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October 20, 2017

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

RE: Post-Remediation Groundwater 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 second round of post-remediation groundwater 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") on August 10, 2017. The Site is currently identified as the Vails Gate Business Center ("VGBC").

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*. Per the RAWP, groundwater monitoring data collected at the end of the eighth quarter sampling round were evaluated to assess the need for continued monitoring and/or additional application of bioremediation medium to the subsurface AOC 6. Based on discussions between Mr. John Miller, P.E. of NYSDEC and Mr. Kolaga, two (2) more rounds of groundwater monitoring was recommended, concurrent with the development of an Interim Site Management Plan ("ISMP") for the Site.

2.0 SCOPE-OF-WORK

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) was required per the RAWP. The scope of work identified for this Post-Remediation Sampling Program is identical to the sampling program in the RAWP, with the exception of the schedule. Two (2) rounds of sampling of the four (4) monitoring wells will occur. The first sampling round was requested by NYSDEC to be completed in the first quarter of 2017. The second round was to be completed six (6) months from the date of the first round. Information included in this report includes data associated with the second round sampling event. Included in this report are the 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 SECOND ROUND SAMPLING PROGRAM

The second round sampling event was conducted on August 10, 2017. The second round of Post–Remediation sampling and analysis included a laboratory analytical regime that included the typical quarterly parameters of volatile organic compounds ("VOCs"), sulfate, total organic carbon ("TOC"), and dissolved iron ("DI") and the field parameters of dissolved oxygen ("DO"), pH, oxidation reduction potential ("redox"), temperature and turbidity. For the purpose of assessing the continued viability of the bioremediation medium, the second round of Post–Remediation sampling and analysis also included a laboratory analytical regime to mirror the baseline (pre-injection) sampling and analysis effort completed on August 11, 2014. Therefore, the additional laboratory parameters of nitrate, total iron, total manganese, dissolved manganese, dissolved methane, dissolved ethane and dissolved ethene were included for analysis. Laboratory and field data were reviewed to evaluate analyte concentrations and field data parameters from groundwater samples from each of the wells. The results were compared to previous data generated during RAWP implementation (i.e, bioremediation sampling and analysis).

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 2,970 parts per billion ("ppb") to 7,080 ppb. The pH levels within the samples collected from the four (4) wells ranged from 6.84 standard units ("SUs") to 7.86 SUs. Redox values of the samples collected from the four (4) wells ranged from -108 milliVolts ("mVs") to 29 mVs. Data interpretation is discussed in Section 5.0.

4.2 Groundwater Sample Laboratory Analytical Data Results

GWM Well MW-5A/AR

Chloroethane concentrations increased slightly from 118 ppb in February 2017 to a value of 178 ppb in August 2017, which remains above the Class GA groundwater standard of 5 ppb. 1,1-dichloroethane concentrations decreased from 14.2 ppb in February 2017 to non-detect ("ND") in August 2017, below the Class GA groundwater standard of 5 ppb. Toluene concentrations increased slightly from ND in February 2017 to 1.2 ppb in August 2017, remaining below the Class GA groundwater standard of 5 ppb since June 2011. 1,2,4 trimethylbenzene concentrations decreased from 1.7 ppb in February 2017 to ND in August 2017, remaining below the Class GA groundwater standard of 5 ppb. Concentrations of this analyte have been below or just slightly above (5.1 ppb in August 2015 and 5.4 ppb in November 2015) the Class GA groundwater standard of 5 ppb since June 2011. 1,2,4,5 tetramethylbenzene concentrations have decreased from 1.7 ppb in February 2017 to ND in August 2017, remaining below the Class GA groundwater standard of 5 ppb. This analyte has been detected only once within MW-5A/AR. 1,4-diethylbenzene concentrations have decreased from 1.4 ppb in February 2017 to ND in August 2017, remaining below the Class GA groundwater standard of 5 ppb. This analyte has been detected only once within MW-5A/AR. The remaining VOC analytes were not detected within the August 2017 sample.

GWM Well MW-14

Acetone concentrations increased from ND in February 2017 to 19.5 ppb in August 2017, but remain below the Class GA groundwater standard of 50 ppb and have not exceeded the standard since June 2011. Chloroethane concentrations increased slightly from 3.1 ppb in February 2017 to 4.4 ppb in August 2017, but remain below the Class GA groundwater standard of 5 ppb. Chloromethane was detected for the first time in the August 2017 groundwater sample at a concentration of 2.5 ppb, below the Class GA groundwater standard of 5 ppb. 1,1-dichloroethane concentrations decreased from 28.3 ppb in February 2017 to 5.7 ppb in August 2017, just slightly above the Class GA groundwater standard of 5ppb. 1,1- dichloroethene concentrations decreased from 2.4 ppb in February 2017 to 1.8 ppb in August 2017, and have not exceeded the Class GA groundwater standard of 5 ppb since November 2011. Vinyl chloride concentrations decreased from 2.5 ppb in February 2017 to 1.5 ppb in August 2017, now below the Class GA groundwater standard of 2 ppb. The remaining VOC analytes were not detected within the August 2017 sample.

GWM Well MW-16

1,1- dichloroethane concentrations increased slightly from 1.4 ppb in February 2017 to 2.6 ppb in August 2017, remaining below the Class GA standard of 5 ppb. Tetrachloroethene concentrations decreased from 1.4 ppb in February 2017 to ND in August 2017, and have not exceeded the Class GA groundwater standard of 5 ppb since August 2015. The remaining VOC analytes were not detected within the February 2017 sample.

GWM Well MW-CHA-RFI-7

Acetone concentrations increased from ND in February 2017 to 20 ppb in August 2017, but remain below the Class GA groundwater standard of 50 ppb, and have not exceeded the standard since June 2011 The remaining VOC analytes were not detected within the February 2017 sample.

5.0 DATA INTERPRETATION

5.1 Field Data

A review of the field data (Table 2 of the Summary Tables included in Attachment A) indicates that TOC concentrations remain sufficiently high in monitoring wells MW-5A/AR and MW-14 to allow for continued microbial activity; groundwater pH levels remain conducive to continued microbial activity; and Redox values indicate that reducing conditions (i.e. anaerobic conditions) still exist for dechlorination.

5.2 Laboratory Data – Volatile Organic Compounds

The groundwater sample collected from Well MW-5A/AR currently indicates that the concentration of only one (1) analyte, chloroethane (178 ppb), remains above the Class GA groundwater standard of 5.0 ppb.

The groundwater sample collected from Well MW-14 currently indicates that only one (1) analyte, 1,1 dichloroethane, remains slightly above (5.7 ppb) Class GA groundwater standard of 5.0 ppb.

Groundwater samples collected from Well MW-16 currently indicate that no analyte concentrations are above Class GA groundwater standards.

There were two (2) detected VOC analytes within the groundwater sample collected in August 2017 from MW-CHA-RFI-7. Acetone (20 ppb) was detected below the Class GA groundwater standard of 50 ppb, and cholоromethane was detected for the first time from this well at 4.8 ppb, below the Class GA standard of 5.0 ppb. 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. The presence of acetone and chloromethane, commonly referred to as methyl chloride (Chemical Abstract No. 74-87-3), within this sample may not be indicative of groundwater quality within the monitoring well, but may reflect introduction of the contaminant during sampling activities or within the laboratory.

5.3 Laboratory Data – Reductive Dechlorination Activity Indicator Parameters

Table 3 provides the results of reductive indicator parameter sampling and analysis. The groundwater samples analyzed for these parameters were collected on August 10, 2017. A comparison of analytical results between August 2014, August 2016 and August 2017 provide an indication of the current viability of the bioremediation process. Based on comparison of the

nitrate and total dissolved iron concentrations, and the oxidation reduction potential (redox) values in Table 2, it appears that subsurface anaerobic conditions conducive to continued bioremediation exist. However, the dissolved ethene and dissolved ethane concentrations in Table 3 were lower than baseline values within wells MW-5A/AR, MW-14 and MW-16, indicating that the Regenesis Corporation 3D micro-emulsion Factory Emulsified® ("3DMe") and Bio-Dechlor INOCULUM Plus® ("BDI") bioremediation media are beyond their effective end dates.

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

Very truly yours,
Leader Consulting Services, Inc.

Keith D. Keller
Project Manager

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 - DECTECTED PARAMETERS

	MW-5A/AR															
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	May 2016	August 2016	February 2017	August 2017	Class GA Groundwater Standard (ppb) [3]
Quarterly Sampling Parameters																
Volatiles																
acetone	ND	ND	ND	ND	ND	440[9]	407	77[11]	110	ND	6.1	ND	ND	ND	ND	50 [4]
chlorobenzene	ND	ND	ND	ND	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	110	320[11]	118	178	5
1,1-dichloroethane	650	1000	830	280	660[9]	110	325	41	3.5	ND	ND	8.6	76	14.2	ND	5
1,1-dichloroethene	ND	110 [2]	29 [2]	11 [2]	22	ND	8.62	1.9	ND	1.1	ND	ND	2.9	ND	ND	5
cis-1,2 dichloroethene	ND	ND	ND	ND	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	ND	ND	ND	ND	[5]
tetrachloroethene	ND	ND	ND	ND	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	ND	1.4	ND	1.2	5
1,1,1-trichloroethane	890	3000	440	210	750[9]	33	200	ND	ND	ND	ND	5.2	42	ND	ND	5
1,1,2-trichloroethane	ND	ND	ND	ND	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	ND	2.3	ND	ND	2
2-butanone (MEK)	ND	ND	ND	ND	ND	190[10]	82.1	4.5 [2]	ND	ND	8.6	ND	ND	ND	ND	50[4]
4-methyl-2-pentanone	ND	ND	ND	ND	ND	3 [2]	ND	ND	ND	ND	ND	ND	ND	ND	ND	[5]
naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	2.7	2.2	ND	ND	1.8	ND	ND	10[4]
n-propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.5	1.4	ND	ND	1.4	ND	ND	5
1,2,3 trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
hexachlorobutadiene	ND	ND	ND	ND	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	ND	ND	ND	ND	5
1,2,4 trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	2.1	5.1	5.4	2.5	2.2	5.3	1.7	ND	5
1,3,5 trimethylbenzene/P ethyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	1.4	ND	ND	5
1,2,4,5 tetramethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7	ND	5[4]
n-butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2 [13]	ND	ND	5
sec-butylbenzene	ND	ND	ND	ND	ND	ND	ND	1.1	1.2	1.3	ND	ND	1.7 [14]	1.2	ND	5
1,4-diethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND	[5]
1,2 dichloroethane	ND	ND	ND	ND	1 [2]	2 [2]	ND	ND	ND	1.8	ND	ND	ND	ND	ND	0.6
trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
chloroform	ND	ND	ND	ND	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	1,020 [2]	< 5,000	24,800	<5,000	250,000
total organic carbon (TOC)	NA	NA	NA	NA	3,410	288,000	95,400	48,900	30,200	25,600	14,600	6,640	10,200	5,000	8,900	NS
dissolved iron	NA	NA	NA	NA	ND	50,600	42,900	5,780	6,050	30,700	14,400	10,900	13,900	3,120	5,190	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, or is excluded within current regulations
(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
(13) The analyte was "cS" flagged, indicating that the calibration acceptability criteria was exceeded, and the value is estiimated. The recovery is outside the limits for this analyte
(14) The recovery is outside the control limits for this analyte.
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 1b - MW-14

GROUNDWATER MONITORING WELL SAMPLE LABORATORY ANALYTICAL DATA SUMMARY - DECTECTED 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	May 2016	August 2016	February 2017	August 2017	
Quarterly Sampling Parameters																
Volatiles																
acetone	19	45	35	11	19[9]	ND	27.3	16.0	12.0	12.0	12.0	8.2 [2]	15 [13]	ND	19.5	50 [4]
chlorobenzene	ND	ND	ND	ND	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	ND	8.9	3.1	4.4	5
chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5	5
1,1-dichloroethane	86	79	67	53	47	1 [2]	43	48	31	22	16	26	12	28.3	5.7	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	2.3	3.7	2.4	1.8	5
cis-1,2 dichloroethene	ND	ND	ND	ND	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	ND	ND	ND	ND	[5]
tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
toluene	ND	ND	ND	ND	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	ND	ND	ND	ND	5
1,1,2-trichloroethane	ND	ND	ND	ND	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	ND	3.1	2.5	1.5	2
2-butanone (MEK)	ND	ND	ND	ND	2 [2]	3[2](10)	ND	2.2 [2]	ND	ND	ND	ND	ND	ND	ND	50[4]
4-methyl-2-pentanone	ND	ND	ND	ND	1 [2]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	[5]
naphthalene	ND	ND	ND	ND	2[2](8)	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	ND	ND	ND	ND	5
1,2,3 trichlorobenzene	ND	ND	ND	ND	2[2](8)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
hexachlorobutadiene	ND	ND	ND	ND	4[2](8)	ND	ND	ND	ND	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	ND	ND	ND	ND	5
1,2,4 trimethylbenzene	ND	ND	ND	ND	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	ND	ND	ND	ND	5
sec-butylbenzene	ND	ND	ND	ND	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	ND	ND	ND	ND	0.6
trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
chloroform	ND	ND	ND	ND	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	21,800	<5,000	<5,000	<5,000	250,000
total organic carbon (TOC)	NA	NA	NA	NA	4,150	45,900	35,800	39,800	50,300	47,400	40,200	35,400	96	1,500	44,400	NS
dissolved iron	NA	NA	NA	NA	6,130	16,200	8,410	9,130	9,920	19,500	21,900	12,500	35,000	8,800	30,700	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.
(13) the analyte was "c" flagged, indicating that the calibration acceptability criteria was exceeded for this analyte. The value is estimated.
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 - DECTECTED PARAMETERS

	MW-16															
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**	**May 2016**	**August 2016**	**February 2017**	**August 2017**	**Class GA Groundwater Standard (ppb)** [3]
Quarterly Sampling Parameters																
Volatiles																
acetone	ND	ND	ND	ND	2 [2][8]	ND	ND	4.6 [2]	ND	ND	ND	ND	ND	ND	ND	50 [4]
chlorobenzene	ND	ND	ND	ND	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	ND	ND	ND	ND	5
1,1-dichloroethane	17	7.9	33	14	14	19	7.18	14	73	8.4	5.2	ND	9.1	1.4	2.6	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	ND	4.5	ND	ND	5
cis-1,2 dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	3.4	ND	ND	ND	ND	ND	ND	5
1,4-dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	[5]
tetrachloroethene	ND	ND	3.2 [2]	3.9 [2]	2 [2]	3 [2][10]	1.42	2.2	11	4.5	2.5	1.3 [13]	2.4	1.4	ND	5
toluene	ND	ND	ND	ND	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	ND	ND	ND	ND	5
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	ND	ND	1
vinyl chloride	ND	ND	ND	ND	ND	ND	ND	1	7.6	ND	ND	ND	ND	ND	ND	2
2-butanone (MEK)	ND	ND	ND	ND	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	ND	ND	ND	ND	[5]
naphthalene	ND	ND	ND	ND	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	ND	ND	ND	ND	5
1,2,3 trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
hexachlorobutadiene	ND	ND	ND	ND	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	ND	ND	ND	ND	5
1,2,4 trimethylbenzene	ND	ND	ND	ND	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	ND	ND	ND	ND	5
sec-butylbenzene	ND	ND	ND	ND	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	ND	ND	ND	ND	0.6
trichloroethene	ND	ND	ND	ND	ND	3 [2]	ND	ND	1.2	ND	ND	ND	ND	ND	ND	5
chloroform	ND	ND	ND	ND	ND	ND	1.85	4.9	ND	ND	ND	ND	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	3,570 [2]	8,670	<5,000	6,400	250,000
total organic carbon (TOC)	NA	NA	NA	NA	8,650	10,800	4,220	11,700	28,000	6,180	4,940	2,700	5,510	1,500	5,500	NS
dissolved iron	NA	NA	NA	NA	ND	231	1,470	30.9 [2]	12.2 [2]	1,460	1,250	<100	310	220	433	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 estimate
(3) Standard is identified in 6 NYCRR, Part 703.5, Table 1, Water Quality Standards Surface Waters and Groundwate
(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 use
(5) Analyte Standard does not exist in Part 703.5, Table 1. Analyte is identified in TOGS 1.1.1, Table 3 as unregulate
(6) Sampling date of August 11, 2014, reflects pre-bioremediation injection date of August 13 and 14, 201
(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 estimate
(9) The analyte was "E"flagged, indicating that the concentration exceeded the calibration range of the laboratory instrument, and should be considered an estima
(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 estimate
(11) The analyte was "D" flagged, indicating that the surrogate concentration was diluted outside the laboratory acceptance criteri
(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 applicat
13) The analyte was "c" flagged, indicating that the calibration acceptability criteria were exceeded, and the value should be considered estimate
NA -Contaminant was not included for analysis during RFI.
A value identified inred 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 valu

TABLE 1d - MW-CHA-RFI-7

GROUNDWATER MONITORING WELL SAMPLE LABORATORY ANALYTICAL DATA SUMMARY - DECTECTED 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	May 2016	August 2016	February 2017	August 2017	
Quarterly Sampling Parameters														
Volatiles														
acetone	ND	ND	1 [2][8]	ND	ND	2.7 [2]	ND	ND	ND	ND	ND	ND	20	50 [4]
chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.8	5
1,1-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
cis-1,2 dichloroethene	ND	ND	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	ND	ND	[5]
tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
toluene	ND	ND	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	ND	ND	5
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
2-butanone (MEK)	ND	ND	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	ND	ND	[5]
naphthalene	ND	ND	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	ND	5
1,2,3 trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
hexachlorobutadiene	ND	ND	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	ND	ND	5
1,2,4 trimethylbenzene	ND	ND	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	ND	ND	5
sec-butylbenzene	ND	ND	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	ND	ND	0.6
trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
chloroform	ND	ND	ND	ND	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	38,600	36,400	39,300	38,500	250,000
total organic carbon (TOC)	NA	NA	938	42,800	746	1,200	584	550	843	ND	ND	ND	1,300	NS
dissolved iron	NA	NA	ND	1,450	124	184	100 [12]	215	247	185	150	220	172	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 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**	**May 2016**	**August 2016**	**February 2017**	**August 2017**
dissolved oxygen[1]	1,150	1,860	1,910	910	300	500	1,500	2,200	2,470	3,120	3,170
pH[2]	7.66	7.07	6.74	6.43	6.61	6.63	6.43	6.90	6.84	6.64	7.2
redox[3]	-137	-90	-42	-73	-88	-44	-124	-62	-65	-73	-108

	MW-14										
Analyte	**August 2014 [4]**	**November 2014 [5]**	**February 2015**	**May 2015**	**August 2015**	**November 2015**	**February 2016**	**May 2016**	**August 2016**	**February 2017**	**August 2017**
dissolved oxygen[1]	1,940	2,110	1,720	1,280	1,100	700	2,700	2,010	2,410	3,160	2,970
pH[2]	7.19	7.41	6.98	6.58	6.68	6.65	6.45	6.91	6.59	6.47	6.84
redox[3]	7	-1	47	0	0	-7	-44	5	-78	24	-80

	MW-16										
Analyte	**August 2014 [4]**	**November 2014 [5]**	**February 2015**	**May 2015**	**August 2015**	**November 2015**	**February 2016**	**May 2016**	**August 2016**	**February 2017**	**August 2017**
dissolved oxygen[1]	990	2,210	2,750	2,150	400	2,200	2,800	2,800	4,270	5,090	7,080
pH[2]	7.12	6.86	6.94	6.66	6.28	6.92	6.74	7.58	7.03	7.05	7.6
redox[3]	24	-14	12	151	49	48	45	73	31	96	29

	MW-CHA-RFI-7										
Analyte	**August 2014 [4]**	**November 2014 [5]**	**February 2015**	**May 2015**	**August 2015**	**November 2015**	**February 2016**	**May 2016**	**August 2016**	**February 2017**	**August 2017**
dissolved oxygen[1]	1,440	1,220	1,760	1,660	600	700	1,200	1,780	1,720	5,020	4,470
pH[2]	7.55	7.38	7.55	7.01	7.41	7.52	7.12	7.28	7.53	6.73	7.86
redox[3]	-36	-1	73	35	20	48	-90	31	-5	-48	-18

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.

TABLE 3

REDUCTIVE DECHLORINATION ACTIVITY INDICATOR PARAMETERS

	MW-5A/AR			MW-14			MW-16			MW-CHA-RFI-7		
Analyte [1]	**August 2014 [3]**	**August 2016**	**August 2017**	**August 2014 [3]**	**August 2016**	**August 2017**	**August 2014 [3]**	**August 2016**	**August 2017**	**August 2014 [3]**	**August 2016**	**August 2017**
Pre/Post Injection Parameters												
nitrate	ND	ND	ND	ND	ND	ND	ND	ND	0.61	ND	ND	ND
total iron	3,850	14,300	6,090	223,000	95,000	37,200	1,860	5,040	2,480	5,430	513	456
dissolved iron	ND	13,900	5,190	6,130	35,000	30,700	ND	310	433	ND	150	172
total manganese	2,410	2,890	1,800	18,200	17,800	13,200	7,380	1,550	1,160	1,680	1,570	1,630
dissolved manganese	2,310	2,810	1,800	7,120	12,800	12,000	5,490	2,060	658	1,450	1,610	1,610
dissolved methane	2,300	9,700	4,400	890	5,200	4,000	370	40	1.0	2.8	2.7	2.2
dissolved ethane	14	2.9	3.3	0.24	0.064 [2]	ND	0.10 [2]	0.027 [2]	ND	0.016 [2]	0.0053 [2]	ND
dissolved ethene	2.1	0.059 [2]	ND	0.21	0.45	ND	0.64	0.066 [2]	ND	0.024 [2]	0.20 [4]	ND

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

(4) The analytes was "U" flagged, indicating that it was not detected at or above the noted concentration

ND - Analyte was not detected above analytical laboratory detection limits.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

August 28, 2017

Keith Keller
Leader Professional Services
2813 Wehrle Drive, Suite 1
Buffalo, NY 14221

RE: Project: Vails Gate Manufacture
Pace Project No.: 7026978

Dear Keith Keller:
Enclosed are the analytical results for sample(s) received by the laboratory on August 11, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Aracri for
Caitlin Panzarella
caitlin.panzarella@pacelabs.com
(631)694-3040
Project Manager

Enclosures

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

CERTIFICATIONS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747
New York Certification #: 10478 Primary Accrediting Body
New Jersey Certification #: NY158
Pennsylvania Certification #: 68-00350
Connecticut Certification #: PH-0435
Maryland Certification #: 208
Rhode Island Certification #: LAO00340
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: FIELD DUPLICATE-01 **Lab ID: 7026978001** Collected: 08/10/17 11:20 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Iron	**6230**	ug/L	20.0	1	08/24/17 10:49	08/25/17 18:53	7439-89-6	
Manganese	**1820**	ug/L	10.0	1	08/24/17 10:49	08/25/17 18:53	7439-96-5	
200.7 Metals, Dissolved	Analytical Method: EPA 200.7							
Iron, Dissolved	**5170**	ug/L	20.0	1		08/22/17 15:10	7439-89-6	
Manganese, Dissolved	**1820**	ug/L	10.0	1		08/22/17 15:10	7439-96-5	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	630-20-6	L1
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	71-55-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	79-34-5	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	79-00-5	
1,1-Dichloroethane	**1.6**	ug/L	1.0	1		08/22/17 11:50	75-34-3	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	75-35-4	
1,1-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	563-58-6	
1,2,3-Trichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	87-61-6	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	96-18-4	
1,2,4-Trichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	120-82-1	
1,2,4-Trimethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	96-12-8	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		08/22/17 11:50	106-93-4	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	95-50-1	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	107-06-2	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	78-87-5	
1,3,5-Trimethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	108-67-8	
1,3-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	541-73-1	
1,3-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	142-28-9	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	106-46-7	
2,2-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	594-20-7	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		08/22/17 11:50	78-93-3	
2-Chloroethylvinyl ether	**<1.0**	ug/L	1.0	1		08/22/17 11:50	110-75-8	L2,c2
2-Chlorotoluene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	95-49-8	
2-Hexanone	**<5.0**	ug/L	5.0	1		08/22/17 11:50	591-78-6	
4-Chlorotoluene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	106-43-4	L1
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		08/22/17 11:50	108-10-1	
Acetone	**<5.0**	ug/L	5.0	1		08/22/17 11:50	67-64-1	
Benzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	71-43-2	
Bromobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	108-86-1	L1
Bromochloromethane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		08/22/17 11:50	75-25-2	
Bromomethane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	74-83-9	CC
Carbon disulfide	**<1.0**	ug/L	1.0	1		08/22/17 11:50	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		08/22/17 11:50	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	108-90-7	
Chloroethane	**231**	ug/L	2.0	2		08/22/17 14:13	75-00-3	CC

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: FIELD DUPLICATE-01 **Lab ID: 7026978001** Collected: 08/10/17 11:20 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Chloroform	**<1.0**	ug/L	1.0	1		08/22/17 11:50	67-66-3	
Chloromethane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	74-87-3	CC
Dibromochloromethane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	124-48-1	
Dibromomethane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	74-95-3	
Dichlorodifluoromethane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	75-71-8	
Ethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	100-41-4	
Hexachloro-1,3-butadiene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	1.0	1		08/22/17 11:50	98-82-8	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	1		08/22/17 11:50	1634-04-4	
Methylene Chloride	**<1.0**	ug/L	1.0	1		08/22/17 11:50	75-09-2	
Naphthalene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	91-20-3	
Styrene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	100-42-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	127-18-4	
Toluene	**1.1**	ug/L	1.0	1		08/22/17 11:50	108-88-3	
Trichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		08/22/17 11:50	75-69-4	
Vinyl acetate	**<1.0**	ug/L	1.0	1		08/22/17 11:50	108-05-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		08/22/17 11:50	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		08/22/17 11:50	1330-20-7	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	156-59-2	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	10061-01-5	
m&p-Xylene	**<2.0**	ug/L	2.0	1		08/22/17 11:50	179601-23-1	
n-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	104-51-8	
n-Propylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	103-65-1	
o-Xylene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	95-47-6	
p-Isopropyltoluene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	99-87-6	L1
sec-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	135-98-8	
tert-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	98-06-6	L1
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	156-60-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 11:50	10061-02-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	94	%.	68-153	1		08/22/17 11:50	17060-07-0	
4-Bromofluorobenzene (S)	102	%.	79-124	1		08/22/17 11:50	460-00-4	
Toluene-d8 (S)	100	%.	69-124	1		08/22/17 11:50	2037-26-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<5.0**	mg/L	5.0	1		08/24/17 20:56	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	1		08/12/17 02:15	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	**<0.050**	mg/L	0.050	1		08/11/17 23:21	14797-65-0	
9060A TOC as NPOC	Analytical Method: EPA 9060A							
Total Organic Carbon	**8.8**	mg/L	1.0	1		08/18/17 19:34	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: FIELD DUPLICATE-01 **Lab ID: 7026978001** Collected: 08/10/17 11:20 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9060A TOC as NPOC	Analytical Method: EPA 9060A							
Total Organic Carbon	**8.9**	mg/L	1.0	1		08/18/17 19:34	7440-44-0	
Total Organic Carbon	**9.0**	mg/L	1.0	1		08/18/17 19:34	7440-44-0	
Total Organic Carbon	**8.8**	mg/L	1.0	1		08/18/17 19:34	7440-44-0	
Mean Total Organic Carbon	**8.9**	mg/L	1.0	1		08/18/17 19:34	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: MW-5A/AR **Lab ID: 7026978002** Collected: 08/10/17 11:15 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Iron	**6090**	ug/L	20.0	1	08/24/17 10:49	08/25/17 18:58	7439-89-6	
Manganese	**1800**	ug/L	10.0	1	08/24/17 10:49	08/25/17 18:58	7439-96-5	
200.7 Metals, Dissolved	Analytical Method: EPA 200.7							
Iron, Dissolved	**5190**	ug/L	20.0	1		08/22/17 15:15	7439-89-6	
Manganese, Dissolved	**1800**	ug/L	10.0	1		08/22/17 15:15	7439-96-5	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	630-20-6	L1
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	71-55-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	79-34-5	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	79-00-5	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	75-34-3	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	75-35-4	
1,1-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	563-58-6	
1,2,3-Trichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	87-61-6	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	96-18-4	
1,2,4-Trichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	120-82-1	
1,2,4-Trimethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	96-12-8	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		08/22/17 12:08	106-93-4	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	95-50-1	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	107-06-2	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	78-87-5	
1,3,5-Trimethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	108-67-8	
1,3-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	541-73-1	
1,3-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	142-28-9	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	106-46-7	
2,2-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	594-20-7	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		08/22/17 12:08	78-93-3	
2-Chloroethylvinyl ether	**<1.0**	ug/L	1.0	1		08/22/17 12:08	110-75-8	L2,c2
2-Chlorotoluene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	95-49-8	
2-Hexanone	**<5.0**	ug/L	5.0	1		08/22/17 12:08	591-78-6	
4-Chlorotoluene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	106-43-4	L1
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		08/22/17 12:08	108-10-1	
Acetone	**<5.0**	ug/L	5.0	1		08/22/17 12:08	67-64-1	
Benzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	71-43-2	
Bromobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	108-86-1	L1
Bromochloromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		08/22/17 12:08	75-25-2	
Bromomethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	74-83-9	CC
Carbon disulfide	**<1.0**	ug/L	1.0	1		08/22/17 12:08	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		08/22/17 12:08	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	108-90-7	
Chloroethane	**178**	ug/L	1.0	1		08/22/17 12:08	75-00-3	CC

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: MW-5A/AR **Lab ID: 7026978002** Collected: 08/10/17 11:15 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Chloroform	**<1.0**	ug/L	1.0	1		08/22/17 12:08	67-66-3	
Chloromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	74-87-3	CC
Dibromochloromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	124-48-1	
Dibromomethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	74-95-3	
Dichlorodifluoromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	75-71-8	
Ethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	100-41-4	
Hexachloro-1,3-butadiene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	1.0	1		08/22/17 12:08	98-82-8	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	1		08/22/17 12:08	1634-04-4	
Methylene Chloride	**<1.0**	ug/L	1.0	1		08/22/17 12:08	75-09-2	
Naphthalene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	91-20-3	
Styrene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	100-42-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	127-18-4	
Toluene	**1.2**	ug/L	1.0	1		08/22/17 12:08	108-88-3	
Trichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:08	75-69-4	
Vinyl acetate	**<1.0**	ug/L	1.0	1		08/22/17 12:08	108-05-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		08/22/17 12:08	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		08/22/17 12:08	1330-20-7	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	156-59-2	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	10061-01-5	
m&p-Xylene	**<2.0**	ug/L	2.0	1		08/22/17 12:08	179601-23-1	
n-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	104-51-8	
n-Propylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	103-65-1	
o-Xylene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	95-47-6	
p-Isopropyltoluene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	99-87-6	L1
sec-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	135-98-8	
tert-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	98-06-6	L1
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	156-60-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 12:08	10061-02-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	96	%.	68-153	1		08/22/17 12:08	17060-07-0	
4-Bromofluorobenzene (S)	101	%.	79-124	1		08/22/17 12:08	460-00-4	
Toluene-d8 (S)	99	%.	69-124	1		08/22/17 12:08	2037-26-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<5.0**	mg/L	5.0	1		08/24/17 21:09	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	1		08/12/17 02:16	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	**<0.050**	mg/L	0.050	1		08/11/17 23:22	14797-65-0	
9060A TOC as NPOC	Analytical Method: EPA 9060A							
Total Organic Carbon	**8.9**	mg/L	1.0	1		08/18/17 19:45	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: MW-5A/AR **Lab ID: 7026978002** Collected: 08/10/17 11:15 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9060A TOC as NPOC	Analytical Method: EPA 9060A							
Total Organic Carbon	**8.9**	mg/L	1.0	1		08/18/17 19:45	7440-44-0	
Total Organic Carbon	**8.8**	mg/L	1.0	1		08/18/17 19:45	7440-44-0	
Total Organic Carbon	**8.8**	mg/L	1.0	1		08/18/17 19:45	7440-44-0	
Mean Total Organic Carbon	**8.9**	mg/L	1.0	1		08/18/17 19:45	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: MW-14 **Lab ID: 7026978003** Collected: 08/10/17 11:30 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Iron	**37200**	ug/L	20.0	1	08/24/17 10:49	08/25/17 19:03	7439-89-6	
Manganese	**13200**	ug/L	10.0	1	08/24/17 10:49	08/25/17 19:03	7439-96-5	
200.7 Metals, Dissolved	Analytical Method: EPA 200.7							
Iron, Dissolved	**30700**	ug/L	20.0	1		08/22/17 15:20	7439-89-6	
Manganese, Dissolved	**12000**	ug/L	100	10		08/23/17 12:01	7439-96-5	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	630-20-6	L1
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	71-55-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	79-34-5	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	79-00-5	
1,1-Dichloroethane	**5.7**	ug/L	1.0	1		08/22/17 12:26	75-34-3	
1,1-Dichloroethene	**1.8**	ug/L	1.0	1		08/22/17 12:26	75-35-4	
1,1-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	563-58-6	
1,2,3-Trichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	87-61-6	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	96-18-4	
1,2,4-Trichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	120-82-1	
1,2,4-Trimethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	96-12-8	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		08/22/17 12:26	106-93-4	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	95-50-1	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	107-06-2	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	78-87-5	
1,3,5-Trimethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	108-67-8	
1,3-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	541-73-1	
1,3-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	142-28-9	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	106-46-7	
2,2-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	594-20-7	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		08/22/17 12:26	78-93-3	
2-Chloroethylvinyl ether	**<1.0**	ug/L	1.0	1		08/22/17 12:26	110-75-8	L2,c2
2-Chlorotoluene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	95-49-8	
2-Hexanone	**<5.0**	ug/L	5.0	1		08/22/17 12:26	591-78-6	
4-Chlorotoluene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	106-43-4	L1
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		08/22/17 12:26	108-10-1	
Acetone	**19.5**	ug/L	5.0	1		08/22/17 12:26	67-64-1	
Benzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	71-43-2	
Bromobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	108-86-1	L1
Bromochloromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		08/22/17 12:26	75-25-2	
Bromomethane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	74-83-9	CC
Carbon disulfide	**<1.0**	ug/L	1.0	1		08/22/17 12:26	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		08/22/17 12:26	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	108-90-7	
Chloroethane	**4.4**	ug/L	1.0	1		08/22/17 12:26	75-00-3	CC

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
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ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: MW-14 **Lab ID: 7026978003** Collected: 08/10/17 11:30 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Chloroform	**<1.0**	ug/L	1.0	1		08/22/17 12:26	67-66-3	
Chloromethane	**2.5**	ug/L	1.0	1		08/22/17 12:26	74-87-3	CC
Dibromochloromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	124-48-1	
Dibromomethane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	74-95-3	
Dichlorodifluoromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	75-71-8	
Ethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	100-41-4	
Hexachloro-1,3-butadiene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	1.0	1		08/22/17 12:26	98-82-8	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	1		08/22/17 12:26	1634-04-4	
Methylene Chloride	**<1.0**	ug/L	1.0	1		08/22/17 12:26	75-09-2	
Naphthalene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	91-20-3	
Styrene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	100-42-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	108-88-3	
Trichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:26	75-69-4	
Vinyl acetate	**<1.0**	ug/L	1.0	1		08/22/17 12:26	108-05-4	
Vinyl chloride	**1.5**	ug/L	1.0	1		08/22/17 12:26	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		08/22/17 12:26	1330-20-7	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	156-59-2	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	10061-01-5	
m&p-Xylene	**<2.0**	ug/L	2.0	1		08/22/17 12:26	179601-23-1	
n-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	104-51-8	
n-Propylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	103-65-1	
o-Xylene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	95-47-6	
p-Isopropyltoluene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	99-87-6	L1
sec-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	135-98-8	
tert-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	98-06-6	L1
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	156-60-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 12:26	10061-02-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	96	%.	68-153	1		08/22/17 12:26	17060-07-0	
4-Bromofluorobenzene (S)	101	%.	79-124	1		08/22/17 12:26	460-00-4	
Toluene-d8 (S)	100	%.	69-124	1		08/22/17 12:26	2037-26-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<5.0**	mg/L	5.0	1		08/24/17 21:23	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	1		08/12/17 02:17	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	**<0.050**	mg/L	0.050	1		08/11/17 23:23	14797-65-0	
9060A TOC as NPOC	Analytical Method: EPA 9060A							
Total Organic Carbon	**44.4**	mg/L	1.0	1		08/18/17 19:58	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
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ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: MW-14 **Lab ID: 7026978003** Collected: 08/10/17 11:30 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9060A TOC as NPOC	Analytical Method: EPA 9060A							
Total Organic Carbon	**45.4**	mg/L	1.0	1		08/18/17 19:58	7440-44-0	
Total Organic Carbon	**44.6**	mg/L	1.0	1		08/18/17 19:58	7440-44-0	
Total Organic Carbon	**45.0**	mg/L	1.0	1		08/18/17 19:58	7440-44-0	
Mean Total Organic Carbon	**44.9**	mg/L	1.0	1		08/18/17 19:58	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: MW-16 **Lab ID: 7026978004** Collected: 08/10/17 12:10 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Iron	**2480**	ug/L	20.0	1	08/24/17 10:49	08/25/17 19:09	7439-89-6	
Manganese	**1160**	ug/L	10.0	1	08/24/17 10:49	08/25/17 19:09	7439-96-5	
200.7 Metals, Dissolved	Analytical Method: EPA 200.7							
Iron, Dissolved	**433**	ug/L	20.0	1		08/22/17 15:56	7439-89-6	
Manganese, Dissolved	**658**	ug/L	10.0	1		08/22/17 15:56	7439-96-5	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	630-20-6	L1
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	71-55-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	79-34-5	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	79-00-5	
1,1-Dichloroethane	**2.6**	ug/L	1.0	1		08/22/17 12:44	75-34-3	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	75-35-4	
1,1-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	563-58-6	
1,2,3-Trichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	87-61-6	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	96-18-4	
1,2,4-Trichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	120-82-1	
1,2,4-Trimethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	96-12-8	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		08/22/17 12:44	106-93-4	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	95-50-1	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	107-06-2	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	78-87-5	
1,3,5-Trimethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	108-67-8	
1,3-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	541-73-1	
1,3-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	142-28-9	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	106-46-7	
2,2-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	594-20-7	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		08/22/17 12:44	78-93-3	
2-Chloroethylvinyl ether	**<1.0**	ug/L	1.0	1		08/22/17 12:44	110-75-8	L2,c2
2-Chlorotoluene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	95-49-8	
2-Hexanone	**<5.0**	ug/L	5.0	1		08/22/17 12:44	591-78-6	
4-Chlorotoluene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	106-43-4	L1
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		08/22/17 12:44	108-10-1	
Acetone	**<5.0**	ug/L	5.0	1		08/22/17 12:44	67-64-1	
Benzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	71-43-2	
Bromobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	108-86-1	L1
Bromochloromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		08/22/17 12:44	75-25-2	
Bromomethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	74-83-9	CC
Carbon disulfide	**<1.0**	ug/L	1.0	1		08/22/17 12:44	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		08/22/17 12:44	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	108-90-7	
Chloroethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	75-00-3	CC

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
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ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: MW-16 **Lab ID: 7026978004** Collected: 08/10/17 12:10 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Chloroform	**<1.0**	ug/L	1.0	1		08/22/17 12:44	67-66-3	
Chloromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	74-87-3	CC
Dibromochloromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	124-48-1	
Dibromomethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	74-95-3	
Dichlorodifluoromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	75-71-8	
Ethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	100-41-4	
Hexachloro-1,3-butadiene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	1.0	1		08/22/17 12:44	98-82-8	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	1		08/22/17 12:44	1634-04-4	
Methylene Chloride	**<1.0**	ug/L	1.0	1		08/22/17 12:44	75-09-2	
Naphthalene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	91-20-3	
Styrene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	100-42-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	108-88-3	
Trichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		08/22/17 12:44	75-69-4	
Vinyl acetate	**<1.0**	ug/L	1.0	1		08/22/17 12:44	108-05-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		08/22/17 12:44	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		08/22/17 12:44	1330-20-7	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	156-59-2	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	10061-01-5	
m&p-Xylene	**<2.0**	ug/L	2.0	1		08/22/17 12:44	179601-23-1	
n-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	104-51-8	
n-Propylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	103-65-1	
o-Xylene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	95-47-6	
p-Isopropyltoluene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	99-87-6	L1
sec-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	135-98-8	
tert-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	98-06-6	L1
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	156-60-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 12:44	10061-02-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	96	%.	68-153	1		08/22/17 12:44	17060-07-0	
4-Bromofluorobenzene (S)	101	%.	79-124	1		08/22/17 12:44	460-00-4	
Toluene-d8 (S)	100	%.	69-124	1		08/22/17 12:44	2037-26-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**6.4**	mg/L	5.0	1		08/24/17 21:36	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
Nitrate-Nitrite (as N)	**0.61**	mg/L	0.050	1		08/12/17 08:35	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	**<0.050**	mg/L	0.050	1		08/11/17 23:25	14797-65-0	
9060A TOC as NPOC	Analytical Method: EPA 9060A							
Total Organic Carbon	**5.5**	mg/L	1.0	1		08/18/17 20:11	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
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ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: MW-16 **Lab ID: 7026978004** Collected: 08/10/17 12:10 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9060A TOC as NPOC	Analytical Method: EPA 9060A							
Total Organic Carbon	**5.4**	mg/L	1.0	1		08/18/17 20:11	7440-44-0	
Total Organic Carbon	**5.5**	mg/L	1.0	1		08/18/17 20:11	7440-44-0	
Total Organic Carbon	**5.5**	mg/L	1.0	1		08/18/17 20:11	7440-44-0	
Mean Total Organic Carbon	**5.5**	mg/L	1.0	1		08/18/17 20:11	7440-44-0	

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ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: MW-CHA-RFI-7 **Lab ID: 7026978005** Collected: 08/10/17 13:20 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Iron	**456**	ug/L	20.0	1	08/24/17 10:49	08/25/17 19:14	7439-89-6	
Manganese	**1630**	ug/L	10.0	1	08/24/17 10:49	08/25/17 19:14	7439-96-5	M1
200.7 Metals, Dissolved	Analytical Method: EPA 200.7							
Iron, Dissolved	**172**	ug/L	20.0	1		08/22/17 15:25	7439-89-6	
Manganese, Dissolved	**1610**	ug/L	10.0	1		08/22/17 15:25	7439-96-5	
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	630-20-6	L1,M0
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	71-55-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	79-34-5	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	79-00-5	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	75-34-3	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	75-35-4	
1,1-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	563-58-6	
1,2,3-Trichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	87-61-6	M1
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	96-18-4	
1,2,4-Trichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	120-82-1	
1,2,4-Trimethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	96-12-8	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		08/22/17 13:02	106-93-4	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	95-50-1	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	107-06-2	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	78-87-5	
1,3,5-Trimethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	108-67-8	
1,3-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	541-73-1	
1,3-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	142-28-9	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	106-46-7	
2,2-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	594-20-7	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		08/22/17 13:02	78-93-3	
2-Chloroethylvinyl ether	**<1.0**	ug/L	1.0	1		08/22/17 13:02	110-75-8	L2,M0, c2
2-Chlorotoluene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	95-49-8	M1
2-Hexanone	**<5.0**	ug/L	5.0	1		08/22/17 13:02	591-78-6	
4-Chlorotoluene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	106-43-4	L1,M0
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		08/22/17 13:02	108-10-1	
Acetone	**20.0**	ug/L	5.0	1		08/22/17 13:02	67-64-1	
Benzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	71-43-2	
Bromobenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	108-86-1	L1,M0
Bromochloromethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		08/22/17 13:02	75-25-2	
Bromomethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	74-83-9	CC
Carbon disulfide	**<1.0**	ug/L	1.0	1		08/22/17 13:02	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		08/22/17 13:02	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	108-90-7	M1
Chloroethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	75-00-3	CC

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
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ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: MW-CHA-RFI-7 **Lab ID: 7026978005** Collected: 08/10/17 13:20 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Chloroform	**<1.0**	ug/L	1.0	1		08/22/17 13:02	67-66-3	
Chloromethane	**4.8**	ug/L	1.0	1		08/22/17 13:02	74-87-3	CC
Dibromochloromethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	124-48-1	
Dibromomethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	74-95-3	
Dichlorodifluoromethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	75-71-8	
Ethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	100-41-4	M1
Hexachloro-1,3-butadiene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	1.0	1		08/22/17 13:02	98-82-8	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	1		08/22/17 13:02	1634-04-4	
Methylene Chloride	**<1.0**	ug/L	1.0	1		08/22/17 13:02	75-09-2	
Naphthalene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	91-20-3	
Styrene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	100-42-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	108-88-3	
Trichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		08/22/17 13:02	75-69-4	
Vinyl acetate	**<1.0**	ug/L	1.0	1		08/22/17 13:02	108-05-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		08/22/17 13:02	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		08/22/17 13:02	1330-20-7	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	156-59-2	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	10061-01-5	
m&p-Xylene	**<2.0**	ug/L	2.0	1		08/22/17 13:02	179601-23-1	
n-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	104-51-8	M1
n-Propylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	103-65-1	
o-Xylene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	95-47-6	
p-Isopropyltoluene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	99-87-6	L1,M0
sec-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	135-98-8	M1
tert-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	98-06-6	L1,M0
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	156-60-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 13:02	10061-02-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	94	%.	68-153	1		08/22/17 13:02	17060-07-0	
4-Bromofluorobenzene (S)	100	%.	79-124	1		08/22/17 13:02	460-00-4	
Toluene-d8 (S)	90	%.	69-124	1		08/22/17 13:02	2037-26-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**38.5**	mg/L	5.0	1		08/24/17 13:38	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	1		08/12/17 08:36	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	**<0.050**	mg/L	0.050	1		08/11/17 23:26	14797-65-0	
9060A TOC as NPOC	Analytical Method: EPA 9060A							
Total Organic Carbon	**1.3**	mg/L	1.0	1		08/18/17 20:30	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: MW-CHA-RFI-7 **Lab ID: 7026978005** Collected: 08/10/17 13:20 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9060A TOC as NPOC	Analytical Method: EPA 9060A							
Total Organic Carbon	**1.4**	mg/L	1.0	1		08/18/17 20:30	7440-44-0	
Total Organic Carbon	**1.3**	mg/L	1.0	1		08/18/17 20:30	7440-44-0	
Total Organic Carbon	**1.2**	mg/L	1.0	1		08/18/17 20:30	7440-44-0	
Mean Total Organic Carbon	**1.3**	mg/L	1.0	1		08/18/17 20:30	7440-44-0	

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ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: TRIP BLANK-01 **Lab ID: 7026978006** Collected: 08/10/17 00:00 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	630-20-6	L1
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	71-55-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	79-34-5	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	79-00-5	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	75-34-3	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	75-35-4	
1,1-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	563-58-6	
1,2,3-Trichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	87-61-6	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	96-18-4	
1,2,4-Trichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	120-82-1	
1,2,4-Trimethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	96-12-8	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		08/22/17 11:32	106-93-4	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	95-50-1	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	107-06-2	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	78-87-5	
1,3,5-Trimethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	108-67-8	
1,3-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	541-73-1	
1,3-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	142-28-9	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	106-46-7	
2,2-Dichloropropane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	594-20-7	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		08/22/17 11:32	78-93-3	
2-Chloroethylvinyl ether	**<1.0**	ug/L	1.0	1		08/22/17 11:32	110-75-8	L2,c2
2-Chlorotoluene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	95-49-8	
2-Hexanone	**<5.0**	ug/L	5.0	1		08/22/17 11:32	591-78-6	
4-Chlorotoluene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	106-43-4	L1
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		08/22/17 11:32	108-10-1	
Acetone	**<5.0**	ug/L	5.0	1		08/22/17 11:32	67-64-1	
Benzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	71-43-2	
Bromobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	108-86-1	L1
Bromochloromethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		08/22/17 11:32	75-25-2	
Bromomethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	74-83-9	CC
Carbon disulfide	**<1.0**	ug/L	1.0	1		08/22/17 11:32	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		08/22/17 11:32	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	108-90-7	
Chloroethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	75-00-3	CC
Chloroform	**<1.0**	ug/L	1.0	1		08/22/17 11:32	67-66-3	
Chloromethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	74-87-3	CC
Dibromochloromethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	124-48-1	
Dibromomethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	74-95-3	
Dichlorodifluoromethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	75-71-8	
Ethylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	100-41-4	
Hexachloro-1,3-butadiene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	1.0	1		08/22/17 11:32	98-82-8	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	1		08/22/17 11:32	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Sample: TRIP BLANK-01 **Lab ID: 7026978006** Collected: 08/10/17 00:00 Received: 08/11/17 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C							
Methylene Chloride	**<1.0**	ug/L	1.0	1		08/22/17 11:32	75-09-2	
Naphthalene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	91-20-3	
Styrene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	100-42-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	108-88-3	
Trichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		08/22/17 11:32	75-69-4	
Vinyl acetate	**<1.0**	ug/L	1.0	1		08/22/17 11:32	108-05-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		08/22/17 11:32	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		08/22/17 11:32	1330-20-7	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	156-59-2	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	10061-01-5	
m&p-Xylene	**<2.0**	ug/L	2.0	1		08/22/17 11:32	179601-23-1	
n-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	104-51-8	
n-Propylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	103-65-1	
o-Xylene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	95-47-6	
p-Isopropyltoluene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	99-87-6	L1
sec-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	135-98-8	
tert-Butylbenzene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	98-06-6	L1
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	156-60-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		08/22/17 11:32	10061-02-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	96	%.	68-153	1		08/22/17 11:32	17060-07-0	
4-Bromofluorobenzene (S)	101	%.	79-124	1		08/22/17 11:32	460-00-4	
Toluene-d8 (S)	100	%.	69-124	1		08/22/17 11:32	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: Vails Gate Manufacture
Pace Project No.: 7026978

QC Batch: 36242 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005

METHOD BLANK: 168998 Matrix: Water
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	<20.0	20.0	08/22/17 14:45	
Manganese, Dissolved	ug/L	<10.0	10.0	08/22/17 14:45	

LABORATORY CONTROL SAMPLE: 168999

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	2000	1960	98	85-115	
Manganese, Dissolved	ug/L	250	251	100	85-115	

MATRIX SPIKE SAMPLE: 169035

Parameter	Units	7026978005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	172	2000	1840	83	70-130	
Manganese, Dissolved	ug/L	1610	250	1810	82	70-130	

SAMPLE DUPLICATE: 169034

Parameter	Units	7026978005 Result	Dup Result	RPD	Qualifiers
Iron, Dissolved	ug/L	172	171	1	
Manganese, Dissolved	ug/L	1610	1600	0	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: Vails Gate Manufacture
Pace Project No.: 7026978

QC Batch: 36657 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005

METHOD BLANK: 170798 Matrix: Water
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron	ug/L	<20.0	20.0	08/25/17 18:43	
Manganese	ug/L	<10.0	10.0	08/25/17 18:43	

LABORATORY CONTROL SAMPLE: 170799

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	2000	1950	97	85-115	
Manganese	ug/L	250	246	99	85-115	

MATRIX SPIKE SAMPLE: 170801

Parameter	Units	7026934001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	302	2000	2220	96	70-130	
Manganese	ug/L	128	250	360	93	70-130	

MATRIX SPIKE SAMPLE: 170803

Parameter	Units	7026978005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	456	2000	2520	103	70-130	
Manganese	ug/L	1630	250	1970	138	70-130	M1

SAMPLE DUPLICATE: 170800

Parameter	Units	7026934001 Result	Dup Result	RPD	Qualifiers
Iron	ug/L	302	293	3	
Manganese	ug/L	128	124	3	

SAMPLE DUPLICATE: 170802

Parameter	Units	7026978005 Result	Dup Result	RPD	Qualifiers
Iron	ug/L	456	484	6	
Manganese	ug/L	1630	1750	7	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: Vails Gate Manufacture
Pace Project No.: 7026978

QC Batch: 36189 Analysis Method: EPA 8260C/5030C
QC Batch Method: EPA 8260C/5030C Analysis Description: 8260 MSV
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005, 7026978006

METHOD BLANK: 168765 Matrix: Water
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005, 7026978006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<1.0	1.0	08/22/17 10:14	
1,1,1-Trichloroethane	ug/L	<1.0	1.0	08/22/17 10:14	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	1.0	08/22/17 10:14	
1,1,2-Trichloroethane	ug/L	<1.0	1.0	08/22/17 10:14	
1,1-Dichloroethane	ug/L	<1.0	1.0	08/22/17 10:14	
1,1-Dichloroethene	ug/L	<1.0	1.0	08/22/17 10:14	
1,1-Dichloropropene	ug/L	<1.0	1.0	08/22/17 10:14	
1,2,3-Trichlorobenzene	ug/L	<1.0	1.0	08/22/17 10:14	
1,2,3-Trichloropropane	ug/L	<1.0	1.0	08/22/17 10:14	
1,2,4-Trichlorobenzene	ug/L	<1.0	1.0	08/22/17 10:14	
1,2,4-Trimethylbenzene	ug/L	<1.0	1.0	08/22/17 10:14	
1,2-Dibromo-3-chloropropane	ug/L	<1.0	1.0	08/22/17 10:14	
1,2-Dibromoethane (EDB)	ug/L	<1.0	1.0	08/22/17 10:14	
1,2-Dichlorobenzene	ug/L	<1.0	1.0	08/22/17 10:14	
1,2-Dichloroethane	ug/L	<1.0	1.0	08/22/17 10:14	
1,2-Dichloropropane	ug/L	<1.0	1.0	08/22/17 10:14	
1,3,5-Trimethylbenzene	ug/L	<1.0	1.0	08/22/17 10:14	
1,3-Dichlorobenzene	ug/L	<1.0	1.0	08/22/17 10:14	
1,3-Dichloropropane	ug/L	<1.0	1.0	08/22/17 10:14	
1,4-Dichlorobenzene	ug/L	<1.0	1.0	08/22/17 10:14	
2,2-Dichloropropane	ug/L	<1.0	1.0	08/22/17 10:14	
2-Butanone (MEK)	ug/L	<5.0	5.0	08/22/17 10:14	
2-Chloroethylvinyl ether	ug/L	<1.0	1.0	08/22/17 10:14	
2-Chlorotoluene	ug/L	<1.0	1.0	08/22/17 10:14	
2-Hexanone	ug/L	<5.0	5.0	08/22/17 10:14	
4-Chlorotoluene	ug/L	<1.0	1.0	08/22/17 10:14	
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	5.0	08/22/17 10:14	
Acetone	ug/L	<5.0	5.0	08/22/17 10:14	
Benzene	ug/L	<1.0	1.0	08/22/17 10:14	
Bromobenzene	ug/L	<1.0	1.0	08/22/17 10:14	
Bromochloromethane	ug/L	<1.0	1.0	08/22/17 10:14	
Bromodichloromethane	ug/L	<1.0	1.0	08/22/17 10:14	
Bromoform	ug/L	<1.0	1.0	08/22/17 10:14	
Bromomethane	ug/L	<1.0	1.0	08/22/17 10:14	
Carbon disulfide	ug/L	<1.0	1.0	08/22/17 10:14	
Carbon tetrachloride	ug/L	<1.0	1.0	08/22/17 10:14	
Chlorobenzene	ug/L	<1.0	1.0	08/22/17 10:14	
Chloroethane	ug/L	<1.0	1.0	08/22/17 10:14	
Chloroform	ug/L	<1.0	1.0	08/22/17 10:14	
Chloromethane	ug/L	<1.0	1.0	08/22/17 10:14	
cis-1,2-Dichloroethene	ug/L	<1.0	1.0	08/22/17 10:14	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: Vails Gate Manufacture
Pace Project No.: 7026978

METHOD BLANK: 168765 Matrix: Water
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005, 7026978006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,3-Dichloropropene	ug/L	<1.0	1.0	08/22/17 10:14	
Dibromochloromethane	ug/L	<1.0	1.0	08/22/17 10:14	
Dibromomethane	ug/L	<1.0	1.0	08/22/17 10:14	
Dichlorodifluoromethane	ug/L	<1.0	1.0	08/22/17 10:14	
Ethylbenzene	ug/L	<1.0	1.0	08/22/17 10:14	
Hexachloro-1,3-butadiene	ug/L	<1.0	1.0	08/22/17 10:14	
Isopropylbenzene (Cumene)	ug/L	<1.0	1.0	08/22/17 10:14	
m&p-Xylene	ug/L	<2.0	2.0	08/22/17 10:14	
Methyl-tert-butyl ether	ug/L	<1.0	1.0	08/22/17 10:14	
Methylene Chloride	ug/L	<1.0	1.0	08/22/17 10:14	
n-Butylbenzene	ug/L	<1.0	1.0	08/22/17 10:14	
n-Propylbenzene	ug/L	<1.0	1.0	08/22/17 10:14	
Naphthalene	ug/L	<1.0	1.0	08/22/17 10:14	
o-Xylene	ug/L	<1.0	1.0	08/22/17 10:14	
p-Isopropyltoluene	ug/L	<1.0	1.0	08/22/17 10:14	
sec-Butylbenzene	ug/L	<1.0	1.0	08/22/17 10:14	
Styrene	ug/L	<1.0	1.0	08/22/17 10:14	
tert-Butylbenzene	ug/L	<1.0	1.0	08/22/17 10:14	
Tetrachloroethene	ug/L	<1.0	1.0	08/22/17 10:14	
Toluene	ug/L	<1.0	1.0	08/22/17 10:14	
trans-1,2-Dichloroethene	ug/L	<1.0	1.0	08/22/17 10:14	
trans-1,3-Dichloropropene	ug/L	<1.0	1.0	08/22/17 10:14	
Trichloroethene	ug/L	<1.0	1.0	08/22/17 10:14	
Trichlorofluoromethane	ug/L	<1.0	1.0	08/22/17 10:14	
Vinyl acetate	ug/L	<1.0	1.0	08/22/17 10:14	
Vinyl chloride	ug/L	<1.0	1.0	08/22/17 10:14	
Xylene (Total)	ug/L	<2.0	2.0	08/22/17 10:14	
1,2-Dichloroethane-d4 (S)	%.	96	68-153	08/22/17 10:14	
4-Bromofluorobenzene (S)	%.	101	79-124	08/22/17 10:14	
Toluene-d8 (S)	%.	100	69-124	08/22/17 10:14	

LABORATORY CONTROL SAMPLE: 168766

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	56.9	114	74-113	L1
1,1,1-Trichloroethane	ug/L	50	51.5	103	65-118	
1,1,2,2-Tetrachloroethane	ug/L	50	48.5	97	74-121	
1,1,2-Trichloroethane	ug/L	50	51.3	103	80-117	
1,1-Dichloroethane	ug/L	50	48.3	97	83-151	
1,1-Dichloroethene	ug/L	50	40.4	81	45-146	
1,1-Dichloropropene	ug/L	50	50.6	101	59-127	
1,2,3-Trichlorobenzene	ug/L	50	50.4	101	67-103	
1,2,3-Trichloropropane	ug/L	50	52.4	105	71-123	
1,2,4-Trichlorobenzene	ug/L	50	53.5	107	66-116	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: Vails Gate Manufacture
Pace Project No.: 7026978

LABORATORY CONTROL SAMPLE: 168766

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	50	50.3	101	68-116	
1,2-Dibromo-3-chloropropane	ug/L	50	45.8	92	74-119	
1,2-Dibromoethane (EDB)	ug/L	50	55.4	111	83-115	
1,2-Dichlorobenzene	ug/L	50	52.3	105	74-113	
1,2-Dichloroethane	ug/L	50	50.4	101	74-129	
1,2-Dichloropropane	ug/L	50	51.3	103	75-117	
1,3,5-Trimethylbenzene	ug/L	50	50.1	100	67-116	
1,3-Dichlorobenzene	ug/L	50	52.7	105	71-112	
1,3-Dichloropropane	ug/L	50	52.7	105	74-112	
1,4-Dichlorobenzene	ug/L	50	52.4	105	71-113	
2,2-Dichloropropane	ug/L	50	50.0	100	63-133	
2-Butanone (MEK)	ug/L	50	40.5	81	44-162	
2-Chloroethylvinyl ether	ug/L	50	<1.0	0	76-121	L2
2-Chlorotoluene	ug/L	50	50.5	101	74-101	
2-Hexanone	ug/L	50	47.5	95	32-183	
4-Chlorotoluene	ug/L	50	51.4	103	74-101	L1
4-Methyl-2-pentanone (MIBK)	ug/L	50	47.0	94	69-132	
Acetone	ug/L	50	35.9	72	23-188	
Benzene	ug/L	50	49.9	100	73-119	
Bromobenzene	ug/L	50	52.8	106	72-102	L1
Bromochloromethane	ug/L	50	52.3	105	81-116	
Bromodichloromethane	ug/L	50	54.0	108	78-117	
Bromoform	ug/L	50	58.4	117	65-122	
Bromomethane	ug/L	50	34.2	68	52-147	CC
Carbon disulfide	ug/L	50	37.9	76	41-144	
Carbon tetrachloride	ug/L	50	51.7	103	59-120	
Chlorobenzene	ug/L	50	55.1	110	75-113	
Chloroethane	ug/L	50	35.9	72	49-151	CC
Chloroform	ug/L	50	50.1	100	72-122	
Chloromethane	ug/L	50	36.2	72	46-144	CC
cis-1,2-Dichloroethene	ug/L	50	50.7	101	72-121	
cis-1,3-Dichloropropene	ug/L	50	54.4	109	78-116	
Dibromochloromethane	ug/L	50	57.4	115	70-120	
Dibromomethane	ug/L	50	52.4	105	75-125	
Dichlorodifluoromethane	ug/L	50	35.8	72	22-154	
Ethylbenzene	ug/L	50	53.7	107	70-113	
Hexachloro-1,3-butadiene	ug/L	50	51.2	102	59-121	
Isopropylbenzene (Cumene)	ug/L	50	50.6	101	67-115	
m&p-Xylene	ug/L	100	108	108	72-115	
Methyl-tert-butyl ether	ug/L	50	42.4	85	72-131	
Methylene Chloride	ug/L	50	39.9	80	61-142	
n-Butylbenzene	ug/L	50	51.0	102	73-107	
n-Propylbenzene	ug/L	50	50.4	101	68-116	
Naphthalene	ug/L	50	47.2	94	70-118	
o-Xylene	ug/L	50	54.5	109	73-117	
p-Isopropyltoluene	ug/L	50	51.8	104	73-101	L1
sec-Butylbenzene	ug/L	50	50.3	101	72-103	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: Vails Gate Manufacture
Pace Project No.: 7026978

LABORATORY CONTROL SAMPLE: 168766

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Styrene	ug/L	50	56.0	112	72-118	
tert-Butylbenzene	ug/L	50	51.4	103	68-100	L1
Tetrachloroethene	ug/L	50	50.7	101	60-128	
Toluene	ug/L	50	51.6	103	72-119	
trans-1,2-Dichloroethene	ug/L	50	44.5	89	56-142	
trans-1,3-Dichloropropene	ug/L	50	56.5	113	79-116	CC
Trichloroethene	ug/L	50	52.2	104	69-117	
Trichlorofluoromethane	ug/L	50	39.5	79	27-173	
Vinyl acetate	ug/L	50	44.4	89	20-158	
Vinyl chloride	ug/L	50	38.9	78	43-143	
Xylene (Total)	ug/L	150	163	109	71-109	
1,2-Dichloroethane-d4 (S)	%.			92	68-153	
4-Bromofluorobenzene (S)	%.			103	79-124	
Toluene-d8 (S)	%.			101	69-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 168767 168768

Parameter	Units	7026978005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<1.0	50	50	58.5	57.7	117	115	74-113	1	M0
1,1,1-Trichloroethane	ug/L	<1.0	50	50	57.2	55.3	114	111	65-118	3	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	50	50	49.4	46.7	99	93	74-121	6	
1,1,2-Trichloroethane	ug/L	<1.0	50	50	52.7	50.6	105	101	80-117	4	
1,1-Dichloroethane	ug/L	<1.0	50	50	45.8	50.3	92	101	83-151	9	
1,1-Dichloroethene	ug/L	<1.0	50	50	46.3	44.6	93	89	45-146	4	
1,1-Dichloropropene	ug/L	<1.0	50	50	57.2	55.0	114	110	59-127	4	
1,2,3-Trichlorobenzene	ug/L	<1.0	50	50	52.6	54.3	105	109	67-103	3	M1
1,2,3-Trichloropropane	ug/L	<1.0	50	50	51.7	49.8	103	100	71-123	4	
1,2,4-Trichlorobenzene	ug/L	<1.0	50	50	55.4	55.5	111	111	66-116	0	
1,2,4-Trimethylbenzene	ug/L	<1.0	50	50	52.4	51.3	105	103	68-116	2	
1,2-Dibromo-3-chloropropane	ug/L	<1.0	50	50	45.0	46.6	90	93	74-119	4	
1,2-Dibromoethane (EDB)	ug/L	<1.0	50	50	57.1	54.8	114	110	83-115	4	
1,2-Dichlorobenzene	ug/L	<1.0	50	50	53.1	53.0	106	106	74-113	0	
1,2-Dichloroethane	ug/L	<1.0	50	50	53.6	51.2	107	102	74-129	5	
1,2-Dichloropropane	ug/L	<1.0	50	50	53.7	52.0	107	104	75-117	3	
1,3,5-Trimethylbenzene	ug/L	<1.0	50	50	52.7	51.1	105	102	67-116	3	
1,3-Dichlorobenzene	ug/L	<1.0	50	50	54.8	54.0	110	108	71-112	1	
1,3-Dichloropropane	ug/L	<1.0	50	50	54.6	52.8	109	106	74-112	3	
1,4-Dichlorobenzene	ug/L	<1.0	50	50	54.6	52.7	109	105	71-113	4	
2,2-Dichloropropane	ug/L	<1.0	50	50	50.0	53.5	100	107	63-133	7	
2-Butanone (MEK)	ug/L	<5.0	50	50	39.1	40.0	78	80	44-162	2	
2-Chloroethylvinyl ether	ug/L	<1.0	50	50	<1.0	<1.0	0	0	76-121		M0
2-Chlorotoluene	ug/L	<1.0	50	50	52.8	52.1	106	104	74-101	1	M1
2-Hexanone	ug/L	<5.0	50	50	48.0	46.3	96	93	32-183	3	
4-Chlorotoluene	ug/L	<1.0	50	50	53.0	52.4	106	105	74-101	1	M0

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: Vails Gate Manufacture
Pace Project No.: 7026978

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 168767 168768

Parameter	Units	7026978005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	50	50	50.2	46.9	100	94	69-132	7	
Acetone	ug/L	20.0	50	50	44.0	36.4	48	33	23-188	19	
Benzene	ug/L	<1.0	50	50	54.7	52.5	109	105	73-119	4	
Bromobenzene	ug/L	<1.0	50	50	54.6	52.3	109	105	72-102	4	M0
Bromochloromethane	ug/L	<1.0	50	50	55.0	53.2	110	106	81-116	3	
Bromodichloromethane	ug/L	<1.0	50	50	56.3	54.3	113	109	78-117	4	
Bromoform	ug/L	<1.0	50	50	58.4	58.1	117	116	65-122	1	
Bromomethane	ug/L	<1.0	50	50	39.9	40.1	80	80	52-147	1	CC
Carbon disulfide	ug/L	<1.0	50	50	43.4	42.4	87	85	41-144	2	
Carbon tetrachloride	ug/L	<1.0	50	50	57.9	56.0	116	112	59-120	3	
Chlorobenzene	ug/L	<1.0	50	50	57.3	56.7	115	113	75-113	1	M1
Chloroethane	ug/L	<1.0	50	50	45.6	38.7	91	77	49-151	16	CC
Chloroform	ug/L	<1.0	50	50	53.8	51.8	108	104	72-122	4	
Chloromethane	ug/L	4.8	50	50	42.5	39.1	75	69	46-144	8	CC
cis-1,2-Dichloroethene	ug/L	<1.0	50	50	50.7	52.7	101	105	72-121	4	
cis-1,3-Dichloropropene	ug/L	<1.0	50	50	56.0	54.7	112	109	78-116	2	
Dibromochloromethane	ug/L	<1.0	50	50	58.1	57.2	116	114	70-120	2	
Dibromomethane	ug/L	<1.0	50	50	54.4	52.0	109	104	75-125	5	
Dichlorodifluoromethane	ug/L	<1.0	50	50	38.1	36.4	76	73	22-154	5	
Ethylbenzene	ug/L	<1.0	50	50	57.3	56.4	115	113	70-113	2	M1
Hexachloro-1,3-butadiene	ug/L	<1.0	50	50	54.6	57.7	109	115	59-121	6	
Isopropylbenzene (Cumene)	ug/L	<1.0	50	50	54.4	52.5	109	105	67-115	3	
m&p-Xylene	ug/L	<2.0	100	100	115	114	115	114	72-115	1	
Methyl-tert-butyl ether	ug/L	<1.0	50	50	44.0	42.1	88	84	72-131	4	
Methylene Chloride	ug/L	<1.0	50	50	41.8	40.6	84	81	61-142	3	
n-Butylbenzene	ug/L	<1.0	50	50	54.6	53.8	109	108	73-107	1	M1
n-Propylbenzene	ug/L	<1.0	50	50	54.0	52.2	108	104	68-116	4	
Naphthalene	ug/L	<1.0	50	50	48.5	50.4	97	101	70-118	4	
o-Xylene	ug/L	<1.0	50	50	58.3	57.4	117	115	73-117	2	
p-Isopropyltoluene	ug/L	<1.0	50	50	54.9	53.8	110	108	73-101	2	M0
sec-Butylbenzene	ug/L	<1.0	50	50	54.3	53.1	109	106	72-103	2	M1
Styrene	ug/L	<1.0	50	50	58.8	57.7	118	115	72-118	2	
tert-Butylbenzene	ug/L	<1.0	50	50	54.8	53.3	110	107	68-100	3	M0
Tetrachloroethene	ug/L	<1.0	50	50	55.7	54.5	111	109	60-128	2	
Toluene	ug/L	<1.0	50	50	56.1	54.1	112	108	72-119	4	
trans-1,2-Dichloroethene	ug/L	<1.0	50	50	48.9	48.8	98	98	56-142	0	
trans-1,3-Dichloropropene	ug/L	<1.0	50	50	58.1	56.9	116	114	79-116	2	CC
Trichloroethene	ug/L	<1.0	50	50	57.7	55.5	115	111	69-117	4	
Trichlorofluoromethane	ug/L	<1.0	50	50	46.1	43.5	92	87	27-173	6	
Vinyl acetate	ug/L	<1.0	50	50	38.2	43.4	76	87	20-158	13	
Vinyl chloride	ug/L	<1.0	50	50	44.0	42.0	88	84	43-143	5	
Xylene (Total)	ug/L	<2.0	150	150	173	171	115	114	71-109	1	
1,2-Dichloroethane-d4 (S)	%.						96	96	68-153		
4-Bromofluorobenzene (S)	%.						103	104	79-124		
Toluene-d8 (S)	%.						100	102	69-124		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: Vails Gate Manufacture
Pace Project No.: 7026978

QC Batch: 36421 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005

METHOD BLANK: 169837 Matrix: Water
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	<5.0	5.0	08/24/17 08:00	

LABORATORY CONTROL SAMPLE: 169838

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE SAMPLE: 169839

Parameter	Units	7027140001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	13.0	10	22.6	96	80-120	

MATRIX SPIKE SAMPLE: 169841

Parameter	Units	7026978005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	38.5	10	49.0	105	80-120	

SAMPLE DUPLICATE: 169840

Parameter	Units	7027140001 Result	Dup Result	RPD	Qualifiers
Sulfate	mg/L	13.0	12.9	1	

SAMPLE DUPLICATE: 169842

Parameter	Units	7026978005 Result	Dup Result	RPD	Qualifiers
Sulfate	mg/L	38.5	38.4	0	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: Vails Gate Manufacture
Pace Project No.: 7026978

QC Batch: 35105 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrite, Unpres.
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005

METHOD BLANK: 163524 Matrix: Water
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	mg/L	<0.050	0.050	08/11/17 23:04	

LABORATORY CONTROL SAMPLE: 163525

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	1	1.1	107	90-110	

MATRIX SPIKE SAMPLE: 163526

Parameter	Units	7026978005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	.5	0.50	100	90-110	

MATRIX SPIKE SAMPLE: 163529

Parameter	Units	7026754019 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	.5	0.51	103	90-110	

SAMPLE DUPLICATE: 163527

Parameter	Units	7026978005 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

SAMPLE DUPLICATE: 163530

Parameter	Units	7026754019 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: Vails Gate Manufacture
Pace Project No.: 7026978

QC Batch: 35110 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005

METHOD BLANK: 163546 Matrix: Water
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.050	08/12/17 02:12	

LABORATORY CONTROL SAMPLE: 163547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	105	90-110	

MATRIX SPIKE SAMPLE: 163548

Parameter	Units	7026978005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	.5	0.50	101	90-110	

SAMPLE DUPLICATE: 163549

Parameter	Units	7026978005 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	<0.050		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: Vails Gate Manufacture
Pace Project No.: 7026978

QC Batch: 35825 Analysis Method: EPA 9060A
QC Batch Method: EPA 9060A Analysis Description: 9060 TOC
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005

METHOD BLANK: 166984 Matrix: Water
Associated Lab Samples: 7026978001, 7026978002, 7026978003, 7026978004, 7026978005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mean Total Organic Carbon	mg/L	<1.0	1.0	08/18/17 18:01	
Total Organic Carbon	mg/L	<1.0	1.0	08/18/17 18:01	
Total Organic Carbon	mg/L	<1.0	1.0	08/18/17 18:01	
Total Organic Carbon	mg/L	<1.0	1.0	08/18/17 18:01	
Total Organic Carbon	mg/L	<1.0	1.0	08/18/17 18:01	

LABORATORY CONTROL SAMPLE: 166985

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mean Total Organic Carbon	mg/L	10	9.9	99	85-115	
Total Organic Carbon	mg/L	10	9.9	99	85-115	
Total Organic Carbon	mg/L	10	9.9	99	85-115	
Total Organic Carbon	mg/L	10	9.9	99	85-115	
Total Organic Carbon	mg/L	10	9.9	99	85-115	

MATRIX SPIKE SAMPLE: 166986

Parameter	Units	7026094025 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mean Total Organic Carbon	mg/L	5.6	10	16.1	105	75-125	
Total Organic Carbon	mg/L	5.5	10	16.0	105	75-125	
Total Organic Carbon	mg/L	6.5	10	16.2	97	75-125	
Total Organic Carbon	mg/L	5.2	10	16.2	110	75-125	
Total Organic Carbon	mg/L	5.3	10	15.9	106	75-125	

MATRIX SPIKE SAMPLE: 166988

Parameter	Units	7026978005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mean Total Organic Carbon	mg/L	1.3	10	11.2	99	75-125	
Total Organic Carbon	mg/L	1.2	10	11.1	99	75-125	
Total Organic Carbon	mg/L	1.3	10	11.1	99	75-125	
Total Organic Carbon	mg/L	1.4	10	11.3	99	75-125	
Total Organic Carbon	mg/L	1.3	10	11.4	101	75-125	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: Vails Gate Manufacture
Pace Project No.: 7026978

SAMPLE DUPLICATE: 166987

Parameter	Units	7026094025 Result	Dup Result	RPD	Qualifiers
Mean Total Organic Carbon	mg/L	5.6	5.3	6	
Total Organic Carbon	mg/L	6.5	5.4	18	
Total Organic Carbon	mg/L	5.2	5.3	1	
Total Organic Carbon	mg/L	5.5	5.3	3	
Total Organic Carbon	mg/L	5.3	5.2	1	

SAMPLE DUPLICATE: 166989

Parameter	Units	7026978005 Result	Dup Result	RPD	Qualifiers
Mean Total Organic Carbon	mg/L	1.3	1.1	16	
Total Organic Carbon	mg/L	1.3	1.1	18	
Total Organic Carbon	mg/L	1.4	1.3	8	
Total Organic Carbon	mg/L	1.3	<1.0		
Total Organic Carbon	mg/L	1.2	1.0	15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALIFIERS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

SAMPLE QUALIFIERS

Sample: 7026978001
[1] 2-Chloroethylvinyl ether not reportable due to improper sample preservation.
Sample: 7026978002
[1] 2-Chloroethylvinyl ether not reportable due to improper sample preservation.
Sample: 7026978003
[1] 2-Chloroethylvinyl ether not reportable due to improper sample preservation.
Sample: 7026978004
[1] 2-Chloroethylvinyl ether not reportable due to improper sample preservation.
Sample: 7026978005
[1] 2-Chloroethylvinyl ether not reportable due to improper sample preservation.
Sample: 7026978006
[1] 2-Chloroethylvinyl ether not reportable due to improper sample preservation.
Sample: 168766
[1] 2-Chloroethylvinyl ether not reportable due to improper sample preservation.
Sample: 168767
[1] 2-Chloroethylvinyl ether not reportable due to improper sample preservation.
Sample: 168768
[1] 2-Chloroethylvinyl ether not reportable due to improper sample preservation.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALIFIERS

Project: Vails Gate Manufacture
Pace Project No.: 7026978

ANALYTE QUALIFIERS

CC	The continuing calibration for this compound is outside of method control limits. The result is estimated.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
c2	Acid preservation may not be appropriate for the analysis of 2-Chloroethylvinyl ether.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Vails Gate Manufacture
Pace Project No.: 7026978

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7026978001	**FIELD DUPLICATE-01**	EPA 200.7	36657	EPA 200.7	36678
7026978002	**MW-5A/AR**	EPA 200.7	36657	EPA 200.7	36678
7026978003	**MW-14**	EPA 200.7	36657	EPA 200.7	36678
7026978004	**MW-16**	EPA 200.7	36657	EPA 200.7	36678
7026978005	**MW-CHA-RFI-7**	EPA 200.7	36657	EPA 200.7	36678
7026978001	**FIELD DUPLICATE-01**	EPA 200.7	36242		
7026978002	**MW-5A/AR**	EPA 200.7	36242		
7026978003	**MW-14**	EPA 200.7	36242		
7026978004	**MW-16**	EPA 200.7	36242		
7026978005	**MW-CHA-RFI-7**	EPA 200.7	36242		
7026978001	**FIELD DUPLICATE-01**	EPA 8260C/5030C	36189		
7026978002	**MW-5A/AR**	EPA 8260C/5030C	36189		
7026978003	**MW-14**	EPA 8260C/5030C	36189		
7026978004	**MW-16**	EPA 8260C/5030C	36189		
7026978005	**MW-CHA-RFI-7**	EPA 8260C/5030C	36189		
7026978006	**TRIP BLANK-01**	EPA 8260C/5030C	36189		
7026978001	**FIELD DUPLICATE-01**	EPA 300.0	36421		
7026978002	**MW-5A/AR**	EPA 300.0	36421		
7026978003	**MW-14**	EPA 300.0	36421		
7026978004	**MW-16**	EPA 300.0	36421		
7026978005	**MW-CHA-RFI-7**	EPA 300.0	36421		
7026978001	**FIELD DUPLICATE-01**	EPA 353.2	35110		
7026978002	**MW-5A/AR**	EPA 353.2	35110		
7026978003	**MW-14**	EPA 353.2	35110		
7026978004	**MW-16**	EPA 353.2	35110		
7026978005	**MW-CHA-RFI-7**	EPA 353.2	35110		
7026978001	**FIELD DUPLICATE-01**	EPA 353.2	35105		
7026978002	**MW-5A/AR**	EPA 353.2	35105		
7026978003	**MW-14**	EPA 353.2	35105		
7026978004	**MW-16**	EPA 353.2	35105		
7026978005	**MW-CHA-RFI-7**	EPA 353.2	35105		
7026978001	**FIELD DUPLICATE-01**	EPA 9060A	35825		
7026978002	**MW-5A/AR**	EPA 9060A	35825		
7026978003	**MW-14**	EPA 9060A	35825		
7026978004	**MW-16**	EPA 9060A	35825		
7026978005	**MW-CHA-RFI-7**	EPA 9060A	35825		

Pace Analytical
www.pacelabs.com

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

CHAIN-OF-CUSTODY / Analytical Request Documen

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

WO# : 7026978

7026978

1708014

Section A Required Client Information:

Company:	Leader Professional Services
Address:	2813 Wehrle Drive, Suite 1
	Williamsville, NY 14221
Email To:	
Phone:	716-565-0963 Fax: na
Requested Due Date/TAT:	Standard 2-Week

Section B Required Project Information:

Report To:	Keith Keller
Copy To:	na
Purchase Order No.:	
Project Name:	Vails Gate Manufactu
Project Number:	

Section C Invoice Information:

Attention:	Keith Keller
Company Name:	Leader Professional Services
Address:	
Pace Quote Reference:	#00012704
Pace Project Manager:	
Pace Profile #:	

REGULATORY PROGRAM

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER_____

SITE LOCATION: New York State

Section D Required Client Information

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Nitrate	Total Fe & Mn	Dissolved Fe & Mn	Sulfate	Total Organic Carbon	RSK-175 (Gases)***	8260 Full List	Pace Laboratory I.D.
1	Field Duplicate-01	WT	G	8/10/17	1120		12	X	X	X	X					X	X	X	X	X	X	X	001
2	MW-5A/AR	WT	G	8/10/17	1115		12	X	X	X	X					X	X	X	X	X	X	X	002
3	MW-14	WT	G	8/10/17	1130		12	X	X	X	X					X	X	X	X	X	X	X	003
4	MW-16	WT	G	8/10/17	1210		12	X	X	X	X					X	X	X	X	X	X	X	004
5	MW-CHA-RFI-7 MS/MSD	WT	G	8/10/17	1320		~~22~~ 28	X	X	X	X					X	X	X	X	X	X	X	005
6	Trip Blank-01	WT	G	8/10/17	N/A		2				X											X	006
7																							
8																							
9																							
10																							
11																							
12																							

Filtered (Y/N): Y

*Specify Metals/Inorganics:
Iron
Manganese
*** Methane, Ethane, & Ethene (RSK-175)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
NYSDEC DER-10 EQuIS EDD	M. Broker PACE	8/10/17	1505	T. Butler (PACE)	8/10/17	15:05
	T. Butler (PACE)	8/10/17	16:00	VIA FED EX →		
	Fed Ex	8/11/17	9:50		8/11/17	9:50

SAMPLE CONDITIONS

Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
9.0 (IR)	Y/N	Y/N	Y/N
1.0	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt Broker (PACE)

SIGNATURE of SAMPLER: M. Broker

DATE Signed (MM / DD / YY): 8/10/17

PACE Analytical Services, Inc. Ground water Field Log

Client: **Leader Consulting**

Project: **Vails Gate Manufacturing**

Well ID.: **MW-5A/AR Field Dupe 1**

PACE ID

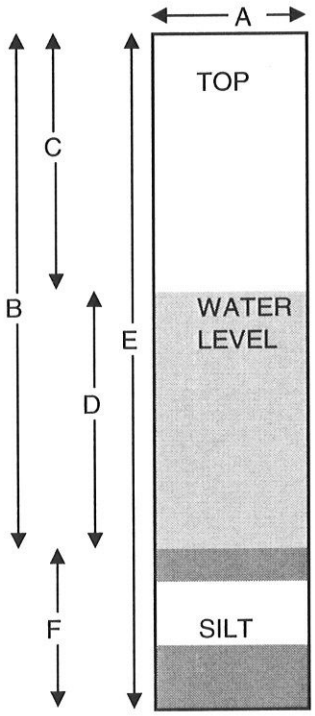
Condition of Well: Good

Locked: Yes

Method of Evacuation: Peristaltic Pump

Lock ID: Flush

Method of Sampling: Peristaltic Pump



A.	Diameter of Well	2.00	inches
B.	Well Depth Measured	6.50	feet
C.	Depth to Water	0.60	feet
D.	Length of Water Column (calculated)	5.90	feet
	Conversion Factor	0.16	------
	Well Volume (calculated)	0.94	gallons
	No. of Volumes to be Evacuated	3	------
	Total Volume to be Evacuated	2.82	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	
Date	8/10/17	8/10/17	
Time	10:45	11:15	
EH	-93	-108	mV
Temperature	23.5	24.5	C
pH	7.15	7.2	SU
Specific Cond.	761.2	875.6	uS
Turbidity	79.3	9.16	NTU
Dissolved Oxygen	3.64	3.17	
Appearance	cloudy	clear	

% Recharge:

Initial Depth to Water 0.6 feet

Recharge Depth to Water 1.93 feet

2nd water column height ____ %

1st water column height

Elevation(Top of Casing) N/A feet

G.W. Elevation= N/A feet

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

Weather: 23C sunny

Observations: cloudy to clear

Field Dupe 11:20

Sampler: Matt Broker

Signature: Matt B

1

PACE Analytical Services, Inc. Ground water Field Log

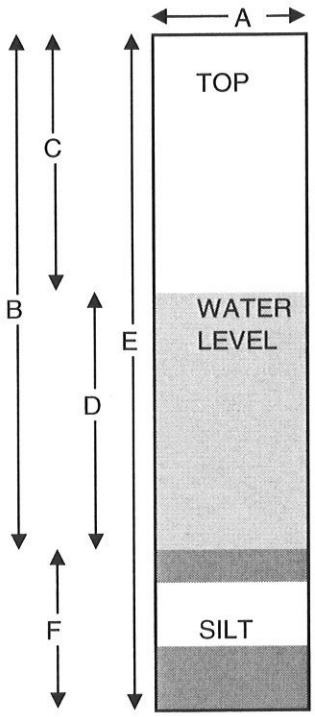
Client: **Leader Consulting**

Project: **Vails Gate Manufacturing**

Well ID.: **MW-14**

PACE ID

Condition of Well:	Good	Locked:	Yes
Method of Evacuation:	Bailer	Lock ID:	Flush
Method of Sampling:	Bailer		



A.	Diameter of Well	2.00	inches
B.	Well Depth Measured	13.00	feet
C.	Depth to Water	4.09	feet
D.	Length of Water Column (calculated)	8.91	feet
	Conversion Factor	0.16	------
	Well Volume (calculated)	1.43	gallons
	No. of Volumes to be Evacuated	3	------
	Total Volume to be Evacuated	4.29	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	
Date	8/10/17	8/10/17	
Time	10:30	11:30	
EH	-91	-80	mV
Temperature	21.9	23.2	C
pH	6.93	6.84	SU
Specific Cond.	727.5	871.4	uS
Turbidity	4.71	92.2	NTU
Dissolved Oxygen	3.28	2.97	
Appearance	clear	cloudy	

% Recharge:

Initial Depth to Water 4.09 feet

Recharge Depth to Water 9.69 feet

2nd water column height ____ %

1st water column height

Elevation(Top of Casing) N/A feet

G.W. Elevation= N/A feet

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

Weather: 23C sunny

Observations: Well between piller 2 and 3 slow recharge oily sheen

Well located in Unit 4-5

Oil all over bailer. Changed bailers before sampling

Sampler: Matt Broker

Signature: Matt Broker

1

PACE Analytical Services, Inc. Ground water Field Log

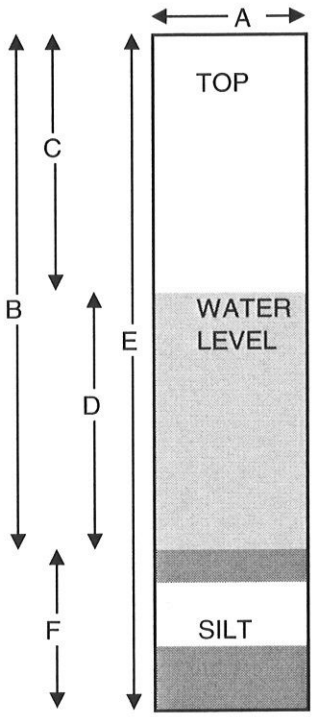
Client: **Leader Consulting**

Project: **Vails Gate Manufacturing**

Well ID.: **MW-16**

PACE ID

Condition of Well:	Good	Locked:	Yes
Method of Evacuation:	Peristaltic Pump	Lock ID:	Flush
Method of Sampling:	Peristaltic Pump		



A.	Diameter of Well	2.00	inches
B.	Well Depth Measured	13.63	feet
C.	Depth to Water	3.19	feet
D.	Length of Water Column (calculated)	10.44	feet
	Conversion Factor	0.16	------
	Well Volume (calculated)	1.67	gallons
	No. of Volumes to be Evacuated	3	------
	Total Volume to be Evacuated	5.01	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	
Date	8/10/17	8/10/17	
Time	11:40	12:10	
EH	-39	29	mV
Temperature	21	22.7	C
pH	7.05	7.6	SU
Specific Cond.	551.6	751.6	uS
Turbidity	37.4	> 1000	NTU
Dissolved Oxygen	2.45	7.08	
Appearance	cloudy	cloudy	

% Recharge:

Initial Depth to Water 3.19 feet

Recharge Depth to Water 12.96 feet

2nd water column height ____ %

1st water column height

Elevation(Top of Casing) N/A feet

G.W. Elevation= N/A feet

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

Weather: 23C sunny

Observations: sample cloudy

Sampler: Matt Broker

Signature: Matt

1

PACE Analytical Services, Inc. Ground water Field Log

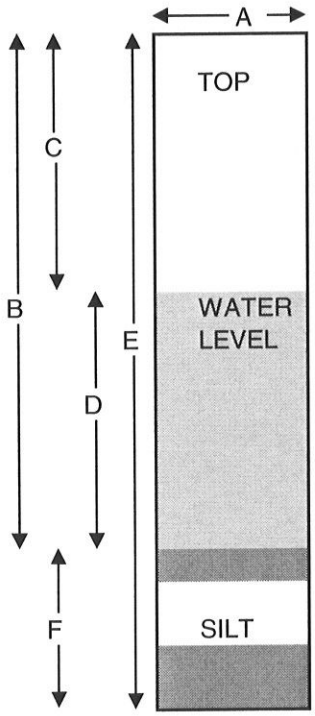
Client: **Leader Consulting**

Project: **Vails Gate Manufacturing**

Well ID.: **MW-CHA-RFI-7 MS/MSD**

PACE ID

Condition of Well:	Good	Locked:	Yes
Method of Evacuation:	Peristaltic Pump	Lock ID:	Flush
Method of Sampling:	Peristaltic Pump		



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

Field Measurements	Initial Evacuation	Final Sampling	
Date	8/10/17	8/10/17	
Time	12:20	13:20	
EH	-73	-18	mV
Temperature	18.8	21.5	C
pH	7.56	7.86	SU
Specific Cond.	918.6	1008	uS
Turbidity	5.49	6.17	NTU
Dissolved Oxygen	2.1	4.47	
Appearance	clear	clear	

% Recharge:

Initial Depth to Water 0 feet

Recharge Depth to Water 25.6 feet

2nd water column height ____ %

1st water column height

Elevation(Top of Casing) N/A feet

G.W. Elevation= N/A feet

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

Weather: 23C sunny

Observations: sample clear

sulfur odor

Sampler: Matt Broker

Signature: Matt D

1

PACE ANALYICAL INC.
FIELD CALIBRATION SHEET

DATE: 8/10/17 **SITE:** Vails Gate Manufacturing
TECHNICIAN: Matt Broker **WEATHER:** 23C 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	INTIAL READING	ADJUSTED READING	TIME	NOTES
Ph	4.00	3.92	4.00	1001	
	7.00	7.20	7.00	1000	
	10.00	10.03	10.00	1002	
Conductivity	1413	1432	1413	1003	
Turbidity	<0.10	0.13	<0.10	1004	
	15	15.1	15	1005	
	100	92	100	1006	
	750	757	750	1007	

NOTES:

Sample Condition Upon Receipt

Pace Analytical

WO#:7026978
PM: CNP Due Date: 08/25/17
CLIENT: LPS

Client Name: Proje

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☐ No Seals intact: ☐ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ Ziploc ☐ None ☐ Other Type of Ice: (Wet) Blue None

☐ Samples on ice, cooling process has begun

Thermometer Used: TH092 Correction Factor: 0

Cooler Temperature (°C): 1.0 Cooler Temperature Corrected (°C): 1.6 Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☒ N/A, water sample) Date and Initials of person examining contents: CM 8/11/17

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples orignate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☒Yes	☐No		1.
Chain of Custody Filled Out:	☒Yes	☐No		2.
Chain of Custody Relinquished:	☒Yes	☐No		3.
Sampler Name & Signature on COC:	☒Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☒Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☒Yes	☐No		6.
Rush Turn Around Time Requested:	☐Yes	☒No		7.
Sufficient Volume: (Triple volume provided for MS/MSD	☒Yes	☐No		8.
Correct Containers Used:	☒Yes	☐No		9.
*Pace Containers Used:	☒Yes	☐No		
Containers Intact:	☒Yes	☐No		10.
Filtered volume received for Dissolved tests	☒Yes	☐No	☐N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	☒Yes	☐No		12.
-Includes date/time/ID/Analysis Matrix SL WT OIL				
All containers needing preservation have been checked.	☒Yes	☐No	☐N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot # HC601354				Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☒Yes	☐No	☐N/A	Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination:	☐Yes	☐No	☒N/A	14. Positive for Res. Chlorine? Y N
Residual chlorine strips Lot #				
Headspace in VOA Vials (>6mm):	☐Yes	☒No	☐N/A	15.
Trip Blank Present:	☒Yes	☐No	☐N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☒N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

F-LI-C-002-rev.01

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

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.

Leader Consulting Services Inc
2813 Wehrle Drive
Williamsville, NY 14221
Attn To : Keith Keller
Collected : 8/10/2017 11:20:00 AM
Received : 8/11/2017 9:50:00 AM
Collected By CLIENT

Lab No. : 1708014-001
Client Sample ID: FIELD DUPLICATE-01

Sample Information:
Type : Aqueous

Origin:

Analytical Method: RSK-175 : Analyst: MaiN

Parameter(s)	Results	Qualifier	D.F.	Units		Analyzed:	Container:
Ethane	3.4		1	µg/L		08/12/2017 3:33 PM	Container-01 of 03
Ethene	< 1.0		1	µg/L		08/12/2017 3:33 PM	Container-01 of 03
Methane	4,100	D	215	µg/L		08/12/2017 4:57 PM	Container-01 of 03
Surr: Propene	78.0		1	%Rec	Limit 21-187	08/12/2017 3:33 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.

Date Reported : 8/28/2017

Pace Analytical
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NYSDOH ID#10478 www.pacelabs.com

LABORATORY RESULTS

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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.

Leader Consulting Services Inc
2813 Wehrle Drive
Williamsville, NY 14221
Attn To : Keith Keller
Collected : 8/10/2017 11:15:00 AM
Received : 8/11/2017 9:50:00 AM
Collected By CLIENT

Lab No. : 1708014-002
Client Sample ID: MW-5A/AR

Sample Information:
Type : Aqueous

Origin:

Analytical Method: RSK-175 : Analyst: MaiN

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Ethane	3.3		1	µg/L			08/12/2017 3:46 PM	Container-01 of 03
Ethene	< 1.0		1	µg/L			08/12/2017 3:46 PM	Container-01 of 03
Methane	4,400	D	215	µg/L			08/12/2017 5:05 PM	Container-01 of 03
Surr: Propene	68.0		1	%Rec	Limit	21-187	08/12/2017 3:46 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

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Date Reported : 8/28/2017

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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.

Leader Consulting Services Inc
2813 Wehrle Drive
Williamsville, NY 14221
Attn To : Keith Keller
Collected : 8/10/2017 11:30:00 AM
Received : 8/11/2017 9:50:00 AM
Collected By CLIENT

Lab No. : 1708014-003
Client Sample ID: MW-14

Sample Information:
Type : Aqueous

Origin:

Analytical Method: RSK-175 : Analyst: MaiN

Parameter(s)	Results	Qualifier	D.F.	Units			Analyzed:	Container:
Ethane	< 1.0		1	µg/L			08/12/2017 3:55 PM	Container-01 of 03
Ethene	< 1.0		1	µg/L			08/12/2017 3:55 PM	Container-01 of 03
Methane	4,000	D	510	µg/L			08/12/2017 5:25 PM	Container-01 of 03
Surr: Propene	104		1	%Rec	Limit	21-187	08/12/2017 3:55 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.

Date Reported : 8/28/2017

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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.

Leader Consulting Services Inc
2813 Wehrle Drive
Williamsville, NY 14221
Attn To : Keith Keller
Collected : 8/10/2017 12:10:00 PM
Received : 8/11/2017 9:50:00 AM
Collected By CLIENT

Lab No. : 1708014-004
Client Sample ID: MW-16

Sample Information:
Type : Aqueous

Origin:

Analytical Method: RSK-175 : Analyst: MaiN

Parameter(s)	Results	Qualifier	D.F.	Units		Analyzed:	Container:
Ethane	< 1.0		1	µg/L		08/12/2017 4:04 PM	Container-01 of 03
Ethene	< 1.0		1	µg/L		08/12/2017 4:04 PM	Container-01 of 03
Methane	1.0		1	µg/L		08/12/2017 4:04 PM	Container-01 of 03
Surr: Propene	72.0		1	%Rec	Limit 21-187	08/12/2017 4:04 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

Caitlin Panzarella

Project Manager : Caitlin Panzarella

Test results meet the requirements of NELAC unless otherwise noted.

Date Reported : 8/28/2017

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NYSDOH ID#10478 www.pacelabs.com

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.

Leader Consulting Services Inc
2813 Wehrle Drive
Williamsville, NY 14221
Attn To : Keith Keller
Collected : 8/10/2017 1:20:00 PM
Received : 8/11/2017 9:50:00 AM
Collected By CLIENT

Lab No. : 1708014-005
Client Sample ID: MW-CHA-RFI-7

Sample Information:
Type : Aqueous

Origin:

Analytical Method: RSK-175 : Analyst: MaiN

Parameter(s)	Results	Qualifier	D.F.	Units		Analyzed:	Container:
Ethane	< 1.0		1	µg/L		08/12/2017 4:12 PM	Container-01 of 09
Ethene	< 1.0		1	µg/L		08/12/2017 4:12 PM	Container-01 of 09
Methane	2.2		1	µg/L		08/12/2017 4:12 PM	Container-01 of 09
Surr: Propene	52.0		1	%Rec	Limit 21-187	08/12/2017 4:12 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

Caitlin Panzarella

Project Manager : Caitlin Panzarella

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Date Reported : 8/28/2017

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TEL: (631) 694-3040 FAX: (631) 420-8436
NYSDOH ID#10478 www.pacelabs.com

WorkOrder :
1708014

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

Attachment B

Data Validation Summary

Data Usability Summary Report
August 2017
Vails Gate
737.004

Data Usability

The Quality Assurance Project Plan ("QAPP") was prepared for this project by Clough Harbor & Associates, LLP. The QAPP 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 August 10, 2017. A total of four (4) samples were collected during the August 2017 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 & Manganese 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
Dissolved Gases	RSK-175

Trip blank, 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)
7026978	08/10/2017	08/10/2017 (Schenectady) 08/11/2017 (Long Island)	Water	TCL 8260 Metals Misc. Field Analysis TOC Sulfate Dissolved Gases	1.0°C (08/10/2017) 1.0°C (08/11/2017)

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.

The following sample results are acceptable but positive results may be considered estimated due to continuing calibration:

- MW-14: Chloroethane and chloromethane
- MW-5A/AR: Chloroethane
- MW-CHA-RFI-7: Chloromethane

There were detectable (or positive) levels of chloroethane and chloromethane in the collected samples.

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.

However, due to improper sample preservation, 2-chlorovinyl ether is not reportable. This is not an issue as this is not a contaminant of concern on this project site.

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 August 10, 2017.

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 August 10, 2017. 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 August 10, 2017. 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. Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits for 1,1,1,2-tetrachloroethane, 2-chloroethylvinyl ether, 4-chlorotoluene, bromobenzene, p-isopropyltoluene, tert-butylbenzene. There were no detectable levels of these compounds in the samples.

- Matrix spike recovery exceeded QC limits for 1,2,3-trichlorobenzene, 2-chlorotoluene, chlorobenzene, ethylbenzene, n-butylbenzene, sec-butylbenzene. Batch accepted based on laboratory control sample (LCS) recovery.

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

August 10, 2017 Sampling Event

Sample ID	**7026978**			
Matrix	**Water**			
Analysis	**TCL 8260/RSK-175**	**Metals (Dissolved Iron and Manganese)**	**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, all criteria were within method requirements. In the continuing calibration for the following compounds are outside of method control limits. The results are estimated: • MW-14: bromomethane, chloroethane, and chloromethane • MW-16: bromomethane, chloroethane, and chloromethane • MW-5A/AR: bromomethane, chloroethane, and chloromethane • MW-CHA-RFI-7: bromomethane, chloroethane, and chloromethane • Trip Blank: bromomethane, chloroethane, and chloromethane • LCS: bromomethane, chloroethane, chloromethane, and trans-1,3-dichloropropene • MS/MSD: bromomethane, chloroethane, chloromethane, and trans-1,3-dichloropropene 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

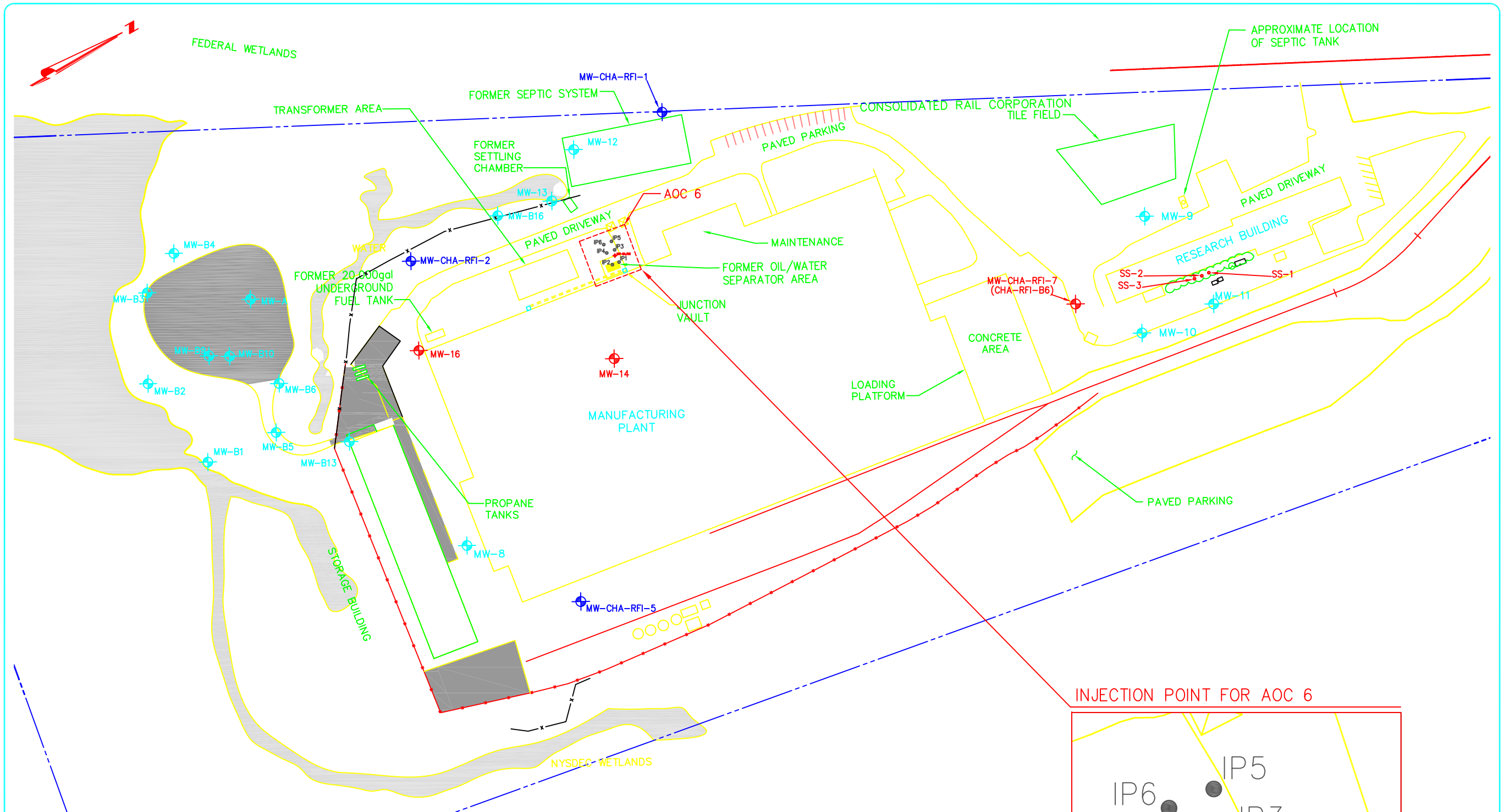
Sample ID	**7026978**			
Matrix	**Water**			
Analysis	**TCL 8260/RSK-175**	**Metals (Dissolved Iron and Manganese)**	**Miscellaneous Field Parameters**	**Wet Chemistry:**
Method Blanks	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.
Matrix Spike/Matrix Spike Duplicate	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits for 1,1,1,2-tetrachloroethane, 2-chloroethylvinyl ether, 4-chlorotoluene, bromobenzene, p-isopropyltoluene, tert-butylbenzene. Matrix spike recovery exceeded QC limits for 1,2,3-trichlorobenzene, 2-chlorotoluene, chlorobenzene, ethylbenzene, n-butylbenzene, sec-butylbenzene. Batch accepted based on laboratory control sample (LCS) recovery. All other 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.
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.

Data Validation Compliance Chart
Vails Gate

Sample ID	**7026978**			
Matrix	**Water**			
Analysis	**TCL 8260/RSK-175**	**Metals (Dissolved Iron and Manganese)**	**Miscellaneous Field Parameters**	**Wet Chemistry:**
Reference Sample	The following analytes were outside the LCS spike sample: 1,1,1,2-tetrachloroethane, 4-chlorotoluene, bromobenzene, p-isopropyltoluene, tert-butylbenzene The 2-chloroethylvinyl ether had a low recovery, however, this compound was excluded due to improper sample preservation. All other laboratory internal quality control samples were within acceptable ranges.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.	All quality assurance parameters were met for these analyses.
Data Usability	Data is acceptable.	Data is acceptable.	Data is acceptable.	Data is acceptable.

Attachment C

Figure 1



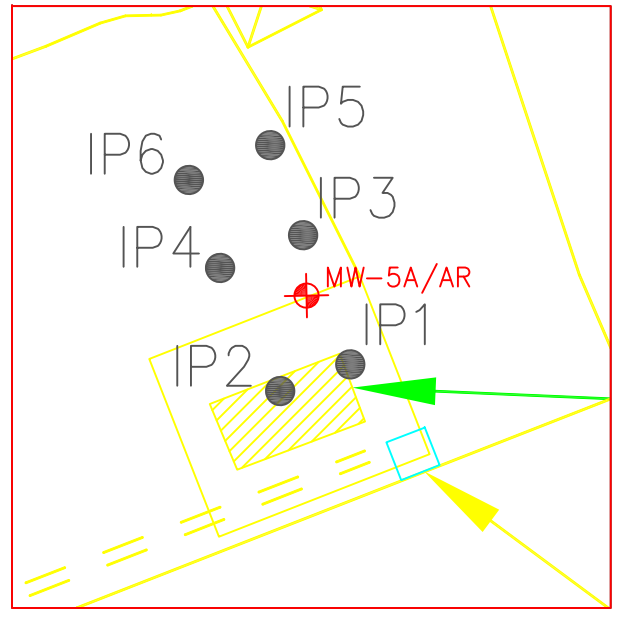
LEGEND

- 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.

INJECTION POINT FOR AOC 6



No.	Submittal / Revision	Appd	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

VAILS GATE
MANUFACTURING FACILITY
VAILS GATE, NEW YORK

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

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

BIOREMEDIATION PROJECT

IN-SITU INJECTION POINT LOCATIONS FOR AOC 6

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

Figure No.
1