L	5.00	02/24/16 2:13 AM	Container-01 of 01

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

Caitlin Panzarella

Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

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LABORATORY RESULTS

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Pace Analytical Services Inc.

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 Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 2/12/2016 11:47:00 AM

Received : 2/16/2016 3:45:00 PM AT03385

Collected By : CLIENT

Lab No. : 1602A81-004
Client Sample ID: MW-16

Sample Information:

Type : Aqueous

Origin:

Analytical Method: E200.7 :

Analyst: CM

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Iron	1,250		1	ug/L	100	02/26/16 12:04 PM	Container-01 of 01

Analytical Method: SW8260C :

Prep Method: 5030C

Analyst: BL

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
1,1,1,2-Tetrachloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,1,1-Trichloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,1,2-Trichloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,1-Dichloroethane	5.2		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,1-Dichloroethene	1.8		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,1-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,2,3-Trichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,2,3-Trichloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,2,4-Trichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,2,4-Trimethylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,2-Dibromo-3-chloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,2-Dibromoethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,2-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,2-Dichloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,2-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,3,5-Trimethylbenzene/P-ethyltoluene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,3-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,3-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
1,4-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
2,2-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
2-Butanone	< 5.0		1	µg/L	5.0	02/17/16 8:52 PM	Container-01 of 03
2-Chloroethylvinyl ether	< 10	S	1	µg/L	10	02/17/16 8:52 PM	Container-01 of 03
2-Chlorotoluene/4-Chlorotoluene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
2-Hexanone	< 5.0		1	µg/L	5.0	02/17/16 8:52 PM	Container-01 of 03
4-Isopropyltoluene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
4-Methyl-2-pentanone	< 5.0		1	µg/L	5.0	02/17/16 8:52 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

c = Calibration acceptability criteria exceeded for this analyte. Value estimated

H = Received/analyzed outside of analytical holding time

J = Estimated value - below calibration range

M-, M+ = Matrix Spike recovery below / above control limit

N = Indicates presumptive evidence of compound

P = Duplicate RPD outside of control limit

r = Reporting limit below calibration range. Value estimated.

S = Recovery outside of control limits for this analyte

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



Project Manager : Caitlin Panzarella

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LABORATORY RESULTS

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Pace Analytical Services Inc.

**2190 Technology Drive
 Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 2/12/2016 11:47:00 AM

Received : 2/16/2016 3:45:00 PM AT03385

Collected By CLIENT

Lab No. : 1602A81-004
Client Sample ID: MW-16

Sample Information:

Type : Aqueous

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	PQL	Analyzed:	Container:
Acetone	< 10		1	µg/L	10	02/17/16 8:52 PM	Container-01 of 03
Benzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Bromobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Bromochloromethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Bromodichloromethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Bromoform	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Bromomethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Carbon disulfide	< 10		1	µg/L	10	02/17/16 8:52 PM	Container-01 of 03
Carbon tetrachloride	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Chlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Chloroethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Chloroform	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Chloromethane	< 1.0	c	1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
cis-1,2-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
cis-1,3-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Dibromochloromethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Dibromomethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Dichlorodifluoromethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Ethylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Hexachlorobutadiene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Isopropylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
m,p-Xylene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Methyl tert-butyl ether	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Methylene chloride	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Naphthalene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
n-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
n-Propylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
o-Xylene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
sec-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Styrene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
tert-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Tetrachloroethene	2.5		1	µg/L	1.0	02/17/16 8:52 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

c = Calibration acceptability criteria exceeded for this analyte. Value estimated

H = Received/analyzed outside of analytical holding time

J = Estimated value - below calibration range

M-, M+ = Matrix Spike recovery below / above control limit

N = Indicates presumptive evidence of compound

P = Duplicate RPD outside of control limit

r = Reporting limit below calibration range. Value estimated.

S = Recovery outside of control limits for this analyte

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



Project Manager : Caitlin Panzarella

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Page 11 of 20

LABORATORY RESULTS

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Pace Analytical Services Inc.

**2190 Technology Drive
 Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 2/12/2016 11:47:00 AM

Received : 2/16/2016 3:45:00 PM AT03385

Collected By CLIENT

Lab No. : 1602A81-004
Client Sample ID: MW-16

Sample Information:

Type : Aqueous

Origin:

<u>Analytical Method:</u> SW8260C :		<u>Prep Method:</u> 5030C				<u>Analyst:</u> BL	
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Toluene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
trans-1,2-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
trans-1,3-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Trichloroethene	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Trichlorofluoromethane	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Vinyl acetate	< 10		1	µg/L	10	02/17/16 8:52 PM	Container-01 of 03
Vinyl chloride	< 1.0		1	µg/L	1.0	02/17/16 8:52 PM	Container-01 of 03
Surr: 1,2-Dichloroethane-d4	139		1	%Rec	Limit 53-183	02/17/16 8:52 PM	Container-01 of 03
Surr: 4-Bromofluorobenzene	103		1	%Rec	Limit 63-140	02/17/16 8:52 PM	Container-01 of 03
Surr: Toluene-d8	89.8		1	%Rec	Limit 60-135	02/17/16 8:52 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>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Sulfate	10.9		1	mg/L	5.00	02/24/16 2:26 AM	Container-01 of 01

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

Caitlin Panzarella

Project Manager : Caitlin Panzarella

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LABORATORY RESULTS

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Pace Analytical Services Inc.

**2190 Technology Drive
 Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 2/12/2016 1:10:00 PM

Received : 2/16/2016 3:45:00 PM AT03386

Collected By : CLIENT

Sample Information:

Type : Aqueous

Origin:

Lab No. : 1602A81-005

Client Sample ID: MW-CHA-RFI-7 MS/MSD

Analytical Method: E200.7 :

Analyst: CM

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Iron	247		1	ug/L	100	02/26/16 12:10 PM	Container-01 of 01

Analytical Method: SW8260C :

Prep Method: 5030C

Analyst: BL

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
1,1,1,2-Tetrachloroethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,1,1-Trichloroethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,1,2-Trichloroethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,1-Dichloroethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,1-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,1-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,2,3-Trichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,2,3-Trichloropropane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,2,4-Trichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,2,4-Trimethylbenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,2-Dibromo-3-chloropropane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,2-Dibromoethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,2-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,2-Dichloroethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,2-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,3,5-Trimethylbenzene/P-ethyltoluene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,3-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,3-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
1,4-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
2,2-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
2-Butanone	< 5.0		1	µg/L	5.0	02/17/16 9:16 PM	Container-01 of 09
2-Chloroethylvinyl ether	< 10	S	1	µg/L	10	02/17/16 9:16 PM	Container-01 of 09
2-Chlorotoluene/4-Chlorotoluene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
2-Hexanone	< 5.0		1	µg/L	5.0	02/17/16 9:16 PM	Container-01 of 09
4-Isopropyltoluene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
4-Methyl-2-pentanone	< 5.0		1	µg/L	5.0	02/17/16 9:16 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

c = Calibration acceptability criteria exceeded for this analyte. Value estimated

H = Received/analyzed outside of analytical holding time

J = Estimated value - below calibration range

M-, M+ = Matrix Spike recovery below / above control limit

N = Indicates presumptive evidence of compound

P = Duplicate RPD outside of control limit

r = Reporting limit below calibration range. Value estimated.

S = Recovery outside of control limits for this analyte

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



Project Manager : Caitlin Panzarella

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Date Reported :

LABORATORY RESULTS

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Pace Analytical Services Inc.

**2190 Technology Drive
 Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 2/12/2016 1:10:00 PM

Received : 2/16/2016 3:45:00 PM AT03386

Collected By CLIENT

Lab No. : 1602A81-005
Client Sample ID: MW-CHA-RFI-7 MS/MSD

Sample Information:

Type : Aqueous

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	PQL	Analyzed:	Container:
Acetone	< 10		1	µg/L	10	02/17/16 9:16 PM	Container-01 of 09
Benzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Bromobenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Bromochloromethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Bromodichloromethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Bromoform	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Bromomethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Carbon disulfide	< 10		1	µg/L	10	02/17/16 9:16 PM	Container-01 of 09
Carbon tetrachloride	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Chlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Chloroethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Chloroform	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Chloromethane	< 1.0	c	1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
cis-1,2-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
cis-1,3-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Dibromochloromethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Dibromomethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Dichlorodifluoromethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Ethylbenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Hexachlorobutadiene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Isopropylbenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
m,p-Xylene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Methyl tert-butyl ether	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Methylene chloride	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Naphthalene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
n-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
n-Propylbenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
o-Xylene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
sec-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Styrene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
tert-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Tetrachloroethene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09

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

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

c = Calibration acceptability criteria exceeded for this analyte. Value estimated

H = Received/analyzed outside of analytical holding time

J = Estimated value - below calibration range

M-, M+ = Matrix Spike recovery below / above control limit

N = Indicates presumptive evidence of compound

P = Duplicate RPD outside of control limit

r = Reporting limit below calibration range. Value estimated.

S = Recovery outside of control limits for this analyte

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



Project Manager : Caitlin Panzarella

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Collected : 2/12/2016 1:10:00 PM

Received : 2/16/2016 3:45:00 PM AT03386

Collected By CLIENT

Sample Information:

Type : Aqueous

Origin:

Lab No. : 1602A81-005

Client Sample ID: MW-CHA-RFI-7 MS/MSD

<u>Analytical Method:</u> SW8260C :		<u>Prep Method:</u> 5030C				<u>Analyst:</u> BL	
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Toluene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
trans-1,2-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
trans-1,3-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Trichloroethene	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Trichlorofluoromethane	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Vinyl acetate	< 10		1	µg/L	10	02/17/16 9:16 PM	Container-01 of 09
Vinyl chloride	< 1.0		1	µg/L	1.0	02/17/16 9:16 PM	Container-01 of 09
Surr: 1,2-Dichloroethane-d4	137		1	%Rec	Limit 53-183	02/17/16 9:16 PM	Container-01 of 09
Surr: 4-Bromofluorobenzene	106		1	%Rec	Limit 63-140	02/17/16 9:16 PM	Container-01 of 09
Surr: Toluene-d8	90.7		1	%Rec	Limit 60-135	02/17/16 9:16 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>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Sulfate	39.8		1	mg/L	5.00	02/24/16 2:40 AM	Container-01 of 01

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 c = Calibration acceptability criteria exceeded for this analyte. Value estimated
 H = Received/analyzed outside of analytical holding time
 J = Estimated value - below calibration range
 M-, M+ = Matrix Spike recovery below / above control limit
 N = Indicates presumptive evidence of compound
 P = Duplicate RPD outside of control limit
 r = Reporting limit below calibration range. Value estimated.
 S = Recovery outside of control limits for this analyte
 + = NYSDOH ELAP does not offer certification for this analyte / matrix / method

Caitlin Panzarella

Project Manager : Caitlin Panzarella

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 Schenectady, NY 12308**

Attn To : William A. Kotas

Collected : 2/12/2016

Received : 2/16/2016 3:45:00 PM AT03387

Collected By : CLIENT

Lab No. : 1602A81-006
Client Sample ID: TRIP BLANK-01

Sample Information:

Type : Aqueous

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	PQL	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,1,1-Trichloroethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,1,2,2-Tetrachloroethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,1,2-Trichloroethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,1-Dichloroethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,1-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,1-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,2,3-Trichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,2,3-Trichloropropane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,2,4-Trichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,2,4-Trimethylbenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,2-Dibromo-3-chloropropane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,2-Dibromoethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,2-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,2-Dichloroethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,2-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,3,5-Trimethylbenzene/P-ethyltoluene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,3-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,3-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
1,4-Dichlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
2,2-Dichloropropane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
2-Butanone	< 5.0		1	µg/L	5.0	02/17/16 7:40 PM	Container-01 of 02
2-Chloroethylvinyl ether	< 10	S	1	µg/L	10	02/17/16 7:40 PM	Container-01 of 02
2-Chlorotoluene/4-Chlorotoluene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
2-Hexanone	< 5.0		1	µg/L	5.0	02/17/16 7:40 PM	Container-01 of 02
4-Isopropyltoluene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
4-Methyl-2-pentanone	< 5.0		1	µg/L	5.0	02/17/16 7:40 PM	Container-01 of 02
Acetone	< 10		1	µg/L	10	02/17/16 7:40 PM	Container-01 of 02
Benzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Bromobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Bromochloromethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Bromodichloromethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02

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Attn To : William A. Kotas

Collected : 2/12/2016

Received : 2/16/2016 3:45:00 PM AT03387

Collected By : CLIENT

Lab No. : 1602A81-006
Client Sample ID: TRIP BLANK-01

Sample Information:

Type : Aqueous

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	PQL	Analyzed:	Container:
Bromoform	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Bromomethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Carbon disulfide	< 10		1	µg/L	10	02/17/16 7:40 PM	Container-01 of 02
Carbon tetrachloride	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Chlorobenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Chloroethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Chloroform	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Chloromethane	< 1.0	c	1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
cis-1,2-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
cis-1,3-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Dibromochloromethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Dibromomethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Dichlorodifluoromethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Ethylbenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Hexachlorobutadiene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Isopropylbenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
m,p-Xylene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Methyl tert-butyl ether	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Methylene chloride	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Naphthalene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
n-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
n-Propylbenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
o-Xylene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
sec-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Styrene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
tert-Butylbenzene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Tetrachloroethene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Toluene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
trans-1,2-Dichloroethene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
trans-1,3-Dichloropropene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Trichloroethene	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Trichlorofluoromethane	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02

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

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S = Recovery outside of control limits for this analyte

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



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Collected : 2/12/2016
 Received : 2/16/2016 3:45:00 PM AT03387
 Collected By CLIENT

Lab No. : 1602A81-006
Client Sample ID: TRIP BLANK-01

Sample Information:
 Type : Aqueous

Origin:

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>PQL</u>	<u>Analyzed:</u>	<u>Container:</u>
Vinyl acetate	< 10		1	µg/L	10	02/17/16 7:40 PM	Container-01 of 02
Vinyl chloride	< 1.0		1	µg/L	1.0	02/17/16 7:40 PM	Container-01 of 02
Surr: 1,2-Dichloroethane-d4	129		1	%Rec	Limit 53-183	02/17/16 7:40 PM	Container-01 of 02
Surr: 4-Bromofluorobenzene	105		1	%Rec	Limit 63-140	02/17/16 7:40 PM	Container-01 of 02
Surr: Toluene-d8	83.9		1	%Rec	Limit 60-135	02/17/16 7:40 PM	Container-01 of 02

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Caitlin Panzarella
 Project Manager : Caitlin Panzarella

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Date Reported :



Sample Receipt Checklist

Client Name **PACE-NY**

Date and Time Received: **2/16/2016 3:45:00 PM**

Work Order Number: **1602A81**

RcptNo: **1**

Received by **Marissa Freking**

Completed by: *Jaclyn Kuri*

Reviewed by: *Caitlin Panzarella*

Completed Date: 2/16/2016 4:40:03 PM

Reviewed Date: 2/18/2016 1:22:57 PM

Carrier name: FedEx

- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Are matrices correctly identified on Chain of custody? Yes No
- Is it clear what analyses were requested? Yes No
- Custody seals intact on sample bottles? Yes No Not Present
- Samples in proper container/bottle? Yes No
- Were correct preservatives used and noted? Yes No NA
- Preservative added to bottles:
- Sample Condition? Intact Broken Leaking
- Sufficient sample volume for indicated test? Yes No
- Were container labels complete (ID, Pres, Date)? Yes No
- All samples received within holding time? Yes No
- Was an attempt made to cool the samples? Yes No NA
- All samples received at a temp. of > 0° C to 6.0° C? Yes No NA
- Response when temperature is outside of range:
- Sample Temp. taken and recorded upon receipt? Yes No To 1.1°
- Water - Were bubbles absent in VOC vials? Yes No No Vials
- Water - Was there Chlorine Present? Yes No NA
- Water - pH acceptable upon receipt? Yes No No Water
- Are Samples considered acceptable? Yes No
- Custody Seals present? Yes No
- Airbill or Sticker? Air Bil Sticker Not Present
- Airbill No: 6661 5913 2481

Case Number: SDG: SAS:
 PACE-NY423

Any No response should be detailed in the comments section below, if applicable.

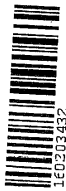
Client Contacted? Yes No NA Person Contacted:
 Contact Mode: Phone: Fax: Email: In Person:
 Client Instructions:
 Date Contacted: Contacted By:
 Regarding:
 Comments:
 SAMPLE PRESERVATION NOT VERIFIED AT SCHENECTADY LAB
 CorrectiveAction:

WorkOrder :
 1602A81

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

<16020343P2>



Sample Condition Upon Receipt

CLIENT NAME: Leadex
 PROJECT: Wails gate

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 ICE USED: Wet Blue None
 THERMOMETER USED: #164 IR Gun 03 #122087967 COOLER TEMPERATURE (°C): 2.10C
 BIOLOGICAL TISSUE IS FROZEN: Yes No N/A Temp should be above freezing to 6°C

COMMENTS:	Temperature is Acceptable?
1. Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3. Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4. Sampler Name / Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6. Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7. Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
8. Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
9. Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
- Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10. Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
11. Filtered volume received for Dissolved tests:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
12. Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
- Includes date/time/ID/Analysis	
13. All containers needing preservation have been checked:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
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: TOC, VOA, Subcontract Analysis	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Trip Blank Custody Seals Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Pace Trip Blank Lot #: <u>021016-0813</u>	
Initial when completed: <u>N/A</u>	Lot # of added preservative: <u>N/A</u>
15. Not Custody-created Trip blanks.	

Sample Receipt form filled in: AJB 2/13/16
 Line-Out (Includes Copying Shipping Documents and verifying sample pH): AJB 2/13/16
 Log In (Includes notifying PM of any discrepancies and documenting in LIMS): AJB 2/12/16
 Labeling (Includes Scanning Bottles and entering LAB IDs into pH logbook): AJB 2/13/16

Attachment B

Data Validation Summary



Data Usability Summary Report – April 2016
Vails Gate
737.004

Data Usability

The Quality Assurance Project Plan (“QAPP”) prepared for this project by Clough Harbor & Associates, LLP, 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 February 12, 2016. A total of six (6) samples were collected during the February 2016 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 included and 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)
16020343	02/12/2016	02/12/2016 (Schenectady) 02/16/2016 (Long Island)	Water	TCL 8260 Metals Misc. Field Analysis TOC Sulfate	2.1

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, if any, 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.

Custody Documentation

Chain of Custody (COC) forms are used to document the history of sample possession from the time the sample containers leave their point of origin (usually the laboratory performing the analyses) to the time the samples are received by the laboratory. COCs are considered legal documents.

The Chain of Custody accurately documents the sample collection.

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 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 monitoring wells was 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 February 12, 2016.

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 February 12, 2016. 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 February 12, 2016. 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 acceptable:

- Sample MW-CHA-RFI-7 was submitted for matrix spike/ matrix spike duplicate (MS/MSD) analysis, and a lab-fortified blank (LFB) was analyzed. All percent recoveries were within or above QC limits. Spike recoveries showed 31 out 132 outside limits.

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**

February 12, 2016 Sampling Event

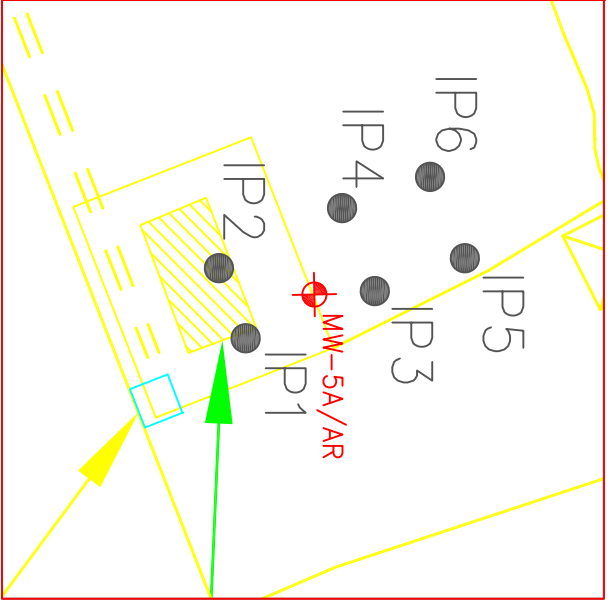
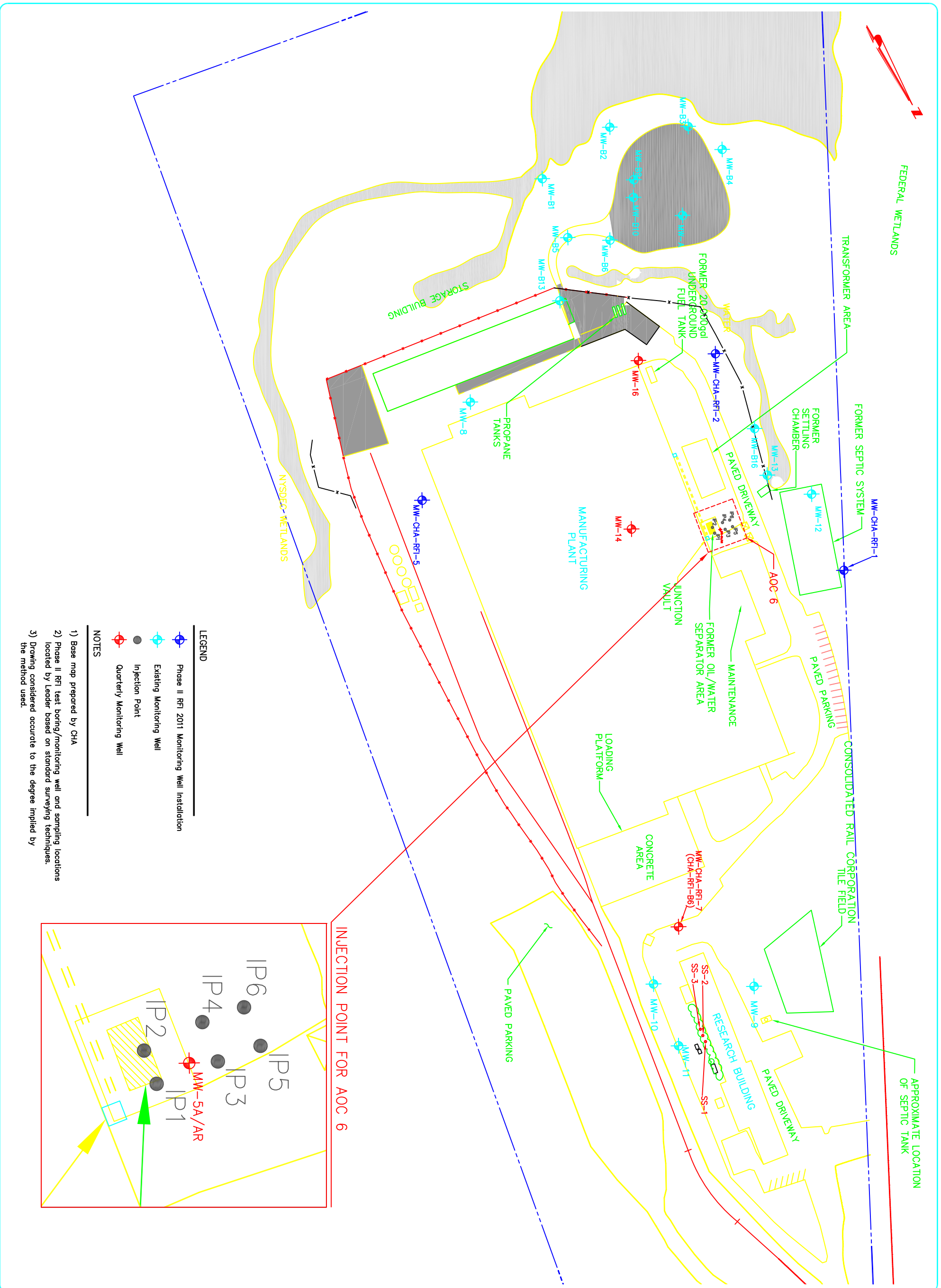
Sample ID	15110056			
Matrix	Water			
Analysis	TCL 8260	Metals (Dissolved Iron Only)	Miscellaneous Field Parameters	Wet Chemistry:
Holding Times	Samples were analyzed within USEPA holding times.	Samples were analyzed within USEPA holding times	Samples were analyzed in the field.	Samples were analyzed within USEPA holding times
Calibration	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 these analytes are regarded estimated and are flagged with "Z" in the LFB. They were not found in the samples. All data quality objectives were satisfied.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.	Sample ID AS34713 was re-analyzed at a secondary dilution to bring all target analyte concentrations within the calibration range of the instrument. All quality assurance parameters were met for these analyses.
Method Blanks	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.
Matrix Spike/Matrix Spike Duplicate	Sample MW-CHA-RFI-7 was submitted for matrix spike/ matrix spike duplicate (MS/MSD) analysis, and a lab-fortified blank (LFB) was analyzed. All percent recoveries were within or above QC limits, except no recovery was obtained for 2-chloroethylvinyl ether in all three extracts. Data reported for this analyte are suspect and are flagged with the qualifier "X". The five compounds that had recoveries above the Q. C. limits in the LFB were not found in the samples, and no data are therefore affected. 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**

Sample ID	15110056			
Matrix	Water			
Analysis	TCL 8260	Metals (Dissolved Iron Only)	Miscellaneous Field Parameters	Wet Chemistry:
Surrogates	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.
Internal Standards	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.
Reference Sample	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.	Note that Sample AS23667 was re-analyzed at a secondary dilution to bring all target analyte concentration within the calibration range of the instrument. All quality assurance parameters were met for these analyses.
Data Usability	Data is acceptable.	Data is acceptable.	Data is acceptable.	Data is acceptable.

Attachment C

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.

BIOREMEDIATION PROJECT

IN-SITU INJECTION POINT LOCATIONS FOR AOC 6

Issue Date: 12/9/14 Project No.: 737.003 Scale: NTS

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

Designed By:	CHA	Date:	01/12/06
Drawn By:	CHA	Date:	01/10/06
Reviewed By:	The Leader Group	Date:	12/9/12

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VAILS GATE
 MANUFACTURING FACILITY
 VAILS GATE, NEW YORK

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

Figure No. **1**