BioRemedial
TECHNOLOGIES
INCORPORATED

2700 Kirila Drive • Hermitage, PA 16148
phone: (724) 981-1994 • fax: (724) 981-9030 • info@bioremedial.com • www.bioremedial.com

REMEDIAL ACTION PILOT TEST REPORT

For

Site: Former Standard Portable Site
(a.k.a. Jo-Lyn Enterprises, Ltd. Site)
13 West Lake Road
Mayville, New York 14757

NYSDEC Designation & Identification
Standard Portable Site Number C907030

Prepared By:
BioRemedial Technologies, Inc.
2700 Kirila Boulevard
Hermitage, PA 16148
(724) 981-1994
Contact: Albert M. Richnafsky, PG
Qualified Environmental Professional
Direct: (814) 547-2848; brichnafsky@bioremedial.com

April 29, 2021

TABLE OF CONTENTS

REMEDIAL ACTION PILOT TEST REPORT

Brownfields Cleanup Program
NYSCEC Site No. C907030
Former Standard Portable Site
13 West Lake Road
Mayville, NY 14757

FIGURES

TABLES

1.0 Introduction / Purpose

This Remedial Action Pilot Test Report (RAPTR) describes a Pilot Test (PT) that has been conducted by BioRemedial Technologies, Inc. (BRT) to demonstrate the effectiveness of Anaerobic Reductive Dechlorination (ARD), a remedial method that has been shown in literature and BRT's direct field experience to be an effective method for the complete degradation of chlorinated solvents that results in the end product Ethene, an environmentally non-toxic gas.

The PT focused on remediating groundwater impacted by Trichloroethene (TCE), also commonly referred to as Trichloroethylene, and associated "daughter" compounds formed by the decomposition of TCE, particularly Dichloroethene (first), followed by Vinyl Chloride (VC) as the last step before Ethene is formed.

Spent TCE was reportedly stored in an underground septic tank adjacent to the building, near the location of PT monitoring/injection point SB-22 (**Figures 3 through 5**). This is considered the "Point of Release" (POR) of the TCE.

Soil and soil vapor/indoor air quality were not addressed by the PT other than observing that the air extraction system that was installed by the previous consultant was operational.

2.0 Site Location and Description

The former Standard Portable Site (the "Site) is located in the Village of Mayville, Chautauqua County, New York. The address of the Site is 13 West Lake Road (formerly 21 Valley Street), Mayville, New York 14757. The location of the property and topographic contours are shown in **Figure 1**. The boundary of the property considered by this PT is shown in **Figures 2 through 5**. The Site consists of four separate parcels as shown in an Environmental Easement survey map produced by FoitAlbert Associates dated March 31, 2015. For the purpose of the remedial action, the entire property is considered as one entity.

The current owner of the Site is Christopher Cardo of Westfield, Chautauqua County, New York. The previous owner of the Site was Jo Lyn Enterprises, Ltd. (Jo-Lyn), which owned the Site at the time the ARD Pilot test was initiated during June 2017. Jo-Lyn purchased the property in 1996 from the previous owner Standard Portable. A "due diligence" investigation at the time Jo-Lyn purchased the property identified a septic tank that was used to store spent TCE by former manufacturers operating at the Site. The septic tank was removed in 1996. Groundwater sampling and monitoring point SB-22 is located where the former septic tank once existed and is considered

in this report to be the "Point of Release" (POR). Spent TCE waste generated after that time was containerized and transported off-site for disposal. It appears that TCE in soil and groundwater in the vicinity of the former septic tank was discovered during a Phase II due diligence investigation by a potential buyer in 2002.

Figure 2 provides an aerial view of the Site and surrounding land use. The Site is bordered to the north and northwest by one residential unit and a commercial/manufacturing facility; to the east by NY Route 394 and a park bordering Chautauqua Lake; to the south by vacant land and residential units; and to the west-southwest by a wastewater treatment facility. A stream flowing into Chautauqua Lake is present to the south of the wastewater treatment facility.

The area of concern for this Site is served by municipal water and sewer. The primary environmental concern at this Site appears to be the potential for impacted groundwater discharging to storm-water conveyance channels and potentially to Chautauqua Lake.

3.0 Physical Setting and Groundwater Conditions

The Site is nearly level to gently sloping to the east-southeast in the direction of Chautauqua Lake. Surface water flows predominately into a man-made drainage channel just beyond the east border of the property that apparently discharges into Chautauqua Lake (this has not been confirmed by BRT).

Drilling records show that underlying a thin layer of organic silty-sandy loam, silty sand and gravelly sand is present to a depth of approximately 12 to 15 feet, which is underlain by silty clay. Fill materials are reported at some locations within the silty sand and gravelly sand interval. It appears that the silty clay serves as a limiting horizon that would restrict the downward movement of dense non-aqueous phase liquids (DNAPLs), as is the case with TCE and its daughter compounds. These compounds being heavier than water have a tendency to "sink" in groundwater.

Site investigation activities extended to a depth of approximately 20 feet, based on the information available to BRT. Unconsolidated materials are believed to extend much deeper based on available geologic information. Bedrock conditions do not have a bearing on investigations or remedial actions at this Site.

Groundwater measurements obtained by BRT on April 5, 2017, at the time the original 5 baseline groundwater samples were collected from SB-8, SB-12, SB-13, SB-14 and SB-22, showed depth to groundwater ranged from 1.4 to 2.7 feet below ground level.

Figures 3 and 4 show groundwater contour maps produced by BRT from groundwater measurements collected on October 2, 2017 and September 18 during the Pilot Test. The groundwater contour maps from both time periods are similar and show that groundwater flow, with local variation, is to the east-southeast toward Chautauqua Lake, as would be expected.

4.0 Constituents of Concern (COC) Concentration

Table 2 and **Figure 5** show TCE, DCE and VC dissolved concentration values in groundwater from samples collected by BRT. Laboratory testing indicates that the highest COC concentrations are present from the point-of-release (POR) and eastward to the eastern boundary of the property in the vicinity of SB-28. **Table 1** provides a list of parameters to be tested that correspond with the Constituents of Concern.

The Pilot Test that has been performed intended to evaluate and demonstrate the effectiveness of ARD. BRT's experience is that ARD is effective at the COC concentrations encountered at the Site, as is supported by analytical results provided in this report.

5.0 Baseline Testing

Marking the first activity associated with the Pilot Test, BRT collected five (5) "baseline" groundwater samples on April 5, 2017 from monitoring wells SB-8, SB-12, SB-13, SB-14 and SB-22 (see **Figure 5** for locations and **Table 2** for results). Test results of all groundwater samples tested in conjunction with the Pilot Test are presented in **Table 2** and laboratory certificates-of-analysis are provided in **Appendix A**. Depth to groundwater was also measured at these 5 locations plus SB-19 prior to disturbance. Groundwater samples were tested at a laboratory registered in New York (Phoenix Environmental Laboratories, Inc., NY Lab Registration No. 11301). Samples were collected utilizing accepted methods, handled and transported on ice under chain-of-custody protocol. The first 5 samples were collected using a low flow sampling technique. A total of 5 gallons or less of purge water was generated, which was filtered through granular activated carbon and allowed to evaporate on a paved surface. Baseline laboratory results are provided in **Table 1**, which also shows the applicable NYDEC groundwater standards. The standards that are the target of the remedial action can be found in *Table 5 of New York State Effluenct Limitations, Class GA, NYS TOGS Series 1.1.1 (6/1998)*. Laboratory certificates-of-analysis are provided in **Appendix A** for all groundwater samples collected by BRT.

At the time of the April 5, 2017 collection of groundwater samples and during other sampling events, BRT also recorded physical data, including pH, temperature, dissolved oxygen (DO), conductivity and oxygen reduction potential (ORP). The baseline analytical values and the physical data is used by BRT to "fine tune" the materials to be applied during injection events.

BRT's test results show TCE ranged from 9.3 ug/l (ppb) at SB-8 to 140,000 ug/l at SB-22 at the start of the Pilot Test. **Table 2** shows the change in test results for the three main analytes, TCE, DCE and VC during the Pilot Test. Groundwater sampling and analysis by BRT has occurred on 4/5/2017; 6/12/2017; 10/2/2017; 12/5/2017; 1/23/2018; 4/24/2018; 9/18/2018 and 7/11/2019. SB-8 appears to represent the north fringe of the dissolved TCE plume in groundwater. SB-22 is located near the POR. In addition to SB-22, the area around SB-28 will be the focus of future injection events.

6.0 Pilot Test Method - Anaerobic Reductive Dechlorination (ARD)

The Pilot Test has utilized Anaerobic Reductive Dechlorination (ARD) as the remedial method. Based on BRT's direct experience, enhanced in-situ anaerobic bioremediation by means of ARD has shown to be an effective method for the complete degradation of chlorinated solvents including all of the compounds that are the focus of this project, including vinyl chloride (VC), the last chlorinated compound of the ARD degradation process, prior to decomposing into the environmentally non-toxic gas Ethene as the end product. Ethene gas has a low solubility and quickly dissipates in groundwater. Typically, the ARD process shows a decrease in TCE and an increase in daughter products, and finally a decrease in daughter products. At the start of the ARD process, an increase in Dichloroethene (DCE) and decrease in TCE shows the process is working. VC will appear farther along in the process as DCE begins to decrease. Analytical results (**Table 2**) show that this progression is occurring.

ARD involves the delivery of an organic substrate and nutrients into the aquifer to stimulate growth within the existing microbial population, create an anaerobic treatment zone, and generate hydrogen via fermentation. Hydrogen is then utilized by bacteria capable of performing ARD, which consists of sequential removal of chlorine ions. BRT uses a site specific approach and formulation, determined by assaying the intrinsic microbial population to optimize this reaction.

ARD has been applied in a variety of hydrogeologic settings, from low permeability silts and clays to high permeability alluvial sand and gravel deposits, to fractured bedrock. The silty gravelly sand found at the Site lends well to the process.

To enhance the anaerobic conditions at the Site and promote ARD without bio-fouling of the injection points, BRT amends the aquifer with a substrate (electron donor) that is a mixture of soluble fast acting and slow release substrate. The dual approach helps minimize microbial lag times associated with fermentation, ultimately creating a more uniform anaerobic environment in the subsurface. BRT uses its proprietary substrate blend for its high solubility, efficiency and effective cost.

BRT utilizes a water soluble anaerobic nutrient supplementation as metabolic stimulants to enhance the kinetics and the efficiency of the biological system. This nutrient blend containing up to 13 compounds targets only the beneficial bacteria with metabolic enhancers, vitamins and various food grade extracts, to name a few, in order to increase replication rates of specific bacteria to promote a major beneficial population shift in the subsurface.

The substrate / nutrient mixture is purged with nitrogen prior to injection to remove the dissolved oxygen. This substrate blend has also been effective in increasing contaminant solubility especially in areas with DNAPL. A proprietary anaerobic nutrient blend has been applied during the injection events along with the substrate to promote microbial growth and help buffer fermentation in-situ.

7.0 Field Application and Evaluation

TCE, DCE, VC and other intermediary decomposition products have been identified in groundwater at the Site in the dissolved state. No free separate phase liquid / free product is currently present. Progress will be evaluated by the change in these COC from the baseline sampling event with the final sampling event after the completion of the injection period.

BRT has provided between 35 to 200 gallons of its proprietary substrate materials and nutrient blend during each of the 5 injection events performed thus far. The injection amount has been determined by BRT based on past experience as being sufficient to show that ARD is working by an increase in daughter products in proportion to TCE concentration. The amount being injected may be increased or decreased in the future depending on concentrations of COC determined by laboratory testing of groundwater.

BRT has injected its proprietary substrate and nutrient blend by means of gravity feed into the following wells during the Pilot Test: SB-8; SB-12; SB-13; SB-14; and SB-28, concentrating on maximizing the amount placed into SB-22 ("the Point of Release") and SB-28, the other well showing the highest COC values. Additional injections will be based on groundwater analytical results and the increasing or decreasing trends. The next round of groundwater testing, scheduled

for approximately May 20, 2021, will include approximately 11 wells that were being tested during the Pilot Test. BRT's conclusions regarding the need for additional injections and the best locations for the injections will be based on the next analytical results. Wells where groundwater will be tested are sufficiently spaced to evaluate the entire COC plume.

Results from the Pilot Test indicate that ARD is working and BRT will continue with the current program until the plume meets NYSDEC guidelines. **Table 6** shows a Schedule of Activities for upcoming work. The ARD method being employed during the Pilot Test will continue as the remedial action method until conditions at the Site meet the requirements for NYSDEC water class GA, type H(WS) criteria, as provided in *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, TOGS (1.1.1)*, sufficient for NYSDEC to issue a Certificate of Completion letter.

8.0 Schedule

The Schedule of Activities for upcoming work is provided in **Table 6**. Work that has been performed in conjunction with the Pilot Test is provided in **Table 5** (RA Pilot Test Activities).

9.0 Qualified Environmental Professional

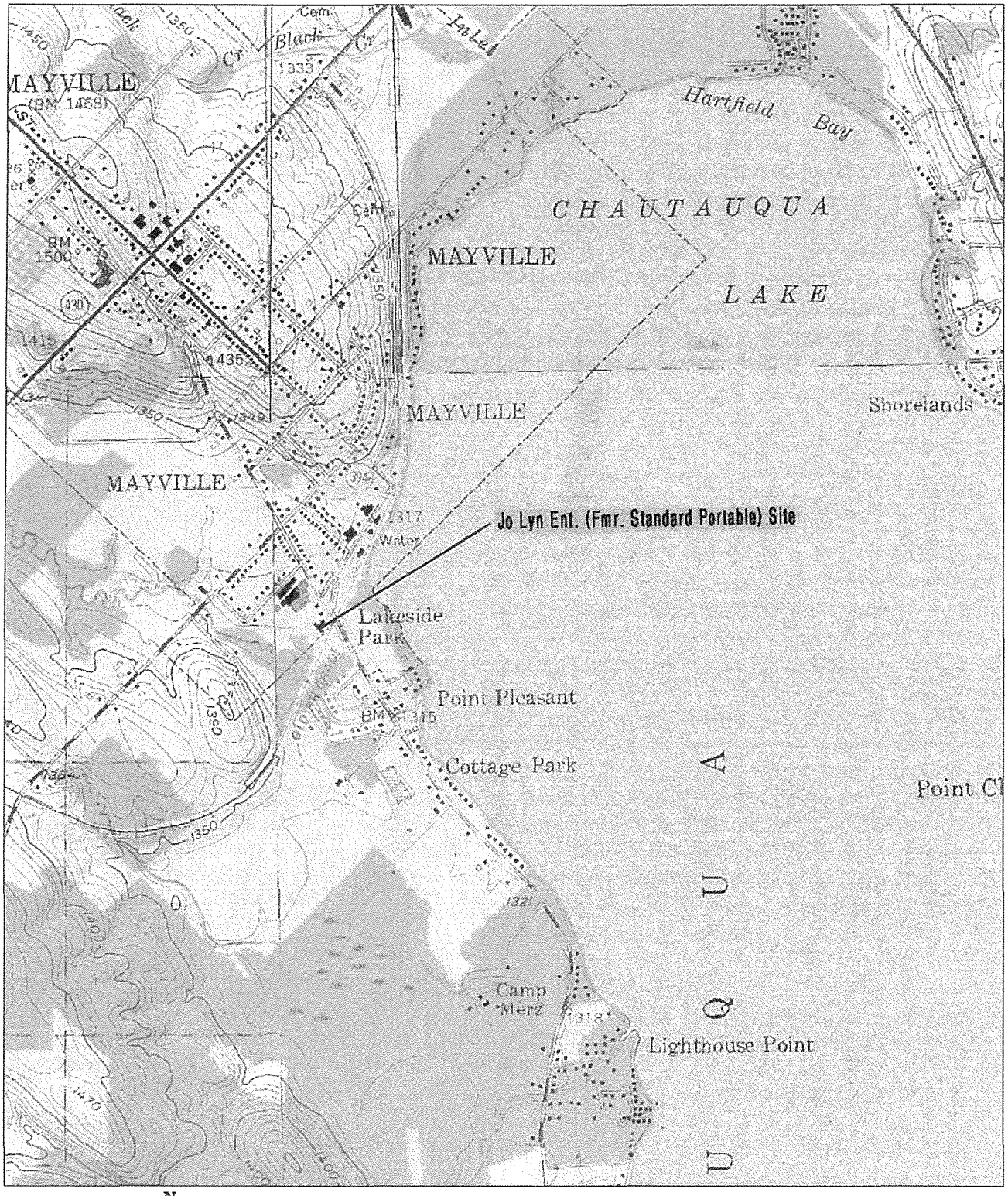
The Pilot Test and continuing remedial action is being supervised by Albert M. Richnafsky, PG (PA), LRS (WV), CPG (AIPG), whom will be responsible for the technical correctness of work performed. Mr. Richnafsky has over 42 years of experience in site investigations and remedial actions, including extensive experience with NYSDEC. Mr. Richnafsky's direct contact information is: Cell – (814) 547-2848; E-mail – brichnafsky@ces-env.com.

Biological evaluation is being conducted and evaluated by BRT's in-house Laboratory Manager Tammy Miller, MS and Amy Ashe, PhD Microbiology.

This RA Pilot Test Report has been prepared by Albert M. Richnafsky, PG

Albert M. Richnafsky 4/29/21

FIGURES



Map provided by MyTopo.com

Figure 1 - Location Map
Jo Lyn Enterprises Site
13 West Lake Road
Mayville, NY 14757
NYSDEC BCP Site No. C907030

Figure 2 – Property Boundary Map

Jo Lyn Enterprises Site
13 West Lake Road
Mayville, NY 14757
NYSDEC BCP Site No. C907030
April 24, 2017

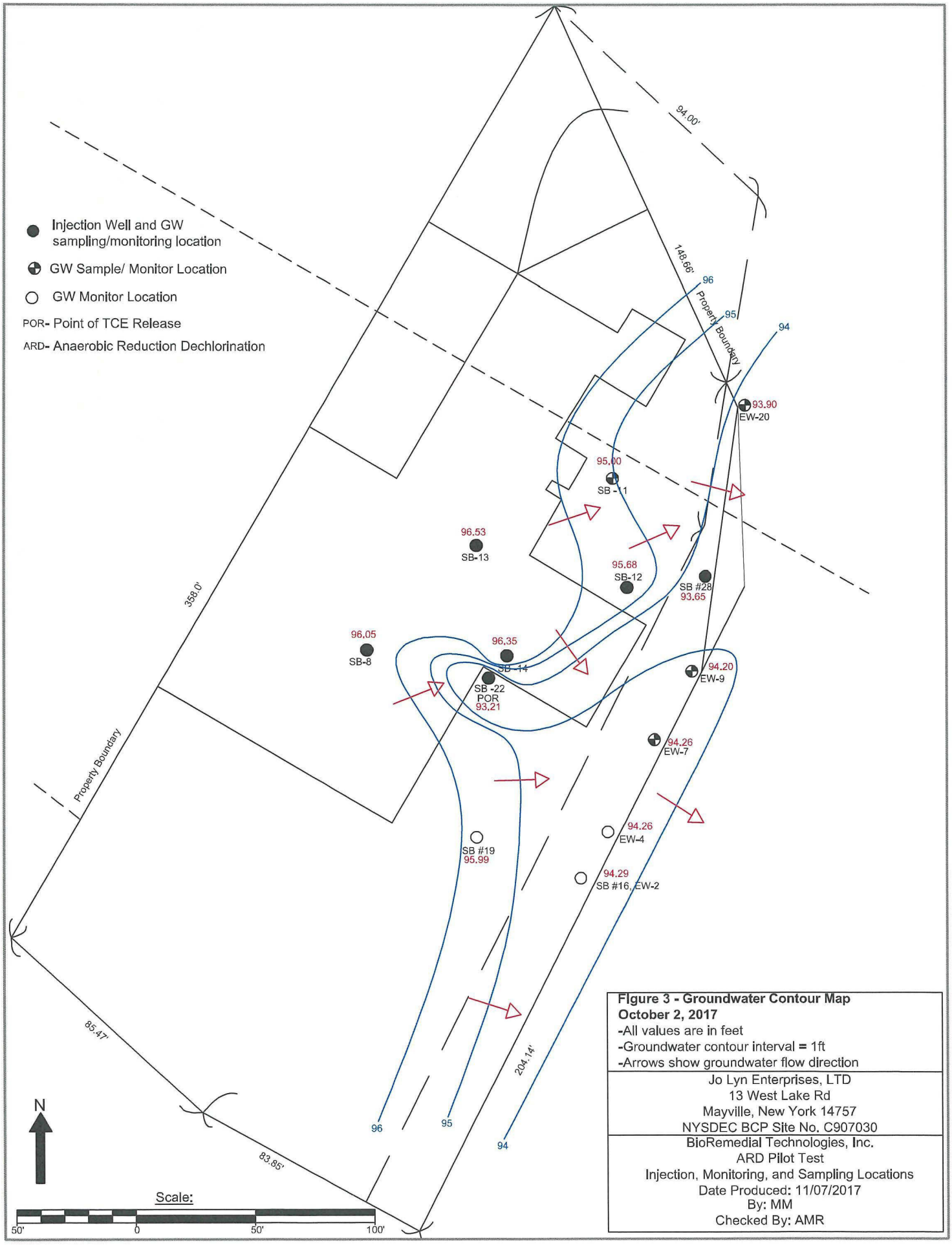


Figure 3 - Groundwater Contour Map
October 2, 2017
-All values are in feet
-Groundwater contour interval = 1ft
-Arrows show groundwater flow direction

Jo Lyn Enterprises, LTD
13 West Lake Rd
Mayville, New York 14757
NYSDEC BCP Site No. C907030

BioRemedial Technologies, Inc.
ARD Pilot Test
Injection, Monitoring, and Sampling Locations
Date Produced: 11/07/2017
By: MM
Checked By: AMR

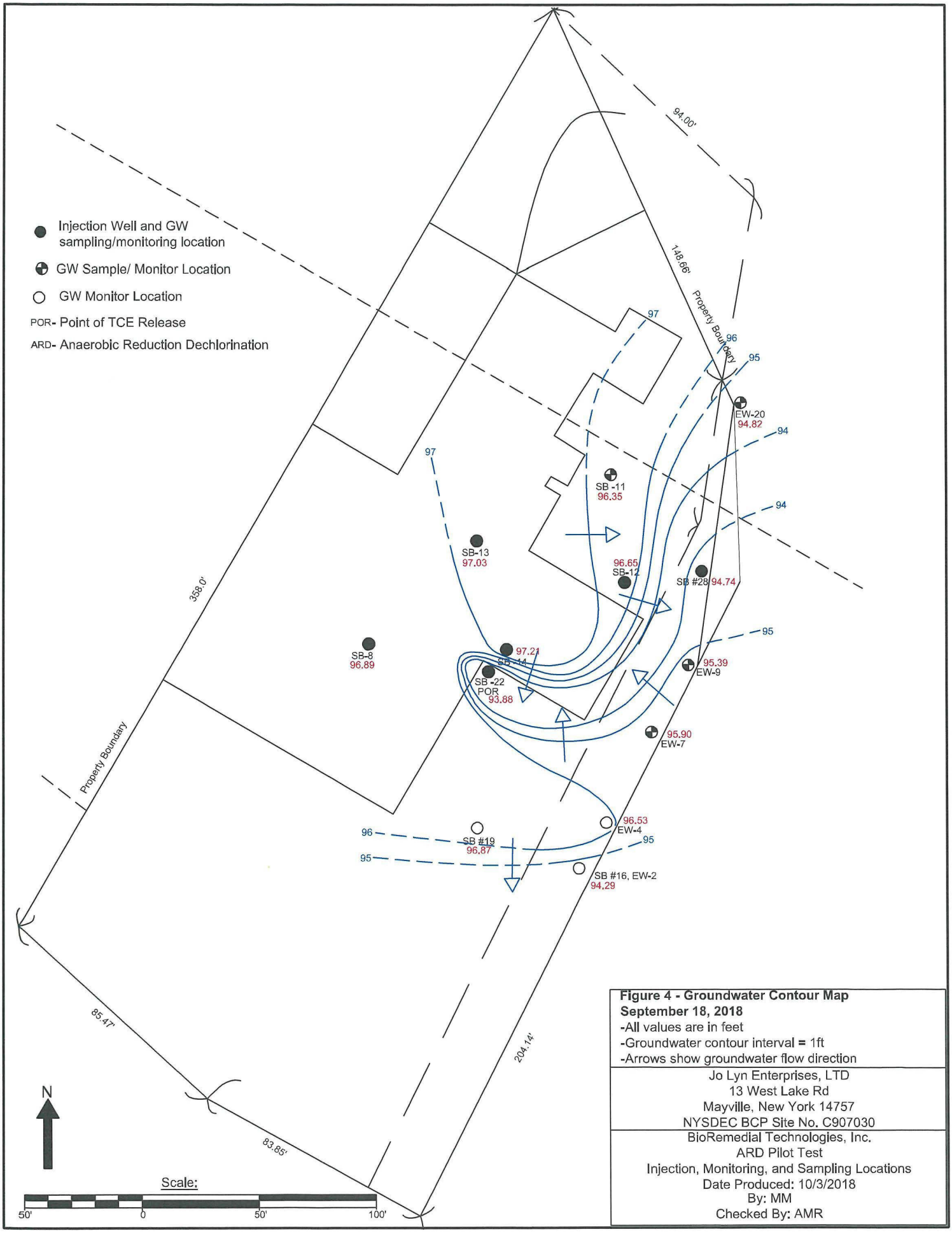


Figure 4 - Groundwater Contour Map
September 18, 2018
-All values are in feet
-Groundwater contour interval = 1ft
-Arrows show groundwater flow direction

Jo Lyn Enterprises, LTD
13 West Lake Rd
Mayville, New York 14757
NYSDEC BCP Site No. C907030

BioRemedial Technologies, Inc.
ARD Pilot Test
Injection, Monitoring, and Sampling Locations
Date Produced: 10/3/2018
By: MM
Checked By: AMR

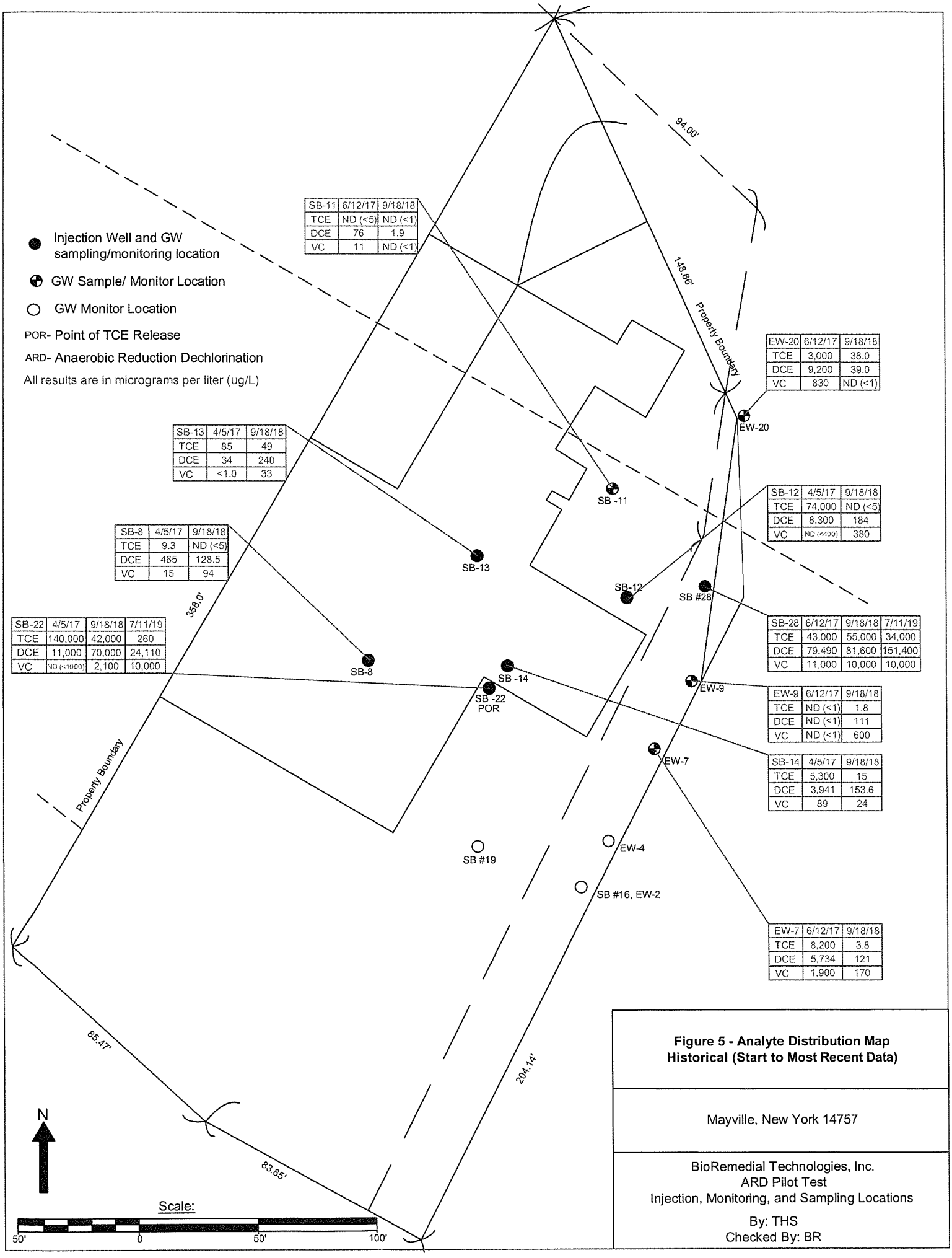


Figure 5 - Analyte Distribution Map
Historical (Start to Most Recent Data)

Mayville, New York 14757

BioRemedial Technologies, Inc.
ARD Pilot Test
Injection, Monitoring, and Sampling Locations

By: THS
Checked By: BR

TABLES

Table 1
Groundwater Analytical Results - Pre Pilot Test
Former Standard Portable (a.k.a. Jo-Lyn) Site
21 Valley Street
Mayville, Chautauqua County, New York
NYDEC Site No. C907030

Sample Date	Parameter	*NYSDEC Class GA Standard	Sample Location				
			SB-8	SB-12	SB-13	SB-14	SB-22
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
4/5/2017	Tetrachloroethene (PCE)	5.0	ND	ND	2.8	ND	ND
	Trichloroethene (TCE)	5.0	9.3	74000	85.0	5300	140000
	cis-1,2-Dichloroethene	5.0	450	8300	34.0	3900	11000
	trans-1,2-Dichloroethene	5.0	15.0	ND	ND	41.0	ND
	1,1-Dichloroethane	5.0	ND	ND	ND	ND	ND
	Vinyl Chloride	2.0	15.0	ND	ND	89.0	ND
	Cyclohexane	NA	58.0	ND	ND	ND	ND
	Methylcyclohexane	NA	15.0	ND	ND	ND	ND
	2-Hexanone	50.0	ND	ND	ND	ND	ND
	Methyl ethyl ketone	50.0	ND	ND	ND	ND	ND
	Acetone	50.0	5.5	ND	ND	ND	ND
	Benzene	1.0	23.0	ND	ND	ND	ND
	Chloroform	7.0	ND	ND	ND	ND	ND

* From Table 5 NYS GW Effluent Limitations (Class GA), NYS TOGS Series 1.1.1 (6/1998)

NA- No standard or guidance values is currently available.

ND - Not Detected (below the test method reporting limit).

Shaded values are above the NYSDEC Class GA Standard

All samples were tested according to EPA Method SW8260C

TABLE 2

BRT Groundwater Analytical Results Through July 11, 2019

Former Standard Portable (a.k.a. Jo-Lyn) Site, Mayville, NY

NYSDEC Site No. C907030

Location	Date	Trichloroethene	Total Dichloroethene	Vinyl Chloride
EW -7	6/12/2017	8,200	5,734	1,900
EW-7	10/2/2017	ND (< 200)	16,000	2,200
EW-7	**12/5/2017**	**2.7**	**345**	**220**
EW-7	**9/18/2018**	**3.8**	**121**	**170**
EW-9	6/12/2017	ND (< 1)	ND (< 1)	ND (< 1)
EW-9	7/27/2017	3,400	1,300	53
EW-9	10/2/2017	ND (<200)	47,000	4,000
EW-9	4/24/2018	13.0	202	270
EW-9	**9/18/2018**	**1.8**	**111**	**600**
EW-20	6/12/2017	3,000	9,200	830
EW-20	10/2/2017	58	84	6.6
EW-20	**12/5/2017**	**56**	**161.6**	**3.0**
EW-20	**4/24/2018**	**3.0**	**1.1**	**ND (<1)**
EW-20	**9/18/2018**	**38.0**	**39.0**	**ND (<1)**
SB-8	4/5/2017	9.3	465	15
SB-8	10/2/2017	18	207	31
SB-8	**9/18/2018**	**ND (<5)**	**128.5**	**94**
SB-11	6/12/2017	ND (< 5)	76	11
SB-11	10/2/2017	ND (<1)	14	12
SB-11	**9/18/2018**	**ND (<1)**	**1.9**	**ND (<1)**
SB-12	4/5/2017	74,000	8,300	ND <400)
SB-12	7/27/2017	100	29,140	730
SB-12	10/2/2017	210	16,100	2,400
SB-12	**12/5/2017**	**21**	**6,664**	**3,700**
SB-12	**4/24/2018**	**2.9**	**70**	**48**
SB-12	**9/18/2018**	**ND (<5)**	**184**	**380**
SB-13	4/5/2017	85	34	< 1.0
SB-13	10/2/2017	110	190	ND (<5)
SB-13	**9/18/2018**	**49**	**240**	**33**
SB-14	4/5/2017	5,300	3,941	89
SB-14	7/27/2017	150	5.4	ND (< 2)
SB-14	10/2/2017	670	3,477	400
SB-14	**12/5/2017**	**5.5**	**394.7**	**140**
SB-14	**4/24/2018**	**ND (<20)**	**1,100**	**330**
SB-14	**9/18/2018**	**15**	**153.6**	**24**
SB-22	4/5/2017	140,000	11,000	ND (< 1000)
SB-22	10/2/2017	12,000	2,500	ND (<100)
SB-22	**12/5/2017**	**140,000**	**29,000**	**ND (<400)**
SB-22	**1/23/2018**	**120,000**	**29,000**	**890**
SB-22	**4/24/2018**	**98,000**	**21,110**	**190**
SB-22	**9/18/2018**	**42,000**	**70,000**	**2,100**
SB-22	*7/11/2019*	*260*	*24,110*	*10,000*
SB-28	6/12/2017	43,000	79,490	11,000
SB-28	10/2/2017	52,000	120,980	13,000
SB-28	**12/5/2017**	**24,000**	**73,430**	**1,000**
SB-28	4/24/2018	170	2,200	460
SB-28	**9/18/2018**	**55,000**	**81,600**	**10,000**
SB-28 Dup	**9/18/2018**	**55,000**	**83,560**	**10,000**
SB-28	*7/11/2019*	*34,000*	*151,400*	*10,000*
GA Standard		**5**	**10**	**2**

All values are in micrograms/liter (µg/l), comparable to parts per billion.

Values in red are baseline / pre-injection.

Values in lighter black are after the start of injections.

Values in blue are after the August 29, 2017 injection.

Values in dark black are after the July 25, 2018 injection.

Italicized values are prior to the July 11,2019 injection.

TABLE 3

Former Standard Portable Site - Groundwater Measurements - 10/2/17

	Depth to	Ref Elev	GW Elev	Trichloroethene	Total Dichloroethene	Vinyl Chloride
EW -7	3.17	97.96	94.79	ND (< 200)	16,000	2,200
EW-9	3.66	97.86	94.20	ND (< 200)	47,000	4,000
EW-20	3.66	97.56	93.90	58	84	6.6
SB-8	3.13	99.18	96.05	18	207	31
SB-11	3.27	98.27	95.00	ND (< 1.0)	14	12
SB-12	2.30	97.98	95.68	210	16,100	2,400
SB-13	3.33	99.86	96.53	110	190	ND (< 5)
SB-14	3.21	99.56	96.35	670	3,477	400
SB-22	6.14	***99.35***	93.21	12,000	2,500	ND (< 100)
SB-28	4.06	97.71	93.65	52,000	120,980	13,000
SB-19	3.69	99.68	95.99	No Sample	No Sample	No Sample
EW-4	3.93	98.19	94.26	No Sample	No Sample	No Sample
*EW-2	3.99	98.28	94.29	No Sample	No Sample	No Sample

Approximate

ND - Non-detect (below the minimum reporting limit)

Analytical values are in micrograms/liter (PPB)

SB-22 represents the source area (point of release)

*Note: EW-1 on lid; SB-16 in field notes; EW-2 and SB-16 on map

TABLE 4

Former Standard Portable Site - Groundwater Measurements - 9/18/18

	Depth to	Ref Elev	GW Elev	Trichloroethene	Total Dichloroethene	Vinyl Chloride
EW -7	2.056	97.96	95.90	3.8	121	170
EW-9	2.47	97.86	95.39	1.8	111	600
EW-20	2.74	97.56	94.82	38	39	ND (<1)
SB-8	2.292	99.18	96.89	ND (< 5)	128.5	94
SB-11	1.92	98.27	96.35	ND (< 1)	1.9	ND (<1)
SB-12	1.33	97.98	96.65	ND (<5)	184	380
SB-13	2.83	99.86	97.03	49	240	33
SB-14	2.347	99.56	97.21	15	153.6	24
SB-22	5.473	***99.35***	93.88	42,000	70,000	2,100
SB-28	2.975	***97.71***	94.74	55,000	83,560	10,000
SB-19	2.813	99.68	96.87	No Sample	No Sample	No Sample
EW-4	1.659	98.19	96.53	No Sample	No Sample	No Sample
*EW-2	3.99	98.28	94.29	No Sample	No Sample	No Sample

Approximate

ND - Non-detect (below the minimum reporting limit)

Analytical values are in micrograms/liter (PPB)

SB-22 represents the source area (point of release)

*Note:EW-1 on lid; SB-16 in field notes; EW-2 and SB-16 on map

Table 5 - RA Pilot Test Activities

Former Standard Portable Site - NYSDEC Site No. C907030
13 West Lake Road, Mayville, NY 14757 (Chautauqua County)

Date	Activity	Comments
5/12/2017	ARD Pilot Test Work Plan Submitted to NYDEC	6/6/2017 - Pilot Test Work Plan Approved by NYDEC.
4/5/2017	Groundwater Sampling	BRT's first pre-injection/baseline sampling event.
6/12/2017	Groundwater Sampling	Additional sampling locations added.
6/17/2017	First Injection Event	Substrate and nutrients injected. UIC permit rcvd.
7/18/2017	Second Injection Event	Substrate and nutrients injected.
7/27/2017	Groundwater Sampling	Three wells only - SB-12, SB-14 and EW-9.
10/2/2017	Groundwater Sampling	Full round of sampling, 11 locations.
12/5/2017	Groundwater Sampling	Sampled 6 locations
1/23/2018	Well Cleanout and Injections	3rd injection event
4/24/2018	Groundwater Sampling	Sampled 6 locations - SB-22, SB-28, SB-14, SB-12, EW-9 and EW-20
7/25/2018	4th Injection Event	Focus on "hot spot" locations.
9/18/2018	Groundwater Sampling	Full round of sampling, 11 locations.
7/11/2019	Groundwater Sampling and Injection Event	Sampled SB-22 and SB-28 only. Injections focused on "hot spot" locations.
7/23/2019	E-mail Update Report	Submitted summary report of GW test results to NYSDEC.

Table 6 - Schedule of Activities

Former Standard Portable Site
13 West Lake Road, Mayville, NY 14757, Chautauqua County
NYSDEC Site No. C907030

Anticipated Date	Description
April 29, 2021	Submittal of Remedial Action Pilot Test Report
May 20, 2021	Groundwater gauging and collection of a complete round of groundwater samples - Samples will be collected from approximately 11 locations used during the Pilot Test. Results will be used to determine if an additional round of substrate and nutrient injections are needed.
June 4 – 25, 2021	Receive groundwater results and evaluate. Order and formulate the substrate and nutrient blend that will be used (if needed).
July 7, 2021	Perform injection of substrate and nutrient blend (if needed).
August 18, 2021	Groundwater gauging and collection of a complete round of groundwater samples.
September 1 – 10	Receive and evaluate groundwater test results.
October 7, 2021	Submit Remedial Action Work Plan or Remedial Action Completion Report (if cleanup has been completed).

APPENDIX A

PHOENIX
Environmental Laboratories, Inc.

Thursday, April 13, 2017

Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Project ID: JOLYN ENTERPRISES
Sample ID#s: BY01083 - BY01087

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

Phyllis Shiller

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #MA-CT-007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 13, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	04/05/17	12:10
Location Code:	BIOTECH	Received by:	LB	04/08/17	11:57
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	040517				

Laboratory Data

SDG ID: GBY01083
Phoenix ID: BY01083

Project ID: JOLYN ENTERPRISES
Client ID: SB-8 GW

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1-Dichloroethane	ND		2.0	ug/L	2	04/11/17	MH	SW8260C
2-Hexanone	ND		5.0	ug/L	2	04/11/17	MH	SW8260C
Acetone	5.5	S	5.0	ug/L	2	04/11/17	MH	SW8260C
Benzene	23		1.4	ug/L	2	04/11/17	MH	SW8260C
Chloroform	ND		2.0	ug/L	2	04/11/17	MH	SW8260C
cis-1,2-Dichloroethene	450		20	ug/L	20	04/10/17	MH	SW8260C
Cyclohexane	58		2.0	ug/L	2	04/11/17	MH	SW8260C
Methyl ethyl ketone	ND		5.0	ug/L	2	04/11/17	MH	SW8260C
Methylcyclohexane	15		2.0	ug/L	2	04/11/17	MH	SW8260C
Tetrachloroethene	ND		2.0	ug/L	2	04/11/17	MH	SW8260C
trans-1,2-Dichloroethene	15		2.0	ug/L	2	04/11/17	MH	SW8260C
Trichloroethene	9.3		2.0	ug/L	2	04/11/17	MH	SW8260C
Vinyl chloride	15		2.0	ug/L	2	04/11/17	MH	SW8260C
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	100			%	2	04/11/17	MH	70 - 130 %
% Bromofluorobenzene	99			%	2	04/11/17	MH	70 - 130 %
% Dibromofluoromethane	90			%	2	04/11/17	MH	70 - 130 %
% Toluene-d8	98			%	2	04/11/17	MH	70 - 130 %

Project ID: JOLYN ENTERPRISES
Client ID: SB-8 GW

Phoenix I.D.: BY01083

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director
April 13, 2017
Reviewed and Released by: Phyllis Shiller, Laboratory Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 13, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	04/05/17	12:43
Location Code:	BIOTECH	Received by:	LB	04/08/17	11:57
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	040517				

Laboratory Data

SDG ID: GBY01083
Phoenix ID: BY01084

Project ID: JOLYN ENTERPRISES
Client ID: SB-13 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	1.0	ug/L	1	04/10/17	MH	SW8260C
2-Hexanone	ND	2.5	ug/L	1	04/10/17	MH	SW8260C
Acetone	ND	2.5	ug/L	1	04/10/17	MH	SW8260C
Benzene	ND	0.70	ug/L	1	04/10/17	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	04/10/17	MH	SW8260C
cis-1,2-Dichloroethene	34	1.0	ug/L	1	04/10/17	MH	SW8260C
Cyclohexane	ND	1.0	ug/L	1	04/10/17	MH	SW8260C
Methyl ethyl ketone	ND	2.5	ug/L	1	04/10/17	MH	SW8260C
Methylcyclohexane	ND	1.0	ug/L	1	04/10/17	MH	SW8260C
Tetrachloroethene	2.8	1.0	ug/L	1	04/10/17	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	04/10/17	MH	SW8260C
Trichloroethene	85	2.0	ug/L	2	04/10/17	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	04/10/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	04/10/17	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	04/10/17	MH	70 - 130 %
% Dibromofluoromethane	96		%	1	04/10/17	MH	70 - 130 %
% Toluene-d8	99		%	1	04/10/17	MH	70 - 130 %

Project ID: JOLYN ENTERPRISES
Client ID: SB-13 GW

Phoenix I.D.: BY01084

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
April 13, 2017
Reviewed and Released by: Phyllis Shiller, Laboratory Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 13, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	04/05/17	13:25
Location Code:	BIOTECH	Received by:	LB	04/08/17	11:57
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	040517				

Laboratory Data

SDG ID: GBY01083
Phoenix ID: BY01085

Project ID: JOLYN ENTERPRISES
Client ID: SB-14 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	40	ug/L	40	04/11/17	MH	SW8260C
2-Hexanone	ND	100	ug/L	40	04/11/17	MH	SW8260C
Acetone	ND	100	ug/L	40	04/11/17	MH	SW8260C
Benzene	ND	28	ug/L	40	04/11/17	MH	SW8260C
Chloroform	ND	40	ug/L	40	04/11/17	MH	SW8260C
cis-1,2-Dichloroethene	3900	40	ug/L	40	04/11/17	MH	SW8260C
Cyclohexane	ND	40	ug/L	40	04/11/17	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	40	04/11/17	MH	SW8260C
Methylcyclohexane	ND	40	ug/L	40	04/11/17	MH	SW8260C
Tetrachloroethene	ND	40	ug/L	40	04/11/17	MH	SW8260C
trans-1,2-Dichloroethene	41	40	ug/L	40	04/11/17	MH	SW8260C
Trichloroethene	5300	400	ug/L	400	04/10/17	MH	SW8260C
Vinyl chloride	89	40	ug/L	40	04/11/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	40	04/11/17	MH	70 - 130 %
% Bromofluorobenzene	97		%	40	04/11/17	MH	70 - 130 %
% Dibromofluoromethane	89		%	40	04/11/17	MH	70 - 130 %
% Toluene-d8	98		%	40	04/11/17	MH	70 - 130 %

Project ID: JOLYN ENTERPRISES
Client ID: SB-14 GW

Phoenix I.D.: BY01085

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director
April 13, 2017
Reviewed and Released by: Phyllis Shiller, Laboratory Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 13, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	04/05/17	14:10
Location Code:	BIOTECH	Received by:	LB	04/08/17	11:57
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	040517				

Laboratory Data

SDG ID: GBY01083
Phoenix ID: BY01086

Project ID: JOLYN ENTERPRISES
Client ID: SB-12 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	400	ug/L	400	04/10/17	MH	SW8260C
2-Hexanone	ND	1000	ug/L	400	04/10/17	MH	SW8260C
Acetone	ND	1000	ug/L	400	04/10/17	MH	SW8260C
Benzene	ND	280	ug/L	400	04/10/17	MH	SW8260C
Chloroform	ND	400	ug/L	400	04/10/17	MH	SW8260C
cis-1,2-Dichloroethene	8300	400	ug/L	400	04/10/17	MH	SW8260C
Cyclohexane	ND	400	ug/L	400	04/10/17	MH	SW8260C
Methyl ethyl ketone	ND	1000	ug/L	400	04/10/17	MH	SW8260C
Methylcyclohexane	ND	400	ug/L	400	04/10/17	MH	SW8260C
Tetrachloroethene	ND	400	ug/L	400	04/10/17	MH	SW8260C
trans-1,2-Dichloroethene	ND	400	ug/L	400	04/10/17	MH	SW8260C
Trichloroethene	74000	1000	ug/L	1000	04/10/17	MH	SW8260C
Vinyl chloride	ND	400	ug/L	400	04/10/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	400	04/10/17	MH	70 - 130 %
% Bromofluorobenzene	98		%	400	04/10/17	MH	70 - 130 %
% Dibromofluoromethane	93		%	400	04/10/17	MH	70 - 130 %
% Toluene-d8	98		%	400	04/10/17	MH	70 - 130 %

Project ID: JOLYN ENTERPRISES
Client ID: SB-12 GW

Phoenix I.D.: BY01086

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
April 13, 2017
Reviewed and Released by: Phyllis Shiller, Laboratory Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 13, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	04/05/17	15:00
Location Code:	BIOTECH	Received by:	LB	04/08/17	11:57
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	040517				

Laboratory Data

SDG ID: GBY01083
Phoenix ID: BY01087

Project ID: JOLYN ENTERPRISES
Client ID: SB-22 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	1000	ug/L	1000	04/10/17	MH	SW8260C
2-Hexanone	ND	2500	ug/L	1000	04/10/17	MH	SW8260C
Acetone	ND	2500	ug/L	1000	04/10/17	MH	SW8260C
Benzene	ND	700	ug/L	1000	04/10/17	MH	SW8260C
Chloroform	ND	1000	ug/L	1000	04/10/17	MH	SW8260C
cis-1,2-Dichloroethene	11000	1000	ug/L	1000	04/10/17	MH	SW8260C
Cyclohexane	ND	1000	ug/L	1000	04/10/17	MH	SW8260C
Methyl ethyl ketone	ND	2500	ug/L	1000	04/10/17	MH	SW8260C
Methylcyclohexane	ND	1000	ug/L	1000	04/10/17	MH	SW8260C
Tetrachloroethene	ND	1000	ug/L	1000	04/10/17	MH	SW8260C
trans-1,2-Dichloroethene	ND	1000	ug/L	1000	04/10/17	MH	SW8260C
Trichloroethene	140000	2000	ug/L	2000	04/10/17	MH	SW8260C
Vinyl chloride	ND	1000	ug/L	1000	04/10/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1000	04/10/17	MH	70 - 130 %
% Bromofluorobenzene	97		%	1000	04/10/17	MH	70 - 130 %
% Dibromofluoromethane	97		%	1000	04/10/17	MH	70 - 130 %
% Toluene-d8	99		%	1000	04/10/17	MH	70 - 130 %

Project ID: JOLYN ENTERPRISES
Client ID: SB-22 GW

Phoenix I.D.: BY01087

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director
April 13, 2017
Reviewed and Released by: Phyllis Shiller, Laboratory Director

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

April 13, 2017

QA/QC Data

SDG I.D.: GBY01083

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 382237 (ug/L), QC Sample No: BY01084 (BY01083 (20X) , BY01084 (1X, 2X) , BY01085 (400X) , BY01086 (400X, 1000X) , BY01087 (1000X, 2000X))										
Volatiles - Ground Water										
1,1-Dichloroethane	ND	1.0	81	81	0.0				70 - 130	30
2-Hexanone	ND	5.0	95	97	2.1				70 - 130	30
Acetone	ND	5.0	86	91	5.6				70 - 130	30
Benzene	ND	0.70	85	84	1.2				70 - 130	30
Chloroform	ND	1.0	75	70	6.9				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	80	77	3.8				70 - 130	30
Cyclohexane	ND	5.0	76	78	2.6				70 - 130	30
Methyl ethyl ketone	ND	5.0	94	95	1.1				70 - 130	30
Methylcyclohexane	ND	1.0	83	85	2.4				70 - 130	30
Tetrachloroethene	ND	1.0	84	85	1.2				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	82	81	1.2				70 - 130	30
Trichloroethene	ND	1.0	84	85	1.2				70 - 130	30
Vinyl chloride	ND	1.0	70	70	0.0				70 - 130	30
% 1,2-dichlorobenzene-d4	98	%	100	100	0.0				70 - 130	30
% Bromofluorobenzene	96	%	102	101	1.0				70 - 130	30
% Dibromofluoromethane	102	%	98	100	2.0				70 - 130	30
% Toluene-d8	100	%	100	100	0.0				70 - 130	30
Comment:										
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.										
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.										
QA/QC Batch 382448 (ug/L), QC Sample No: BY01825 (BY01083 (2X) , BY01085 (40X))										
Volatiles - Ground Water										
1,1-Dichloroethane	ND	1.0	100	105	4.9				70 - 130	30
2-Hexanone	ND	5.0	91	90	1.1				70 - 130	30
Acetone	ND	5.0	98	94	4.2				70 - 130	30
Benzene	ND	0.70	97	96	1.0				70 - 130	30
Chloroform	ND	1.0	84	85	1.2				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	94	99	5.2				70 - 130	30
Cyclohexane	ND	5.0	87	91	4.5				70 - 130	30
Methyl ethyl ketone	ND	5.0	93	92	1.1				70 - 130	30
Methylcyclohexane	ND	1.0	90	90	0.0				70 - 130	30
Tetrachloroethene	ND	1.0	93	97	4.2				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	100	101	1.0				70 - 130	30
Trichloroethene	ND	1.0	96	96	0.0				70 - 130	30
Vinyl chloride	ND	1.0	90	94	4.3				70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	100	99	1.0				70 - 130	30
% Bromofluorobenzene	98	%	100	101	1.0				70 - 130	30
% Dibromofluoromethane	94	%	99	102	3.0				70 - 130	30
% Toluene-d8	100	%	100	99	1.0				70 - 130	30

QA/QC Data

SDG I.D.: GBY01083

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
April 13, 2017

Thursday, April 13, 2017

Criteria: None

State: NY

Sample Criteria Exceedances Report

GBY01083 - BIOTECH

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

Analysis Comments

April 13, 2017 SDG I.D.: GBY01083

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

NY Temperature Narration

April 13, 2017

SDG I.D.: GBY01083

The samples in this delivery group were received at 3.2°C.
(Note acceptance criteria is above freezing up to 6°C)

PAGE. 1/ 1

Apr.07.2017 10:48 AM

Page 17 of 18

NY/NJ CHAIN OF CUSTODY RECORD

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Cooler: Yes [X] No [ ]
Coolant: IPK [ ] ICE [X] No [ ]
Temp 3.2 °C Pg of

Contact Options:
[ ] Fax: 724-981-9030
[ ] Phone: 724-342-1990
[X] Email: brichnafsky@cles-env.com

Customer: BioREMEDIAL Technologies, INC.
Address: 2708 Kirila Blvd
Hermitage Pa 16148

Project: Solun Enterprises
Report to: Bert Richnafsky
Invoice to: Jan Morrocio

Project P.O: 040517

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: Bert Richnafsky Date: 4/5/17

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe
OIL=Oil B=Bulk L=Liquid

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Part 375 VOCs (see list below for report)	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [X] As is [ ] HCl (2 each)	GL Amber 1000ml [ ] As is [ ]	PL As is [ ] 250ml [ ]	PL H2SO4 [ ] As is [ ] 500ml [ ]	PL HNO3 250ml [ ]	PL NaOH 250ml [ ]	Bacteria Bottle [ ] 1000ml [ ] 500ml
01083	SB-8 GW	GW	4-5-17	12:10 pm	X				X						
01084	SB-13 GW		"	12:43 pm	X				X						
01085	SB-14 GW		"	1:25 pm	X				X						
01086	SB-12 GW		"	2:10 pm	X				X						
01087	SB-22 GW		"	3:00 pm	X				X						

Relinquished by:	Accepted by:	Date:	Time:
Bert Richnafsky	Jim Miller	4/7/17	3:17
	Kelly Bell	4/8/17	11:57

Comments, Special Requirements or Regulations: Analyte to Report: 1,1-Dichloroethene; 2-Butanone; 2-Hexanone; Acetone; Benzene; cis-1,2-Dichloroethene; Chloroform; Cyclohexane; Methyl Cyclohexane; Tetrachloroethene; Trans-1,2-Dichloroethene; Trichloroethene; Vinyl Chloride.

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[X] 5 Days
[ ] 10 Days
[ ] Other
*SURCHARGE APPLIES

NJ
[ ] Res. Criteria
[ ] Non-Res. Criteria
[ ] Impact to GW Soil Cleanup Criteria
[ ] GW Criteria

NY
[ ] TAGM 4046 GW
[ ] TAGM 4046 SOIL
[ ] NY375 Unrestricted Use Soil
[ ] NY375 Residential Soil
[ ] Restricted/Residential
[ ] Commercial
[ ] Industrial

Data Format
[ ] Phoenix Std Report
[ ] Excel
[ ] PDF
[ ] GIS/Key
[ ] EQuIS
[ ] NJ Hazsite EDD
[ ] NY EZ EDD (ASP)
[ ] Other

Data Package
[ ] NJ Reduced Deliv.*
[ ] NY Enhanced (ASP B)*
[ ] Other

State where samples were collected: NY

Cooler: Yes [X] No [ ]
Coolant: IPK [ ] ICE [X] No [ ]
Temp 3.2 °C Pg of

NY/NJ CHAIN OF CUSTODY RECORD

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Contact Options:
[ ] Fax: 724-981-9030
[ ] Phone: 724-342-1990
[X] Email: brichnatsky@les-env.com

Customer: BioRemedial Technologies, Inc.
Address: 2200 Kirila Blvd
Hermitage Pa 16148

Project: Joluyn Enterprises
Report to: Bert Richnatsky
Invoice to: Jan Morrocco

Project P.O: 040517

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 4/5/17

Analysis Request: Partial VOCs (see list below to report)

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe
OIL=Oil B=Bulk L=Liquid

Bottle columns: Soil VOA Vials ( ) H2O; ( ) methanol; GL Soil container ( ) oz; GL Soil container ( ) oz; 40 ml VOA Vial (X) As is (X) HCl (2 each); GL Amber 1000ml ( ) As is; PL As is ( ) 250ml ( ) 500ml ( ) 1000ml; PL H2SO4 ( ) 250ml ( ) 500ml; PL HNO3 250ml; PL NaOH 250ml; Bacteria Bottle

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Partial VOCs	40 ml VOA Vial
01083	SB-8 GW	GW	4-5-17	12:10 pm	X	X
01084	SB-13 GW		"	12:43 pm	X	X
01085	SB-14 GW		"	1:25 pm	X	X
01086	SB-12 GW		"	2:10 pm	X	X
01087	SB-22 GW		"	3:00 pm	X	X

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	4/7/17	3:17
	K. DellaBella	4/8/17	11:57

Turnaround: [ ] 1 Day* [ ] 2 Days* [ ] 3 Days* [X] 5 Days [ ] 10 Days [ ] Other
*SURCHARGE APPLIES

NJ: [ ] Res. Criteria [ ] Non-Res. Criteria [ ] Impact to GW Soil Cleanup Criteria [ ] GW Criteria

NY: [ ] TAGM 4046 GW [ ] TAGM 4046 SOIL [ ] NY375 Unrestricted Use Soil [ ] NY375 Residential Soil [ ] Restricted/Residential [ ] Commercial [ ] Industrial

Data Format: [ ] Phoenix Std Report [ ] Excel [ ] PDF [ ] GIS/Key [ ] EQuIS [ ] NJ Hazsite EDD [ ] NY EZ EDD (ASP) [ ] Other

Data Package: [ ] NJ Reduced Deliv.* [ ] NY Enhanced (ASP B)* [ ] Other

Comments, Special Requirements or Regulations: Analyts To Report: 1,1-Dichloroethane; 2-Butanone; 2-Hexanone; Acetone; Benzene; cis-1,2-Dichloroethene; Chloroform; Cyclohexane; Methyl Cyclohexane; Tetrachloroethene; Trans-1,2-Dichloroethene; Trichloroethene; Vinyl Chloride..

2 HCL Vials were received for each sample

State where samples were collected: NY

PHOENIX
Environmental Laboratories, Inc.

Friday, June 23, 2017

Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Project ID: JO LYN ENTERPRISES
Sample ID#s: BY40260 - BY40265

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

Phyllis Shiller

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #MA-CT-007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

June 23, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	06/12/17	10:10
Location Code:	BIOTECH	Received by:	LB	06/15/17	10:35
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	061217				

Laboratory Data

SDG ID: GBY40260
Phoenix ID: BY40260

Project ID: JO LYN ENTERPRISES
Client ID: EW-7

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	20	ug/L	20	06/17/17	MH	SW8260C
2-Hexanone	ND	50	ug/L	20	06/17/17	MH	SW8260C
Acetone	ND	50	ug/L	20	06/17/17	MH	SW8260C
Benzene	ND	14	ug/L	20	06/17/17	MH	SW8260C
cis-1,2-Dichloroethene	5200	500	ug/L	500	06/19/17	MH	SW8260C
Cyclohexane	ND	20	ug/L	20	06/17/17	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	20	06/17/17	MH	SW8260C
Methylcyclohexane	ND	20	ug/L	20	06/17/17	MH	SW8260C
Tetrachloroethene	ND	20	ug/L	20	06/17/17	MH	SW8260C
trans-1,2-Dichloroethene	38	20	ug/L	20	06/17/17	MH	SW8260C
Trichloroethene	8200	500	ug/L	500	06/19/17	MH	SW8260C
Vinyl chloride	1400	500	ug/L	500	06/19/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	20	06/17/17	MH	70 - 130 %
% Bromofluorobenzene	100		%	20	06/17/17	MH	70 - 130 %
% Dibromofluoromethane	95		%	20	06/17/17	MH	70 - 130 %
% Toluene-d8	98		%	20	06/17/17	MH	70 - 130 %
Volatile Library Search Top 10	Completed				06/19/17	MH	1

Project ID: JO LYN ENTERPRISES
Client ID: EW-7

Phoenix I.D.: BY40260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director
June 23, 2017
Reviewed and Released by: Ethan Lee, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

June 23, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	06/12/17	10:10
Location Code:	BIOTECH	Received by:	LB	06/15/17	10:35
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	061217				

Laboratory Data

SDG ID: GBY40260
Phoenix ID: BY40261

Project ID: JO LYN ENTERPRISES
Client ID: EW-7 DUP

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	20	ug/L	20	06/17/17	MH	SW8260C
2-Hexanone	ND	50	ug/L	20	06/17/17	MH	SW8260C
Acetone	ND	50	ug/L	20	06/17/17	MH	SW8260C
Benzene	ND	14	ug/L	20	06/17/17	MH	SW8260C
cis-1,2-Dichloroethene	5700	500	ug/L	500	06/19/17	MH	SW8260C
Cyclohexane	ND	20	ug/L	20	06/17/17	MH	SW8260C
Methyl ethyl ketone	ND	50	ug/L	20	06/17/17	MH	SW8260C
Methylcyclohexane	ND	20	ug/L	20	06/17/17	MH	SW8260C
Tetrachloroethene	ND	20	ug/L	20	06/17/17	MH	SW8260C
trans-1,2-Dichloroethene	34	20	ug/L	20	06/17/17	MH	SW8260C
Trichloroethene	6400	500	ug/L	500	06/19/17	MH	SW8260C
Vinyl chloride	1900	500	ug/L	500	06/19/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	20	06/17/17	MH	70 - 130 %
% Bromofluorobenzene	99		%	20	06/17/17	MH	70 - 130 %
% Dibromofluoromethane	92		%	20	06/17/17	MH	70 - 130 %
% Toluene-d8	95		%	20	06/17/17	MH	70 - 130 %
Volatile Library Search Top 10	Completed				06/19/17	MH	1

Project ID: JO LYN ENTERPRISES
Client ID: EW-7 DUP

Phoenix I.D.: BY40261

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director
June 23, 2017
Reviewed and Released by: Ethan Lee, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

June 23, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	06/12/17	10:25
Location Code:	BIOTECH	Received by:	LB	06/15/17	10:35
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	061217				

Laboratory Data

SDG ID: GBY40260
Phoenix ID: BY40262

Project ID: JO LYN ENTERPRISES
Client ID: EW-9

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1-Dichloroethane	ND		1.0	ug/L	1	06/17/17	MH	SW8260C
2-Hexanone	ND		2.5	ug/L	1	06/17/17	MH	SW8260C
Acetone	96	S	13	ug/L	5	06/19/17	MH	SW8260C
Benzene	ND		0.70	ug/L	1	06/17/17	MH	SW8260C
cis-1,2-Dichloroethene	ND		1.0	ug/L	1	06/17/17	MH	SW8260C
Cyclohexane	ND		1.0	ug/L	1	06/17/17	MH	SW8260C
Methyl ethyl ketone	15		2.5	ug/L	1	06/17/17	MH	SW8260C
Methylcyclohexane	ND		1.0	ug/L	1	06/17/17	MH	SW8260C
Tetrachloroethene	ND		1.0	ug/L	1	06/17/17	MH	SW8260C
trans-1,2-Dichloroethene	ND		1.0	ug/L	1	06/17/17	MH	SW8260C
Trichloroethene	ND		1.0	ug/L	1	06/17/17	MH	SW8260C
Vinyl chloride	ND		1.0	ug/L	1	06/17/17	MH	SW8260C
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	99			%	1	06/17/17	MH	70 - 130 %
% Bromofluorobenzene	95			%	1	06/17/17	MH	70 - 130 %
% Dibromofluoromethane	90			%	1	06/17/17	MH	70 - 130 %
% Toluene-d8	93			%	1	06/17/17	MH	70 - 130 %
Volatile Library Search Top 10	Completed					06/19/17	MH	1

Project ID: JO LYN ENTERPRISES
Client ID: EW-9

Phoenix I.D.: BY40262

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
June 23, 2017
Reviewed and Released by: Ethan Lee, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

June 23, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	06/12/17	10:35
Location Code:	BIOTECH	Received by:	LB	06/15/17	10:35
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	061217				

Laboratory Data

SDG ID: GBY40260
Phoenix ID: BY40263

Project ID: JO LYN ENTERPRISES
Client ID: SB-28

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	100	ug/L	100	06/19/17	MH	SW8260C
2-Hexanone	ND	250	ug/L	100	06/19/17	MH	SW8260C
Acetone	ND	250	ug/L	100	06/19/17	MH	SW8260C
Benzene	ND	70	ug/L	100	06/19/17	MH	SW8260C
cis-1,2-Dichloroethene	79000	5000	ug/L	5000	06/20/17	MH	SW8260C
Cyclohexane	ND	100	ug/L	100	06/19/17	MH	SW8260C
Methyl ethyl ketone	ND	250	ug/L	100	06/19/17	MH	SW8260C
Methylcyclohexane	ND	100	ug/L	100	06/19/17	MH	SW8260C
Tetrachloroethene	ND	100	ug/L	100	06/19/17	MH	SW8260C
trans-1,2-Dichloroethene	490	100	ug/L	100	06/19/17	MH	SW8260C
Trichloroethene	43000	2500	ug/L	2500	06/19/17	MH	SW8260C
Vinyl chloride	11000	2500	ug/L	2500	06/19/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	100	06/19/17	MH	70 - 130 %
% Bromofluorobenzene	102		%	100	06/19/17	MH	70 - 130 %
% Dibromofluoromethane	95		%	100	06/19/17	MH	70 - 130 %
% Toluene-d8	107		%	100	06/19/17	MH	70 - 130 %
Volatile Library Search Top 10	Completed				06/20/17	MH	1

Project ID: JO LYN ENTERPRISES
Client ID: SB-28

Phoenix I.D.: BY40263

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
June 23, 2017
Reviewed and Released by: Ethan Lee, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

June 23, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	06/12/17	10:50
Location Code:	BIOTECH	Received by:	LB	06/15/17	10:35
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	061217				

Laboratory Data

SDG ID: GBY40260
Phoenix ID: BY40264

Project ID: JO LYN ENTERPRISES
Client ID: SB-11

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1-Dichloroethane	ND		5.0	ug/L	5	06/19/17	MH	SW8260C
2-Hexanone	ND		13	ug/L	5	06/19/17	MH	SW8260C
Acetone	76	S	13	ug/L	5	06/19/17	MH	SW8260C
Benzene	ND		3.5	ug/L	5	06/19/17	MH	SW8260C
cis-1,2-Dichloroethene	76		5.0	ug/L	5	06/19/17	MH	SW8260C
Cyclohexane	ND		5.0	ug/L	5	06/19/17	MH	SW8260C
Methyl ethyl ketone	77		13	ug/L	5	06/19/17	MH	SW8260C
Methylcyclohexane	ND		5.0	ug/L	5	06/19/17	MH	SW8260C
Tetrachloroethene	ND		5.0	ug/L	5	06/19/17	MH	SW8260C
trans-1,2-Dichloroethene	ND		5.0	ug/L	5	06/19/17	MH	SW8260C
Trichloroethene	ND		5.0	ug/L	5	06/19/17	MH	SW8260C
Vinyl chloride	11		5.0	ug/L	5	06/19/17	MH	SW8260C
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	98			%	5	06/19/17	MH	70 - 130 %
% Bromofluorobenzene	104			%	5	06/19/17	MH	70 - 130 %
% Dibromofluoromethane	96			%	5	06/19/17	MH	70 - 130 %
% Toluene-d8	102			%	5	06/19/17	MH	70 - 130 %
Volatile Library Search Top 10	Completed					06/20/17	MH	1

Project ID: JO LYN ENTERPRISES
Client ID: SB-11

Phoenix I.D.: BY40264

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
June 23, 2017
Reviewed and Released by: Ethan Lee, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

June 23, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	06/12/17	11:05
Location Code:	BIOTECH	Received by:	LB	06/15/17	10:35
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	061217				

Laboratory Data

SDG ID: GBY40260
Phoenix ID: BY40265

Project ID: JO LYN ENTERPRISES
Client ID: EW-20

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	100	ug/L	100	06/19/17	MH	SW8260C
2-Hexanone	ND	250	ug/L	100	06/19/17	MH	SW8260C
Acetone	ND	250	ug/L	100	06/19/17	MH	SW8260C
Benzene	ND	70	ug/L	100	06/19/17	MH	SW8260C
cis-1,2-Dichloroethene	9200	500	ug/L	500	06/20/17	MH	SW8260C
Cyclohexane	ND	100	ug/L	100	06/19/17	MH	SW8260C
Methyl ethyl ketone	ND	250	ug/L	100	06/19/17	MH	SW8260C
Methylcyclohexane	ND	100	ug/L	100	06/19/17	MH	SW8260C
Tetrachloroethene	ND	100	ug/L	100	06/19/17	MH	SW8260C
trans-1,2-Dichloroethene	ND	100	ug/L	100	06/19/17	MH	SW8260C
Trichloroethene	3000	250	ug/L	250	06/19/17	MH	SW8260C
Vinyl chloride	830	100	ug/L	100	06/19/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	100	06/19/17	MH	70 - 130 %
% Bromofluorobenzene	101		%	100	06/19/17	MH	70 - 130 %
% Dibromofluoromethane	96		%	100	06/19/17	MH	70 - 130 %
% Toluene-d8	100		%	100	06/19/17	MH	70 - 130 %
Volatile Library Search Top 10	Completed				06/20/17	MH	1

Project ID: JO LYN ENTERPRISES
Client ID: EW-20

Phoenix I.D.: BY40265

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
June 23, 2017
Reviewed and Released by: Ethan Lee, Project Manager

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: EW-7

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBY40260

Matrix:(soil/water) WATER Lab Sample ID: BY40260

Sample wt/vol: 25 (g/mL) mL Lab File ID: 0616P45.D

Level: (low/med) Date Received: 06/15/17

% Moisture: not dec. 100 Date Analyzed: 06/17/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 20

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID

EW-7 DUP

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBY40260

Matrix:(soil/water) WATER Lab Sample ID: BY40261

Sample wt/vol: 25 (g/mL) mL Lab File ID: 0616P46.D

Level: (low/med) Date Received: 06/15/17

% Moisture: not dec. 100 Date Analyzed: 06/17/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 20

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: EW-9

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBY40260

Matrix:(soil/water) WATER Lab Sample ID: BY40262

Sample wt/vol: 25 (g/mL) mL Lab File ID: 0616P47.D

Level: (low/med) Date Received: 06/15/17

% Moisture: not dec. 100 Date Analyzed: 06/17/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 1

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000543-59-9	Pentane, 1-chloro-	4.928	1.1	JN
000066-25-1	Hexanal	5.948	2.4	JN
000918-00-3	2-Propanone, 1,1,1-trichloro-	6.372	2.2	JN
000124-13-0	Octanal	7.930	1.5	JN
	unknown	8.563	8	J

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-28

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBY40260

Matrix:(soil/water) WATER Lab Sample ID: BY40263

Sample wt/vol: 25 (g/mL) mL Lab File ID: 0619P28.D

Level: (low/med) Date Received: 06/15/17

% Moisture: not dec. 100 Date Analyzed: 06/19/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 100

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-11

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBY40260

Matrix:(soil/water) WATER Lab Sample ID: BY40264

Sample wt/vol: 25 (g/mL) mL Lab File ID: 0619P30.D

Level: (low/med) Date Received: 06/15/17

% Moisture: not dec. 100 Date Analyzed: 06/19/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 5

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 9 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000109-66-0	Pentane	1.717	47	JN
000123-38-6	Propanal	2.250	20	JN
000123-72-8	Butanal	3.354	29	JN
	unknown	4.703	150	J
000071-41-0	1-Pentanol	5.561	9.1	JN
000066-25-1	Hexanal	5.953	310	JN
	unknown	5.958	340	J
000124-13-0	Octanal	7.930	6.2	JN
002548-87-0	2-Octenal, (E)-	8.490	31	JN

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: EW-20

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBY40260

Matrix:(soil/water) WATER Lab Sample ID: BY40265

Sample wt/vol: 25 (g/mL) mL Lab File ID: 0619P32.D

Level: (low/med) Date Received: 06/15/17

% Moisture: not dec. 100 Date Analyzed: 06/19/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 100

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

June 23, 2017

QA/QC Data

SDG I.D.: GBY40260

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 390515 (ug/L), QC Sample No: BY39232 (BY40260 (20X) , BY40261 (20X) , BY40262)										
Volatiles - Ground Water										
1,1-Dichloroethane	ND	1.0	89	93	4.4				70 - 130	30
2-Hexanone	ND	5.0	85	93	9.0				70 - 130	30
Acetone	ND	5.0	78	81	3.8				70 - 130	30
Benzene	ND	0.70	88	91	3.4				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	89	90	1.1				70 - 130	30
Cyclohexane	ND	5.0	83	86	3.6				70 - 130	30
Methyl ethyl ketone	ND	5.0	88	95	7.7				70 - 130	30
Methylcyclohexane	ND	1.0	90	92	2.2				70 - 130	30
Tetrachloroethene	ND	1.0	85	87	2.3				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	87	88	1.1				70 - 130	30
Trichloroethene	ND	1.0	87	89	2.3				70 - 130	30
Vinyl chloride	ND	1.0	83	84	1.2				70 - 130	30
% 1,2-dichlorobenzene-d4	98	%	99	100	1.0				70 - 130	30
% Bromofluorobenzene	101	%	100	100	0.0				70 - 130	30
% Dibromofluoromethane	93	%	93	94	1.1				70 - 130	30
% Toluene-d8	100	%	100	100	0.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 390687 (ug/L), QC Sample No: BY41982 (BY40260 (500X) , BY40261 (500X) , BY40262 (5X) , BY40263 (2500X) , BY40265 (250X))										
Volatiles - Ground Water										
Acetone	ND	5.0	86	85	1.2				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	97	96	1.0				70 - 130	30
Trichloroethene	ND	1.0	99	96	3.1				70 - 130	30
Vinyl chloride	ND	1.0	96	92	4.3				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 390689 (ug/L), QC Sample No: BY42264 (BY40263 (100X) , BY40264 (5X) , BY40265 (100X))										
Volatiles - Ground Water										
1,1-Dichloroethane	ND	1.0	114	91	22.4				70 - 130	30
2-Hexanone	ND	5.0	126	99	24.0				70 - 130	30
Acetone	ND	5.0	99	82	18.8				70 - 130	30
Benzene	ND	0.70	113	90	22.7				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	112	89	22.9				70 - 130	30
Cyclohexane	ND	5.0	103	84	20.3				70 - 130	30
Methyl ethyl ketone	ND	5.0	122	99	20.8				70 - 130	30
Methylcyclohexane	ND	1.0	113	92	20.5				70 - 130	30

QA/QC Data

SDG I.D.: GBY40260

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Tetrachloroethene	ND	1.0	107	85	22.9				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	108	86	22.7				70 - 130	30
Trichloroethene	ND	1.0	110	87	23.4				70 - 130	30
Vinyl chloride	ND	1.0	101	82	20.8				70 - 130	30
% 1,2-dichlorobenzene-d4	98	%	98	98	0.0				70 - 130	30
% Bromofluorobenzene	101	%	102	102	0.0				70 - 130	30
% Dibromofluoromethane	95	%	98	96	2.1				70 - 130	30
% Toluene-d8	102	%	101	101	0.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 390810 (ug/L), QC Sample No: BY42983 (BY40263 (5000X) , BY40265 (500X))

Volatiles - Ground Water

cis-1,2-Dichloroethene	ND	1.0	95	102	7.1				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
June 23, 2017

Friday, June 23, 2017

Criteria: None

State: NY

Sample Criteria Exceedances Report

GBY40260 - BIOTECH

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

Analysis Comments

June 23, 2017 SDG I.D.: GBY40260

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

NY Temperature Narration

June 23, 2017

SDG I.D.: GBY40260

The samples in this delivery group were received at 3.0°C.
(Note acceptance criteria is above freezing up to 6°C)

Cooler: Yes [✓] No [ ]
Coolant: IPK [ ] ICE [✓] No [ ]

PHOENIX
Environmental Laboratories, Inc.

NY/NJ CHAIN OF CUSTODY RECORD

Temp 3.0°C Pg of

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Contact Options:
[ ] Fax: 724-981-9030
[ ] Phone: 724-342-1980
[X] Email: brichnafsky@ces-env.com

Customer: Bio-Remedial Technologies Inc.
Address: 2700 Kirila Blvd
Hermitage Pa 16148

Project: Jo Lyn Enterprises
Report to: Bert Richnafsky
Invoice to: Jan Mazzocio

Project P.O: Ole 1217

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 6-12-17

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe
OIL=Oil B=Bulk L=Liquid

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Analysis Request: Partial VOCs (see list below to report)	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [X] As is [X] HCl (2 each)	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml [ ] 1000ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle
402600	EW-7	GW	6-12-17	10:10	X				X						
402601	EW-7 Dup	GW	"	10:10	X				X						
402602	EW-9	GW	"	10:25	X				X						
402603	SB-28	GW	"	10:35	X				X						
402604	SB-11	GW	"	10:50	X				X						
402605	EW-20	GW	"	11:05	X				X						

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	6/12/17	4:20pm
[signature]			
[signature]	[signature]	6/15/17	10:35

Comments, Special Requirements or Regulations: ~~Analytes~~ to report: 1,1-Dichloroethane; 2-Butanone; 2-Hexanone; Acetone; Benzene; cis-1,2-Dichloroethene; cyclohexane; methyl cyclohexane; tetrachloroethane; trans-1,2-Dichloroethene; Trichloroethene; Vinyl Chloride

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[X] 5 Days
[ ] 10 Days
[ ] Other
* SURCHARGE APPLIES

NJ
[ ] Res. Criteria
[ ] Non-Res. Criteria
[ ] Impact to GW Soil Cleanup Criteria
[ ] GW Criteria

NY
[ ] NY 375 GWP
[ ] NY375 Unrestricted Use Soil
[ ] NY375 Residential Soil
[ ] Restricted/Residential
[ ] Commercial
[ ] Industrial

Data Format
[ ] Phoenix Std Report
[ ] Excel
[ ] PDF
[ ] GIS/Key
[ ] EQuIS
[ ] NJ Hazsite EDD
[ ] NY EZ EDD (ASP)
[ ] Other

Data Package
[ ] NJ Reduced Deliv.*
[ ] NY Enhanced (ASP B)*
[ ] Other

State where samples were collected: NY

PHOENIX
Environmental Laboratories, Inc.

Monday, July 22, 2019

Attn: Bert Richnafsky
BioRemedial Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Project ID: JO-LYN
SDG ID: GCD57679
Sample ID#s: CD57679 - CD57680

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Telephone (860) 645-1102 Fax (860) 645-0823

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Sample Id Cross Reference

July 22, 2019

SDG I.D.: GCD57679

Project ID: JO-LYN

Client Id	Lab Id	Matrix
JO-LYN, SB-28	CD57679	GROUND WATER
JO-LYN, SB-22	CD57680	GROUND WATER

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

July 22, 2019

FOR: Attn: Bert Richnafsky
BioRemedial Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		07/11/19	11:05
Location Code:	BIOTECH	Received by:	CP	07/16/19	11:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCD57679
Phoenix ID: CD57679

Project ID: JO-LYN
Client ID: JO-LYN, SB-28

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	200	ug/L	200	07/18/19	MH	SW8260C
2-Hexanone	ND	500	ug/L	200	07/18/19	MH	SW8260C
Acetone	ND	500	ug/L	200	07/18/19	MH	SW8260C
Benzene	ND	140	ug/L	200	07/18/19	MH	SW8260C
cis-1,2-Dichloroethene	150000	10000	ug/L	10000	07/18/19	MH	SW8260C
Cyclohexane	ND	200	ug/L	200	07/18/19	MH	SW8260C
Methyl ethyl ketone	ND	500	ug/L	200	07/18/19	MH	SW8260C
Methylcyclohexane	ND	200	ug/L	200	07/18/19	MH	SW8260C
Tetrachloroethene	ND	200	ug/L	200	07/18/19	MH	SW8260C
trans-1,2-Dichloroethene	1400	200	ug/L	200	07/18/19	MH	SW8260C
Trichloroethene	34000	10000	ug/L	10000	07/18/19	MH	SW8260C
Vinyl chloride	16000	10000	ug/L	10000	07/18/19	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (200x)	100		%	200	07/18/19	MH	70 - 130 %
% Bromofluorobenzene (200x)	95		%	200	07/18/19	MH	70 - 130 %
% Dibromofluoromethane (200x)	104		%	200	07/18/19	MH	70 - 130 %
% Toluene-d8 (200x)	105		%	200	07/18/19	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10000x)	99		%	10000	07/18/19	MH	70 - 130 %
% Bromofluorobenzene (10000x)	93		%	10000	07/18/19	MH	70 - 130 %
% Dibromofluoromethane (10000x)	105		%	10000	07/18/19	MH	70 - 130 %
% Toluene-d8 (10000x)	99		%	10000	07/18/19	MH	70 - 130 %

Project ID: JO-LYN
Client ID: JO-LYN, SB-28

Phoenix I.D.: CD57679

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
July 22, 2019
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

July 22, 2019

FOR: Attn: Bert Richnafsky
BioRemedial Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		07/11/19	11:15
Location Code:	BIOTECH	Received by:	CP	07/16/19	11:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCD57679
Phoenix ID: CD57680

Project ID: JO-LYN
Client ID: JO-LYN, SB-22

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1-Dichloroethane	ND		20	ug/L	20	07/18/19	MH	SW8260C
2-Hexanone	ND		50	ug/L	20	07/18/19	MH	SW8260C
Acetone	58	S	50	ug/L	20	07/18/19	MH	SW8260C
Benzene	ND		14	ug/L	20	07/18/19	MH	SW8260C
cis-1,2-Dichloroethene	24000		2500	ug/L	2500	07/18/19	MH	SW8260C
Cyclohexane	ND		20	ug/L	20	07/18/19	MH	SW8260C
Methyl ethyl ketone	ND		50	ug/L	20	07/18/19	MH	SW8260C
Methylcyclohexane	ND		20	ug/L	20	07/18/19	MH	SW8260C
Tetrachloroethene	ND		20	ug/L	20	07/18/19	MH	SW8260C
trans-1,2-Dichloroethene	110		20	ug/L	20	07/18/19	MH	SW8260C
Trichloroethene	260		20	ug/L	20	07/18/19	MH	SW8260C
Vinyl chloride	10000		2500	ug/L	2500	07/18/19	MH	SW8260C
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4 (20x)	101			%	20	07/18/19	MH	70 - 130 %
% Bromofluorobenzene (20x)	93			%	20	07/18/19	MH	70 - 130 %
% Dibromofluoromethane (20x)	101			%	20	07/18/19	MH	70 - 130 %
% Toluene-d8 (20x)	100			%	20	07/18/19	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (2500x)	99			%	2500	07/18/19	MH	70 - 130 %
% Bromofluorobenzene (2500x)	94			%	2500	07/18/19	MH	70 - 130 %
% Dibromofluoromethane (2500x)	103			%	2500	07/18/19	MH	70 - 130 %
% Toluene-d8 (2500x)	100			%	2500	07/18/19	MH	70 - 130 %

Project ID: JO-LYN
Client ID: JO-LYN, SB-22

Phoenix I.D.: CD57680

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

S - Laboratory solvent, contamination is possible.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
July 22, 2019
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

July 22, 2019

QA/QC Data

SDG I.D.: GCD57679

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 488550 (ug/L), QC Sample No: CD58570 (CD57679 (200X, 10000X) , CD57680 (20X, 2500X))										
Volatiles - Ground Water										
1,1-Dichloroethane	ND	1.0	95	99	4.1				70 - 130	30
2-Hexanone	ND	5.0	106	105	0.9				70 - 130	30
Acetone	ND	5.0	91	89	2.2				70 - 130	30
Benzene	ND	0.70	95	99	4.1				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	95	100	5.1				70 - 130	30
Cyclohexane	ND	5.0	85	89	4.6				70 - 130	30
Methyl ethyl ketone	ND	5.0	103	110	6.6				70 - 130	30
Methylcyclohexane	ND	1.0	92	93	1.1				70 - 130	30
Tetrachloroethene	ND	1.0	91	94	3.2				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	98	104	5.9				70 - 130	30
Trichloroethene	ND	1.0	93	98	5.2				70 - 130	30
Vinyl chloride	ND	1.0	104	110	5.6				70 - 130	30
% 1,2-dichlorobenzene-d4	101	%	102	101	1.0				70 - 130	30
% Bromofluorobenzene	94	%	100	100	0.0				70 - 130	30
% Dibromofluoromethane	110	%	105	107	1.9				70 - 130	30
% Toluene-d8	99	%	99	100	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%, 25-160% for Chloroethane-HL and Trichlorofluoromethane-HL.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
July 22, 2019

Monday, July 22, 2019

Criteria: None

State: NY

Sample Criteria Exceedances Report

GCD57679 - BIOTECH

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

Analysis Comments

July 22, 2019 SDG I.D.: GCD57679

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

VOA Narration

CHEM02 07/18/19-1: CD57679, CD57680

The following Initial Calibration compounds did not meet recommended response factors: 2-Hexanone 0.073 (0.1), Acetone 0.047 (0.1), Methyl ethyl ketone 0.059 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: Acetone 0.043 (0.05)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

NY Temperature Narration

July 22, 2019

SDG I.D.: GCD57679

The samples in this delivery group were received at 5.0°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes [X] No [ ]
Coolant: IPK [ ] ICE [X] No [ ]

CHAIN OF CUSTODY RECORD

Temp 5.2°C Pg of

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact Options:
[ ] Fax:
[ ] Phone:
[X] Email: brichnafsky@ces-eml.com

Customer: ~~Compliance Environ Svcs~~ BioRemedial Technologies, Inc.
Address: 2700 Kirila Blvd.
Hermitage, PA 16148

Project: Jo-Lyn
Report to: Bert Richnafsky
Invoice to: Jah
QUOTE #

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: B Richnafsky Date: 7/11/19

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil
B=Bulk L=Liquid X = _____(Other)

Analysis Request: VOCs Part 375 (see below)

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOCs Part 375 (see below)	GL Amber 8 oz. w/H3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [X] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
57679	Jo-Lyn, SB-28	GW	7-11-19	11:05	X					2							
57680	Jo-Lyn, SB-22	GW	7-11-19	11:15	X					2							

Relinquished by:	Accepted by:	Date:	Time:
B Richnafsky	Tam Fuller	7/15/19	3:10pm
Tam Fuller		7/15/19	3:15 pm
RECEIVED		7/16/19	11:03

Comments, Special Requirements or Regulations:
~~Report 1,1 Dichloroethane~~
Report the parameters provided on the attached list.

Turnaround Time:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[X] Standard
[ ] Other
* SURCHARGE APPLIES

RI
[ ] Direct Exposure (Residential)
[ ] GW
[ ] Other

CT
[ ] RCP Cert
[ ] GW Protection
[ ] SW Protection
[ ] GA Mobility
[ ] GB Mobility
[ ] Residential DEC
[ ] I/C DEC
[ ] Other

MA
[ ] MCP Certification
[ ] GW-1
[ ] GW-2
[ ] GW-3
[ ] S-1 GW-1 [ ] S-1 GW-2 [ ] S-1 GW-3
[ ] S-2 GW-1 [ ] S-2 GW-2 [ ] S-2 GW-3
[ ] S-3 GW-1 [ ] S-3 GW-2 [ ] S-3 GW-3
[ ] MWRA eSMART [ ] Other

State where samples were collected: NY

Data Format
[ ] Excel
[X] PDF
[ ] GIS/Key
[ ] EQuIS
[ ] Other

Data Package
[ ] Tier II Checklist
[ ] Full Data Package*
[ ] Phoenix Std Report
[ ] Other
* SURCHARGE APPLIES

GCD57679

BioRemedial Technologies
Jo-Lyn Site (Former Standard Portable)
13 West Lake Rd, Mayville, NY 14757

Chemical Parameters to Report

1,1-Dichloroethane
2-Butanone
2-Hexanone
Acetone
Benzene
cis-1,2-Dichloroethene
Cyclohexane
Methyl Cyclohexane
Tetrachloroethene
trans-1,2-Dichloroethene
Trichloroethene
Vinyl Chloride

PHOENIX
Environmental Laboratories, Inc.

Friday, August 11, 2017

Attn: Mr. Bert Richnafsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Project ID: JOLYN ENTERPRISES
Sample ID#s: BY75590 - BY75592

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

August 11, 2017

FOR: Attn: Mr. Bert Richnafsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		07/27/17	9:45
Location Code:	BIOTECH	Received by:	LB	08/01/17	10:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	072717				

Laboratory Data

SDG ID: GBY75590
Phoenix ID: BY75590

Project ID: JOLYN ENTERPRISES
Client ID: SB-14 (GW)

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1,1-Trichloroethane	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
1,1,2-Trichloroethane	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
1,1-Dichloroethane	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
1,1-Dichloroethene	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
1,2-Dibromoethane	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
1,2-Dichlorobenzene	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
1,2-Dichloroethane	ND		1.2	ug/L	2	08/08/17	MH	SW8260C
1,2-Dichloropropane	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
1,3-Dichlorobenzene	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
1,4-Dichlorobenzene	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
2-Hexanone	ND		5.0	ug/L	2	08/08/17	MH	SW8260C
4-Methyl-2-pentanone	18		5.0	ug/L	2	08/08/17	MH	SW8260C
Acetone	6000	E	50	ug/L	20	08/04/17	MH	SW8260C
Benzene	ND		1.4	ug/L	2	08/08/17	MH	SW8260C
Bromochloromethane	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
Bromodichloromethane	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
Bromoform	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
Bromomethane	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
Carbon Disulfide	4.3		2.0	ug/L	2	08/08/17	MH	SW8260C
Carbon tetrachloride	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
Chlorobenzene	ND		2.0	ug/L	2	08/08/17	MH	SW8260C
Chloroethane	ND		2.0	ug/L	2	08/08/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: SB-14 (GW)

Phoenix I.D.: BY75590

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Chloroform	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Chloromethane	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
cis-1,2-Dichloroethene	5.4	2.0	ug/L	2	08/08/17	MH	SW8260C	
cis-1,3-Dichloropropene	ND	0.80	ug/L	2	08/08/17	MH	SW8260C	
Cyclohexane	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Dibromochloromethane	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Dichlorodifluoromethane	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Ethylbenzene	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Isopropylbenzene	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
m&p-Xylene	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Methyl ethyl ketone	150	50	ug/L	20	08/04/17	MH	SW8260C	
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Methylacetate	ND	10	ug/L	2	08/08/17	MH	SW8260C	
Methylcyclohexane	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Methylene chloride	ND	6.0	ug/L	2	08/08/17	MH	SW8260C	
o-Xylene	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Styrene	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Tetrachloroethene	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Toluene	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Total Xylenes	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
trans-1,2-Dichloroethene	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
trans-1,3-Dichloropropene	ND	0.80	ug/L	2	08/08/17	MH	SW8260C	
Trichloroethene	150	20	ug/L	20	08/04/17	MH	SW8260C	
Trichlorofluoromethane	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Trichlorotrifluoroethane	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
Vinyl chloride	ND	2.0	ug/L	2	08/08/17	MH	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	101		%	2	08/08/17	MH	70 - 130 %	
% Bromofluorobenzene	98		%	2	08/08/17	MH	70 - 130 %	
% Dibromofluoromethane	98		%	2	08/08/17	MH	70 - 130 %	
% Toluene-d8	103		%	2	08/08/17	MH	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	200	ug/l	2	08/08/17	MH	SW8260C	
Volatile Library Search Top 10	Completed				08/09/17	MH		1

Project ID: JOLYN ENTERPRISES
Client ID: SB-14 (GW)

Phoenix I.D.: BY75590

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
E = Estimated value. Sample result was above the calibration range. Subsequent dilution did not correlate well with original analysis results. The higher results are reported.

BY75590 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
August 11, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

August 11, 2017

FOR: Attn: Mr. Bert Richnafsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		07/27/17	10:00
Location Code:	BIOTECH	Received by:	LB	08/01/17	10:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	072717				

Laboratory Data

SDG ID: GBY75590
Phoenix ID: BY75591

Project ID: JOLYN ENTERPRISES
Client ID: SB-12 (GW)

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1,1-Trichloroethane	ND		20	ug/L	20	08/04/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND		20	ug/L	20	08/04/17	MH	SW8260C
1,1,2-Trichloroethane	ND		20	ug/L	20	08/04/17	MH	SW8260C
1,1-Dichloroethane	ND		20	ug/L	20	08/04/17	MH	SW8260C
1,1-Dichloroethene	61		20	ug/L	20	08/04/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND		20	ug/L	20	08/04/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND		20	ug/L	20	08/04/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND		20	ug/L	20	08/04/17	MH	SW8260C
1,2-Dibromoethane	ND		20	ug/L	20	08/04/17	MH	SW8260C
1,2-Dichlorobenzene	ND		20	ug/L	20	08/04/17	MH	SW8260C
1,2-Dichloroethane	ND		12	ug/L	20	08/04/17	MH	SW8260C
1,2-Dichloropropane	ND		20	ug/L	20	08/04/17	MH	SW8260C
1,3-Dichlorobenzene	ND		20	ug/L	20	08/04/17	MH	SW8260C
1,4-Dichlorobenzene	ND		20	ug/L	20	08/04/17	MH	SW8260C
2-Hexanone	ND		50	ug/L	20	08/04/17	MH	SW8260C
4-Methyl-2-pentanone	ND		50	ug/L	20	08/04/17	MH	SW8260C
Acetone	120	S	50	ug/L	20	08/04/17	MH	SW8260C
Benzene	ND		14	ug/L	20	08/04/17	MH	SW8260C
Bromochloromethane	ND		20	ug/L	20	08/04/17	MH	SW8260C
Bromodichloromethane	ND		20	ug/L	20	08/04/17	MH	SW8260C
Bromoform	ND		20	ug/L	20	08/04/17	MH	SW8260C
Bromomethane	ND		20	ug/L	20	08/04/17	MH	SW8260C
Carbon Disulfide	ND		20	ug/L	20	08/04/17	MH	SW8260C
Carbon tetrachloride	ND		20	ug/L	20	08/04/17	MH	SW8260C
Chlorobenzene	ND		20	ug/L	20	08/04/17	MH	SW8260C
Chloroethane	ND		20	ug/L	20	08/04/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: SB-12 (GW)

Phoenix I.D.: BY75591

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloroform	ND	20	ug/L	20	08/04/17	MH	SW8260C
Chloromethane	ND	20	ug/L	20	08/04/17	MH	SW8260C
cis-1,2-Dichloroethene	29000	2000	ug/L	2000	08/08/17	MH	SW8260C
cis-1,3-Dichloropropene	ND	8.0	ug/L	20	08/04/17	MH	SW8260C
Cyclohexane	ND	20	ug/L	20	08/04/17	MH	SW8260C
Dibromochloromethane	ND	20	ug/L	20	08/04/17	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	08/04/17	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	08/04/17	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	08/04/17	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	08/04/17	MH	SW8260C
Methyl ethyl ketone	280	50	ug/L	20	08/04/17	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	08/04/17	MH	SW8260C
Methylacetate	ND	100	ug/L	20	08/04/17	MH	SW8260C
Methylcyclohexane	ND	20	ug/L	20	08/04/17	MH	SW8260C
Methylene chloride	ND	60	ug/L	20	08/04/17	MH	SW8260C
o-Xylene	ND	20	ug/L	20	08/04/17	MH	SW8260C
Styrene	ND	20	ug/L	20	08/04/17	MH	SW8260C
Tetrachloroethene	ND	20	ug/L	20	08/04/17	MH	SW8260C
Toluene	ND	20	ug/L	20	08/04/17	MH	SW8260C
Total Xylenes	ND	20	ug/L	20	08/04/17	MH	SW8260C
trans-1,2-Dichloroethene	140	20	ug/L	20	08/04/17	MH	SW8260C
trans-1,3-Dichloropropene	ND	8.0	ug/L	20	08/04/17	MH	SW8260C
Trichloroethene	100	20	ug/L	20	08/04/17	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	08/04/17	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	08/04/17	MH	SW8260C
Vinyl chloride	730	100	ug/L	100	08/08/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	20	08/04/17	MH	70 - 130 %
% Bromofluorobenzene	99		%	20	08/04/17	MH	70 - 130 %
% Dibromofluoromethane	101		%	20	08/04/17	MH	70 - 130 %
% Toluene-d8	100		%	20	08/04/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	2000	ug/l	20	08/04/17	MH	SW8260C
Volatile Library Search Top 10	Completed				08/06/17	MH	[1]

Project ID: JOLYN ENTERPRISES
Client ID: SB-12 (GW)

Phoenix I.D.: BY75591

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

BY75591 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
August 11, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

August 11, 2017

FOR: Attn: Mr. Bert Richnafsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		07/27/17	10:15
Location Code:	BIOTECH	Received by:	LB	08/01/17	10:24
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	072717				

Laboratory Data

SDG ID: GBY75590
Phoenix ID: BY75592

Project ID: JOLYN ENTERPRISES
Client ID: EW-9 (GW)

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1,1-Trichloroethane	ND		20	ug/L	20	08/08/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND		20	ug/L	20	08/08/17	MH	SW8260C
1,1,2-Trichloroethane	ND		20	ug/L	20	08/08/17	MH	SW8260C
1,1-Dichloroethane	ND		20	ug/L	20	08/08/17	MH	SW8260C
1,1-Dichloroethene	ND		20	ug/L	20	08/08/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND		20	ug/L	20	08/08/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND		20	ug/L	20	08/08/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND		20	ug/L	20	08/08/17	MH	SW8260C
1,2-Dibromoethane	ND		20	ug/L	20	08/08/17	MH	SW8260C
1,2-Dichlorobenzene	ND		20	ug/L	20	08/08/17	MH	SW8260C
1,2-Dichloroethane	ND		12	ug/L	20	08/08/17	MH	SW8260C
1,2-Dichloropropane	ND		20	ug/L	20	08/08/17	MH	SW8260C
1,3-Dichlorobenzene	ND		20	ug/L	20	08/08/17	MH	SW8260C
1,4-Dichlorobenzene	ND		20	ug/L	20	08/08/17	MH	SW8260C
2-Hexanone	ND		50	ug/L	20	08/08/17	MH	SW8260C
4-Methyl-2-pentanone	ND		50	ug/L	20	08/08/17	MH	SW8260C
Acetone	58	S	50	ug/L	20	08/08/17	MH	SW8260C
Benzene	ND		14	ug/L	20	08/08/17	MH	SW8260C
Bromochloromethane	ND		20	ug/L	20	08/08/17	MH	SW8260C
Bromodichloromethane	ND		20	ug/L	20	08/08/17	MH	SW8260C
Bromoform	ND		20	ug/L	20	08/08/17	MH	SW8260C
Bromomethane	ND		20	ug/L	20	08/08/17	MH	SW8260C
Carbon Disulfide	ND		20	ug/L	20	08/08/17	MH	SW8260C
Carbon tetrachloride	ND		20	ug/L	20	08/08/17	MH	SW8260C
Chlorobenzene	ND		20	ug/L	20	08/08/17	MH	SW8260C
Chloroethane	ND		20	ug/L	20	08/08/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: EW-9 (GW)

Phoenix I.D.: BY75592

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Chloroform	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Chloromethane	ND	20	ug/L	20	08/08/17	MH	SW8260C	
cis-1,2-Dichloroethene	1300	200	ug/L	200	08/05/17	MH	SW8260C	
cis-1,3-Dichloropropene	ND	8.0	ug/L	20	08/08/17	MH	SW8260C	
Cyclohexane	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Dibromochloromethane	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Dichlorodifluoromethane	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Ethylbenzene	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Isopropylbenzene	ND	20	ug/L	20	08/08/17	MH	SW8260C	
m&p-Xylene	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Methyl ethyl ketone	ND	50	ug/L	20	08/08/17	MH	SW8260C	
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Methylacetate	ND	100	ug/L	20	08/08/17	MH	SW8260C	
Methylcyclohexane	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Methylene chloride	ND	60	ug/L	20	08/08/17	MH	SW8260C	
o-Xylene	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Styrene	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Tetrachloroethene	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Toluene	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Total Xylenes	ND	20	ug/L	20	08/08/17	MH	SW8260C	
trans-1,2-Dichloroethene	ND	20	ug/L	20	08/08/17	MH	SW8260C	
trans-1,3-Dichloropropene	ND	8.0	ug/L	20	08/08/17	MH	SW8260C	
Trichloroethene	3400	200	ug/L	200	08/05/17	MH	SW8260C	
Trichlorofluoromethane	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Trichlorotrifluoroethane	ND	20	ug/L	20	08/08/17	MH	SW8260C	
Vinyl chloride	53	20	ug/L	20	08/08/17	MH	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	100		%	20	08/08/17	MH	70 - 130 %	
% Bromofluorobenzene	96		%	20	08/08/17	MH	70 - 130 %	
% Dibromofluoromethane	101		%	20	08/08/17	MH	70 - 130 %	
% Toluene-d8	105		%	20	08/08/17	MH	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	2000	ug/l	20	08/08/17	MH	SW8260C	
Volatile Library Search Top 10	Completed				08/10/17	MH		1

Project ID: JOLYN ENTERPRISES
Client ID: EW-9 (GW)

Phoenix I.D.: BY75592

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
August 11, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-14 (GW)

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBY75590

Matrix:(soil/water) WATER Lab Sample ID: BY75590

Sample wt/vol: 25 (g/mL) mL Lab File ID: 0808P24.D

Level: (low/med) Date Received: 08/01/17

% Moisture: not dec. 100 Date Analyzed: 08/08/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 2

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000075-18-3	Dimethyl sulfide	2.151	5.1	JN
000067-63-0	Isopropyl Alcohol	2.329	6.7	JN

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-12 (GW)

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBY75590

Matrix:(soil/water) WATER Lab Sample ID: BY75591

Sample wt/vol: 25 (g/mL) mL Lab File ID: 0804P27.D

Level: (low/med) Date Received: 08/01/17

% Moisture: not dec. 100 Date Analyzed: 08/04/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 20

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: EW-9 (GW)

Lab Name: Phoenix Environmental Labs   Client: BIOTECH

Lab Code: Phoenix   Case No.: ____   SAS No.: ____   SDG No.: GBY75590

Matrix:(soil/water) WATER   Lab Sample ID: BY75592

Sample wt/vol: 25 (g/mL) mL   Lab File ID: 0808P32.D

Level: (low/med) ____   Date Received: 08/01/17

% Moisture: not dec. 100   Date Analyzed: 08/08/17

GC Column: rtx-vms   ID: 0.18 (mm)   Dilution Factor: 20

Purge Volume 25000 (uL)   Soil Aliquot Vol (uL): n.a.

Number TICs found: 0   CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

August 11, 2017

QA/QC Data

SDG I.D.: GBY75590

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 396639 (ug/L), QC Sample No: BY76573 (BY75590 (20X) , BY75591 (20X))										
Volatiles - Ground Water										
1,1,1-Trichloroethane	ND	1.0	100	98	2.0				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	99	98	1.0				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	94	93	1.1				70 - 130	30
1,1-Dichloroethane	ND	1.0	101	99	2.0				70 - 130	30
1,1-Dichloroethene	ND	1.0	103	101	2.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	94	95	1.1				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	95	96	1.0				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	102	103	1.0				70 - 130	30
1,2-Dibromoethane	ND	1.0	96	96	0.0				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	97	96	1.0				70 - 130	30
1,2-Dichloroethane	ND	1.0	96	96	0.0				70 - 130	30
1,2-Dichloropropane	ND	1.0	96	95	1.0				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	99	97	2.0				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	97	96	1.0				70 - 130	30
1,4-dioxane	ND	100	110	106	3.7				70 - 130	30
2-Hexanone	ND	5.0	99	97	2.0				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	99	99	0.0				70 - 130	30
Acetone	ND	5.0	96	97	1.0				70 - 130	30
Benzene	ND	0.70	98	97	1.0				70 - 130	30
Bromochloromethane	ND	1.0	98	97	1.0				70 - 130	30
Bromodichloromethane	ND	0.50	99	98	1.0				70 - 130	30
Bromoform	ND	1.0	102	99	3.0				70 - 130	30
Bromomethane	ND	1.0	129	131	1.5				70 - 130	30
Carbon Disulfide	ND	1.0	119	117	1.7				70 - 130	30
Carbon tetrachloride	ND	1.0	102	101	1.0				70 - 130	30
Chlorobenzene	ND	1.0	97	96	1.0				70 - 130	30
Chloroethane	ND	1.0	108	106	1.9				70 - 130	30
Chloroform	ND	1.0	98	96	2.1				70 - 130	30
Chloromethane	ND	1.0	111	111	0.0				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	99	99	0.0				70 - 130	30
Cyclohexane	ND	5.0	109	107	1.9				70 - 130	30
Dibromochloromethane	ND	0.50	105	103	1.9				70 - 130	30
Dichlorodifluoromethane	ND	1.0	140	138	1.4				70 - 130	30
Ethylbenzene	ND	1.0	98	97	1.0				70 - 130	30
Isopropylbenzene	ND	1.0	99	98	1.0				70 - 130	30
m&p-Xylene	ND	1.0	99	98	1.0				70 - 130	30
Methyl ethyl ketone	ND	5.0	103	107	3.8				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	113	111	1.8				70 - 130	30
Methylacetate	ND	2.5	105	103	1.9				70 - 130	30
Methylcyclohexane	ND	1.0	106	104	1.9				70 - 130	30
Methylene chloride	ND	1.0	95	94	1.1				70 - 130	30

QA/QC Data

SDG I.D.: GBY75590

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
o-Xylene	ND	1.0	98	99	1.0				70 - 130	30
Styrene	ND	1.0	97	97	0.0				70 - 130	30
Tetrachloroethene	ND	1.0	100	98	2.0				70 - 130	30
Toluene	ND	1.0	98	96	2.1				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	99	98	1.0				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	95	94	1.1				70 - 130	30
Trichloroethene	ND	1.0	98	98	0.0				70 - 130	30
Trichlorofluoromethane	ND	1.0	101	98	3.0				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	112	109	2.7				70 - 130	30
% 1,2-dichlorobenzene-d4	99	%	101	100	1.0				70 - 130	30
% Bromofluorobenzene	96	%	99	99	0.0				70 - 130	30
% Dibromofluoromethane	99	%	100	99	1.0				70 - 130	30
% Toluene-d8	99	%	99	100	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 396739 (ug/L), QC Sample No: BY79133 (BY75592 (200X))

Volatiles - Ground Water

cis-1,2-Dichloroethene	ND	1.0	98	92	6.3				70 - 130	30
Trichloroethene	ND	1.0	101	95	6.1				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 397007 (ug/L), QC Sample No: BY80397 (BY75590 (2X) , BY75591 (100X, 2000X) , BY75592 (20X))

Volatiles - Ground Water

1,1,1-Trichloroethane	ND	1.0	95	92	3.2				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	95	95	0.0				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	90	90	0.0				70 - 130	30
1,1-Dichloroethane	ND	1.0	93	92	1.1				70 - 130	30
1,1-Dichloroethene	ND	1.0	94	93	1.1				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	94	93	1.1				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	91	92	1.1				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	100	100	0.0				70 - 130	30
1,2-Dibromoethane	ND	1.0	93	94	1.1				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	91	90	1.1				70 - 130	30
1,2-Dichloroethane	ND	1.0	90	90	0.0				70 - 130	30
1,2-Dichloropropane	ND	1.0	91	89	2.2				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	92	91	1.1				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	91	90	1.1				70 - 130	30
1,4-dioxane	ND	100	114	120	5.1				70 - 130	30
2-Hexanone	ND	5.0	96	96	0.0				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	96	97	1.0				70 - 130	30
Acetone	ND	5.0	92	97	5.3				70 - 130	30
Benzene	ND	0.70	93	90	3.3				70 - 130	30
Bromochloromethane	ND	1.0	93	91	2.2				70 - 130	30
Bromodichloromethane	ND	0.50	94	92	2.2				70 - 130	30
Bromoform	ND	1.0	98	96	2.1				70 - 130	30
Bromomethane	ND	1.0	126	126	0.0				70 - 130	30
Carbon Disulfide	ND	1.0	112	108	3.6				70 - 130	30
Carbon tetrachloride	ND	1.0	97	95	2.1				70 - 130	30

QA/QC Data

SDG I.D.: GBY75590

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chlorobenzene	ND	1.0	92	90	2.2				70 - 130	30
Chloroethane	ND	1.0	108	106	1.9				70 - 130	30
Chloroform	ND	1.0	91	89	2.2				70 - 130	30
Chloromethane	ND	1.0	108	106	1.9				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	92	91	1.1				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	94	92	2.2				70 - 130	30
Cyclohexane	ND	5.0	104	101	2.9				70 - 130	30
Dibromochloromethane	ND	0.50	97	98	1.0				70 - 130	30
Dichlorodifluoromethane	ND	1.0	126	122	3.2				70 - 130	30
Ethylbenzene	ND	1.0	93	90	3.3				70 - 130	30
Isopropylbenzene	ND	1.0	94	91	3.2				70 - 130	30
m&p-Xylene	ND	1.0	93	90	3.3				70 - 130	30
Methyl ethyl ketone	ND	5.0	101	104	2.9				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	89	88	1.1				70 - 130	30
Methylacetate	ND	2.5	98	100	2.0				70 - 130	30
Methylcyclohexane	ND	1.0	102	98	4.0				70 - 130	30
Methylene chloride	ND	1.0	81	81	0.0				70 - 130	30
o-Xylene	ND	1.0	94	92	2.2				70 - 130	30
Styrene	ND	1.0	92	92	0.0				70 - 130	30
Tetrachloroethene	ND	1.0	94	91	3.2				70 - 130	30
Toluene	ND	1.0	91	90	1.1				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	92	90	2.2				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	90	90	0.0				70 - 130	30
Trichlorofluoromethane	ND	1.0	104	101	2.9				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	106	103	2.9				70 - 130	30
Vinyl chloride	ND	1.0	112	108	3.6				70 - 130	30
% 1,2-dichlorobenzene-d4	99	%	99	101	2.0				70 - 130	30
% Bromofluorobenzene	96	%	100	99	1.0				70 - 130	30
% Dibromofluoromethane	99	%	99	99	0.0				70 - 130	30
% Toluene-d8	99	%	100	100	0.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

I = This parameter is outside laboratory LCS/LCSD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller

Phyllis Shiller, Laboratory Director
August 11, 2017

Friday, August 11, 2017

Criteria: None

State: NY

Sample Criteria Exceedances Report

GBY75590 - BIOTECH

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

August 11, 2017 SDG I.D.: GBY75590

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

VOA Narration

CHEM02 08/04/17-1: BY75590, BY75591

The following Initial Calibration compounds did not meet RSD% criteria: Bromomethane 29% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.029 (0.05), 2-Hexanone 0.060 (0.1), 4-Methyl-2-pentanone 0.073 (0.1), Acetone 0.039 (0.1), Bromoform 0.069 (0.1), Methyl ethyl ketone 0.053 (0.1), Methylacetate 0.087 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.032 (0.05), Bromoform 0.077 (0.1)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

CHEM02 08/08/17-2: BY75590, BY75591, BY75592

The following Initial Calibration compounds did not meet RSD% criteria: Bromomethane 23% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.029 (0.05), 2-Hexanone 0.060 (0.1), 4-Methyl-2-pentanone 0.074 (0.1), Acetone 0.040 (0.1), Bromoform 0.071 (0.1), Methyl ethyl ketone 0.054 (0.1), Methylacetate 0.090 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.029 (0.05), Bromoform 0.073 (0.1)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

NY Temperature Narration

August 11, 2017

SDG I.D.: GBY75590

The samples in this delivery group were received at 4.3°C.
(Note acceptance criteria is above freezing up to 6°C)

Cooler: Yes [X] No [ ]
Coolant: IPK [ ] ICE [X] No [ ]

NY/NJ CHAIN OF CUSTODY RECORD

Temp 1.3 C Pg of

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Contact Options:
[ ] Fax: 724-981-9030
[ ] Phone: 724-342-1990
[X] Email: brichnafsky@ces-env.com

Customer: BioRemedial Technologies, Inc.
Address: 2700 Kirila Blvd.
Hermitage, PA 16148

Project: JoLyn Enterprises
Report to: Bert Richnafsky
Invoice to: Jan Mozzocio

Project P.O: 072717

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 4/27/17

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe
OIL=Oil B=Bulk L=Liquid

Analysis Request: VOLs Partial List (see below)

Bottle types: Soil VOA Vials [ ] methanol [ ] H2O; GL Soil container ( )oz; GL Soil container ( )oz; 40 ml VOA Vial [X] As is [X] HCl (2 each); GL Amber 1000ml [ ] As is [ ] H2SO4; PL As is [ ] 250ml [ ] 1500ml [ ] 1000ml; PL H2SO4 [ ] 250ml [ ] 1500ml; PL HNO3 250ml; PL NaOH 250ml; Bacteria Bottle

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOLs Partial List (see below)	40 ml VOA Vial
* ~~75590~~	SB-22 (GW)	GW	7-27-17	9:30	X	X
75590	SB-14 (GW	GW	7-27-17	9:45	X	X
*	SB-14 Dup (GW)	GW	11	9:47	X	X
75591	SB-12 (GW)	GW	11	10:00	X	X
75592	~~SB~~ EW-9 (GW)	GW	11	10:15	X	X

Relinquished by:	Accepted by:	Date:	Time:
A.M. Richnafsky	[signature]	7/28/17	11:20pm
[signature]		7/31/17	3:55
FedEx	CParadise	8/1/17	1024

Turnaround: [ ] 1 Day* [ ] 2 Days* [ ] 3 Days* [X] 5 Days [ ] 10 Days [ ] Other
* SURCHARGE APPLIES

NJ: [ ] Res. Criteria [ ] Non-Res. Criteria [ ] Impact to GW Soil Cleanup Criteria [ ] GW Criteria

NY: [ ] NY 375 GWP [ ] NY375 Unrestricted Use Soil [ ] NY375 Residential Soil [ ] Restricted/Residential [ ] Commercial [ ] Industrial

Data Format: [ ] Phoenix Std Report [ ] Excel [ ] PDF [ ] GIS/Key [ ] EQuIS [ ] NJ Hazsite EDD [ ] NY EZ EDD (ASP) [ ] Other ______

Data Package: [ ] NJ Reduced Deliv.* [ ] NY Enhanced (ASP B)* [ ] Other

State where samples were collected: NY

Comments, Special Requirements or Regulations:
Analyses To Report: 1,1-Dichloroethane; 2-Butanone; 2-Hexanone; Acetone; Benzene; cis-1,2-Dichloroethene; cyclohexane; methyl cyclohexane; tetrachloroethane; trans-1,2-Dichloroethene; trichloroethene; Vinyl Chloride.
*not rcvd (CP)

Christine Paradise GBY 75590

From: Bert Richnafsky <brichnafsky@ces-env.com>
Sent: Tuesday, August 01, 2017 4:56 PM
To: Christine Paradise
Subject: RE: JoLyn Enterprises

You should not have the two samples that you name below (I forgot to cross them off the chain of custody).

Thanks,
Bert

From: Christine Paradise [mailto:christine@phoenixlabs.com]
Sent: Tuesday, August 01, 2017 12:25 PM
To: brichnafsky@ces-env.com
Subject: JoLyn Enterprises

Hello-

We received your samples for the above mentioned project, however we were missing two samples. We did not receive your sample ID SB-22 (GW) or SB-14 Dup (GW). Please let me know if we should have these samples. Thanks!

Christine Paradise

Phoenix Environmental Laboratories
587 East Middle Turnpike
Manchester, CT 06040
Phone: 860-645-1102
Fax: 860-645-0823

PHOENIX
Environmental Laboratories, Inc.

Wednesday, October 11, 2017

Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Project ID: JOLYN ENTERPRISES
Sample ID#s: BZ13303 - BZ13313

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

Phyllis Shiller

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

SDG Comments

October 11, 2017

SDG I.D.: GBZ13303

The holding time for pH is immediate. The sample was analyzed in the laboratory on receipt and may be considered out of hold.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/02/17	9:30
Location Code:	BIOTECH	Received by:	LB	10/03/17	10:49
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	100217				

Laboratory Data

SDG ID: GBZ13303
Phoenix ID: BZ13303

Project ID: JOLYN ENTERPRISES
Client ID: EW-7 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1,1-Trichloroethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
1,1,2-Trichloroethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
1,1-Dichloroethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
1,1-Dichloroethene	ND	200	ug/L	200	10/07/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND	200	ug/L	200	10/07/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND	200	ug/L	200	10/07/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	200	ug/L	200	10/07/17	MH	SW8260C
1,2-Dibromoethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
1,2-Dichlorobenzene	ND	200	ug/L	200	10/07/17	MH	SW8260C
1,2-Dichloroethane	ND	120	ug/L	200	10/07/17	MH	SW8260C
1,2-Dichloropropane	ND	200	ug/L	200	10/07/17	MH	SW8260C
1,3-Dichlorobenzene	ND	200	ug/L	200	10/07/17	MH	SW8260C
1,4-Dichlorobenzene	ND	200	ug/L	200	10/07/17	MH	SW8260C
2-Hexanone	ND	500	ug/L	200	10/07/17	MH	SW8260C
4-Methyl-2-pentanone	ND	500	ug/L	200	10/07/17	MH	SW8260C
Acetone	ND	500	ug/L	200	10/07/17	MH	SW8260C
Benzene	ND	140	ug/L	200	10/07/17	MH	SW8260C
Bromochloromethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
Bromodichloromethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
Bromoform	ND	200	ug/L	200	10/07/17	MH	SW8260C
Bromomethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
Carbon Disulfide	ND	200	ug/L	200	10/07/17	MH	SW8260C
Carbon tetrachloride	ND	200	ug/L	200	10/07/17	MH	SW8260C
Chlorobenzene	ND	200	ug/L	200	10/07/17	MH	SW8260C
Chloroethane	ND	200	ug/L	200	10/07/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: EW-7 GW

Phoenix I.D.: BZ13303

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloroform	ND	200	ug/L	200	10/07/17	MH	SW8260C
Chloromethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
cis-1,2-Dichloroethene	16000	2000	ug/L	2000	10/07/17	MH	SW8260C
cis-1,3-Dichloropropene	ND	80	ug/L	200	10/07/17	MH	SW8260C
Cyclohexane	ND	200	ug/L	200	10/07/17	MH	SW8260C
Dibromochloromethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
Dichlorodifluoromethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
Ethylbenzene	ND	200	ug/L	200	10/07/17	MH	SW8260C
Isopropylbenzene	ND	200	ug/L	200	10/07/17	MH	SW8260C
m&p-Xylene	ND	200	ug/L	200	10/07/17	MH	SW8260C
Methyl ethyl ketone	ND	500	ug/L	200	10/07/17	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	200	ug/L	200	10/07/17	MH	SW8260C
Methylacetate	ND	1000	ug/L	200	10/07/17	MH	SW8260C
Methylcyclohexane	ND	200	ug/L	200	10/07/17	MH	SW8260C
Methylene chloride	ND	600	ug/L	200	10/07/17	MH	SW8260C
o-Xylene	ND	200	ug/L	200	10/07/17	MH	SW8260C
Styrene	ND	200	ug/L	200	10/07/17	MH	SW8260C
Tetrachloroethene	ND	200	ug/L	200	10/07/17	MH	SW8260C
Toluene	ND	200	ug/L	200	10/07/17	MH	SW8260C
Total Xylenes	ND	200	ug/L	200	10/07/17	MH	SW8260C
trans-1,2-Dichloroethene	ND	200	ug/L	200	10/07/17	MH	SW8260C
trans-1,3-Dichloropropene	ND	80	ug/L	200	10/07/17	MH	SW8260C
Trichloroethene	ND	200	ug/L	200	10/07/17	MH	SW8260C
Trichlorofluoromethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
Trichlorotrifluoroethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
Vinyl chloride	2200	200	ug/L	200	10/07/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	200	10/07/17	MH	70 - 130 %
% Bromofluorobenzene	101		%	200	10/07/17	MH	70 - 130 %
% Dibromofluoromethane	95		%	200	10/07/17	MH	70 - 130 %
% Toluene-d8	104		%	200	10/07/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	20000	ug/l	200	10/07/17	MH	SW8260C
Volatile Library Search Top 10	Completed				10/09/17	MH	1

Project ID: JOLYN ENTERPRISES
Client ID: EW-7 GW

Phoenix I.D.: BZ13303

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 11, 2017
Reviewed and Released by: Maryam Taylor, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/02/17	9:40
Location Code:	BIOTECH	Received by:	LB	10/03/17	10:49
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	100217				

Laboratory Data

SDG ID: GBZ13303
Phoenix ID: BZ13304

Project ID: JOLYN ENTERPRISES
Client ID: EW-9 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1,1-Trichloroethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,1,2-Trichloroethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,1-Dichloroethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,1-Dichloroethene	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,2-Dibromoethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,2-Dichlorobenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,2-Dichloroethane	ND	120	ug/L	200	10/08/17	MH	SW8260C
1,2-Dichloropropane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,3-Dichlorobenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,4-Dichlorobenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
2-Hexanone	ND	500	ug/L	200	10/08/17	MH	SW8260C
4-Methyl-2-pentanone	ND	500	ug/L	200	10/08/17	MH	SW8260C
Acetone	ND	500	ug/L	200	10/08/17	MH	SW8260C
Benzene	ND	140	ug/L	200	10/08/17	MH	SW8260C
Bromochloromethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Bromodichloromethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Bromoform	ND	200	ug/L	200	10/08/17	MH	SW8260C
Bromomethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Carbon Disulfide	ND	200	ug/L	200	10/08/17	MH	SW8260C
Carbon tetrachloride	ND	200	ug/L	200	10/08/17	MH	SW8260C
Chlorobenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Chloroethane	ND	200	ug/L	200	10/08/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: EW-9 GW

Phoenix I.D.: BZ13304

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloroform	ND	200	ug/L	200	10/08/17	MH	SW8260C
Chloromethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
cis-1,2-Dichloroethene	47000	2000	ug/L	2000	10/08/17	MH	SW8260C
cis-1,3-Dichloropropene	ND	80	ug/L	200	10/08/17	MH	SW8260C
Cyclohexane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Dibromochloromethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Dichlorodifluoromethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Ethylbenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Isopropylbenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
m&p-Xylene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Methyl ethyl ketone	ND	500	ug/L	200	10/08/17	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	200	ug/L	200	10/08/17	MH	SW8260C
Methylacetate	ND	1000	ug/L	200	10/08/17	MH	SW8260C
Methylcyclohexane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Methylene chloride	ND	600	ug/L	200	10/08/17	MH	SW8260C
o-Xylene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Styrene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Tetrachloroethene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Toluene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Total Xylenes	ND	200	ug/L	200	10/08/17	MH	SW8260C
trans-1,2-Dichloroethene	ND	200	ug/L	200	10/08/17	MH	SW8260C
trans-1,3-Dichloropropene	ND	80	ug/L	200	10/08/17	MH	SW8260C
Trichloroethene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Trichlorofluoromethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Trichlorotrifluoroethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Vinyl chloride	4000	200	ug/L	200	10/08/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	200	10/08/17	MH	70 - 130 %
% Bromofluorobenzene	102		%	200	10/08/17	MH	70 - 130 %
% Dibromofluoromethane	100		%	200	10/08/17	MH	70 - 130 %
% Toluene-d8	102		%	200	10/08/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	20000	ug/l	200	10/08/17	MH	SW8260C
Volatile Library Search Top 10	Completed				10/09/17	MH	1

Project ID: JOLYN ENTERPRISES
Client ID: EW-9 GW

Phoenix I.D.: BZ13304

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

BZ13304 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

If there are any questions regarding this data, please call Phoenix Client Services.

Phyllis Shiller, Laboratory Director
October 11, 2017
Reviewed and Released by: Maryam Taylor, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/02/17	9:50
Location Code:	BIOTECH	Received by:	LB	10/03/17	10:49
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	100217				

Laboratory Data

SDG ID: GBZ13303
Phoenix ID: BZ13305

Project ID: JOLYN ENTERPRISES
Client ID: EW-20 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
1,1-Dichloroethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
1,2-Dibromoethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/08/17	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	2	10/08/17	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	2	10/08/17	MH	SW8260C
Acetone	ND	5.0	ug/L	2	10/08/17	MH	SW8260C
Benzene	ND	1.4	ug/L	2	10/08/17	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Bromodichloromethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Carbon Disulfide	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: EW-20 GW

Phoenix I.D.: BZ13305

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloroform	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
cis-1,2-Dichloroethene	84	10	ug/L	10	10/08/17	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.80	ug/L	2	10/08/17	MH	SW8260C
Cyclohexane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	2	10/08/17	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Methylacetate	ND	10	ug/L	2	10/08/17	MH	SW8260C
Methylcyclohexane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Methylene chloride	ND	6.0	ug/L	2	10/08/17	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Styrene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Tetrachloroethene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Toluene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Total Xylenes	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
trans-1,2-Dichloroethene	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.80	ug/L	2	10/08/17	MH	SW8260C
Trichloroethene	58	2.0	ug/L	2	10/08/17	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Vinyl chloride	6.6	2.0	ug/L	2	10/08/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	2	10/08/17	MH	70 - 130 %
% Bromofluorobenzene	102		%	2	10/08/17	MH	70 - 130 %
% Dibromofluoromethane	100		%	2	10/08/17	MH	70 - 130 %
% Toluene-d8	101		%	2	10/08/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	200	ug/l	2	10/08/17	MH	SW8260C
Volatile Library Search Top 10	Completed				10/09/17	MH	1

Project ID: JOLYN ENTERPRISES
Client ID: EW-20 GW

Phoenix I.D.: BZ13305

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 11, 2017
Reviewed and Released by: Maryam Taylor, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/02/17	10:00
Location Code:	BIOTECH	Received by:	LB	10/03/17	10:49
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	100217				

Laboratory Data

SDG ID: GBZ13303
Phoenix ID: BZ13306

Project ID: JOLYN ENTERPRISES
Client ID: SB-8 GW

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1,1-Trichloroethane	ND		10	ug/L	10	10/08/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND		10	ug/L	10	10/08/17	MH	SW8260C
1,1,2-Trichloroethane	ND		10	ug/L	10	10/08/17	MH	SW8260C
1,1-Dichloroethane	ND		10	ug/L	10	10/08/17	MH	SW8260C
1,1-Dichloroethene	ND		10	ug/L	10	10/08/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND		10	ug/L	10	10/08/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND		10	ug/L	10	10/08/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND		10	ug/L	10	10/08/17	MH	SW8260C
1,2-Dibromoethane	ND		10	ug/L	10	10/08/17	MH	SW8260C
1,2-Dichlorobenzene	ND		10	ug/L	10	10/08/17	MH	SW8260C
1,2-Dichloroethane	ND		6.0	ug/L	10	10/08/17	MH	SW8260C
1,2-Dichloropropane	ND		10	ug/L	10	10/08/17	MH	SW8260C
1,3-Dichlorobenzene	ND		10	ug/L	10	10/08/17	MH	SW8260C
1,4-Dichlorobenzene	ND		10	ug/L	10	10/08/17	MH	SW8260C
2-Hexanone	ND		25	ug/L	10	10/08/17	MH	SW8260C
4-Methyl-2-pentanone	ND		25	ug/L	10	10/08/17	MH	SW8260C
Acetone	110	S	25	ug/L	10	10/08/17	MH	SW8260C
Benzene	ND		7.0	ug/L	10	10/08/17	MH	SW8260C
Bromochloromethane	ND		10	ug/L	10	10/08/17	MH	SW8260C
Bromodichloromethane	ND		10	ug/L	10	10/08/17	MH	SW8260C
Bromoform	ND		10	ug/L	10	10/08/17	MH	SW8260C
Bromomethane	ND		10	ug/L	10	10/08/17	MH	SW8260C
Carbon Disulfide	ND		10	ug/L	10	10/08/17	MH	SW8260C
Carbon tetrachloride	ND		10	ug/L	10	10/08/17	MH	SW8260C
Chlorobenzene	ND		10	ug/L	10	10/08/17	MH	SW8260C
Chloroethane	ND		10	ug/L	10	10/08/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: SB-8 GW

Phoenix I.D.: BZ13306

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloroform	ND	10	ug/L	10	10/08/17	MH	SW8260C
Chloromethane	ND	10	ug/L	10	10/08/17	MH	SW8260C
cis-1,2-Dichloroethene	190	10	ug/L	10	10/08/17	MH	SW8260C
cis-1,3-Dichloropropene	ND	4.0	ug/L	10	10/08/17	MH	SW8260C
Cyclohexane	45	10	ug/L	10	10/08/17	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	10	10/08/17	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	10/08/17	MH	SW8260C
Ethylbenzene	19	10	ug/L	10	10/08/17	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	10/08/17	MH	SW8260C
m&p-Xylene	11	10	ug/L	10	10/08/17	MH	SW8260C
Methyl ethyl ketone	2500	500	ug/L	200	10/08/17	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	10/08/17	MH	SW8260C
Methylacetate	ND	50	ug/L	10	10/08/17	MH	SW8260C
Methylcyclohexane	11	10	ug/L	10	10/08/17	MH	SW8260C
Methylene chloride	ND	30	ug/L	10	10/08/17	MH	SW8260C
o-Xylene	ND	10	ug/L	10	10/08/17	MH	SW8260C
Styrene	ND	10	ug/L	10	10/08/17	MH	SW8260C
Tetrachloroethene	ND	10	ug/L	10	10/08/17	MH	SW8260C
Toluene	ND	10	ug/L	10	10/08/17	MH	SW8260C
Total Xylenes	11	10	ug/L	10	10/08/17	MH	SW8260C
trans-1,2-Dichloroethene	17	10	ug/L	10	10/08/17	MH	SW8260C
trans-1,3-Dichloropropene	ND	4.0	ug/L	10	10/08/17	MH	SW8260C
Trichloroethene	18	10	ug/L	10	10/08/17	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	10/08/17	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	10/08/17	MH	SW8260C
Vinyl chloride	31	10	ug/L	10	10/08/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	10	10/08/17	MH	70 - 130 %
% Bromofluorobenzene	101		%	10	10/08/17	MH	70 - 130 %
% Dibromofluoromethane	101		%	10	10/08/17	MH	70 - 130 %
% Toluene-d8	101		%	10	10/08/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	1000	ug/l	10	10/08/17	MH	SW8260C
Volatile Library Search Top 10	Completed				10/09/17	MH	1

Project ID: JOLYN ENTERPRISES
Client ID: SB-8 GW

Phoenix I.D.: BZ13306

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

BZ13306 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.

Phyllis Shiller, Laboratory Director
October 11, 2017
Reviewed and Released by: Maryam Taylor, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/02/17	10:10
Location Code:	BIOTECH	Received by:	LB	10/03/17	10:49
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	100217				

Laboratory Data

SDG ID: GBZ13303
Phoenix ID: BZ13307

Project ID: JOLYN ENTERPRISES
Client ID: SB-11

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/05/17	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
2-Hexanone	430	50	ug/L	20	10/08/17	MH	SW8260C
4-Methyl-2-pentanone	ND	2.5	ug/L	1	10/05/17	MH	SW8260C
Acetone	ND	50	ug/L	20	10/08/17	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/05/17	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Carbon Disulfide	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: SB-11

Phoenix I.D.: BZ13307

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloroform	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
cis-1,2-Dichloroethene	14	1.0	ug/L	1	10/05/17	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/17	MH	SW8260C
Cyclohexane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Methyl ethyl ketone	100	50	ug/L	20	10/08/17	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Methylacetate	ND	5.0	ug/L	1	10/05/17	MH	SW8260C
Methylcyclohexane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Methylene chloride	ND	3.0	ug/L	1	10/05/17	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/05/17	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/05/17	MH	SW8260C
Vinyl chloride	12	1.0	ug/L	1	10/05/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	10/05/17	MH	70 - 130 %
% Bromofluorobenzene	118		%	1	10/05/17	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	10/05/17	MH	70 - 130 %
% Toluene-d8	104		%	1	10/05/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	100	ug/l	1	10/05/17	HM	SW8260C
Volatile Library Search Top 10	Completed				10/06/17	HM	1

Project ID: JOLYN ENTERPRISES
Client ID: SB-11

Phoenix I.D.: BZ13307

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 11, 2017
Reviewed and Released by: Maryam Taylor, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/02/17	10:20
Location Code:	BIOTECH	Received by:	LB	10/03/17	10:49
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	100217				

Laboratory Data

SDG ID: GBZ13303
Phoenix ID: BZ13308

Project ID: JOLYN ENTERPRISES
Client ID: SB-12

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1,1-Trichloroethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
1,1,2-Trichloroethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
1,1-Dichloroethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
1,1-Dichloroethene	ND	50	ug/L	50	10/09/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND	50	ug/L	50	10/09/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND	50	ug/L	50	10/09/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	50	10/09/17	MH	SW8260C
1,2-Dibromoethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
1,2-Dichlorobenzene	ND	50	ug/L	50	10/09/17	MH	SW8260C
1,2-Dichloroethane	ND	30	ug/L	50	10/09/17	MH	SW8260C
1,2-Dichloropropane	ND	50	ug/L	50	10/09/17	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	50	10/09/17	MH	SW8260C
1,4-Dichlorobenzene	ND	50	ug/L	50	10/09/17	MH	SW8260C
2-Hexanone	ND	130	ug/L	50	10/09/17	MH	SW8260C
4-Methyl-2-pentanone	ND	130	ug/L	50	10/09/17	MH	SW8260C
Acetone	ND	130	ug/L	50	10/09/17	MH	SW8260C
Benzene	ND	35	ug/L	50	10/09/17	MH	SW8260C
Bromochloromethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
Bromodichloromethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
Bromoform	ND	50	ug/L	50	10/09/17	MH	SW8260C
Bromomethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	50	10/09/17	MH	SW8260C
Carbon tetrachloride	ND	50	ug/L	50	10/09/17	MH	SW8260C
Chlorobenzene	ND	50	ug/L	50	10/09/17	MH	SW8260C
Chloroethane	ND	50	ug/L	50	10/09/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: SB-12

Phoenix I.D.: BZ13308

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloroform	ND	50	ug/L	50	10/09/17	MH	SW8260C
Chloromethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
cis-1,2-Dichloroethene	16000	2000	ug/L	2000	10/10/17	MH	SW8260C
cis-1,3-Dichloropropene	ND	20	ug/L	50	10/09/17	MH	SW8260C
Cyclohexane	ND	50	ug/L	50	10/09/17	MH	SW8260C
Dibromochloromethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
Dichlorodifluoromethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
Ethylbenzene	ND	50	ug/L	50	10/09/17	MH	SW8260C
Isopropylbenzene	ND	50	ug/L	50	10/09/17	MH	SW8260C
m&p-Xylene	ND	50	ug/L	50	10/09/17	MH	SW8260C
Methyl ethyl ketone	ND	130	ug/L	50	10/09/17	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	50	ug/L	50	10/09/17	MH	SW8260C
Methylacetate	ND	250	ug/L	50	10/09/17	MH	SW8260C
Methylcyclohexane	ND	50	ug/L	50	10/09/17	MH	SW8260C
Methylene chloride	ND	150	ug/L	50	10/09/17	MH	SW8260C
o-Xylene	ND	50	ug/L	50	10/09/17	MH	SW8260C
Styrene	ND	50	ug/L	50	10/09/17	MH	SW8260C
Tetrachloroethene	ND	50	ug/L	50	10/09/17	MH	SW8260C
Toluene	ND	50	ug/L	50	10/09/17	MH	SW8260C
Total Xylenes	ND	50	ug/L	50	10/09/17	MH	SW8260C
trans-1,2-Dichloroethene	100	50	ug/L	50	10/09/17	MH	SW8260C
trans-1,3-Dichloropropene	ND	20	ug/L	50	10/09/17	MH	SW8260C
Trichloroethene	210	50	ug/L	50	10/09/17	MH	SW8260C
Trichlorofluoromethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
Trichlorotrifluoroethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
Vinyl chloride	2400	500	ug/L	500	10/10/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	96		%	50	10/09/17	MH	70 - 130 %
% Bromofluorobenzene	99		%	50	10/09/17	MH	70 - 130 %
% Dibromofluoromethane	95		%	50	10/09/17	MH	70 - 130 %
% Toluene-d8	102		%	50	10/09/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	5000	ug/l	50	10/09/17	MH	SW8260C
Volatile Library Search Top 10	Completed				10/10/17	MH	1

Project ID: JOLYN ENTERPRISES
Client ID: SB-12

Phoenix I.D.: BZ13308

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

BZ13308 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 11, 2017
Reviewed and Released by: Maryam Taylor, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/02/17	10:30
Location Code:	BIOTECH	Received by:	LB	10/03/17	10:49
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	100217				

Laboratory Data

SDG ID: GBZ13303
Phoenix ID: BZ13309

Project ID: JOLYN ENTERPRISES
Client ID: SB-13

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1,1-Trichloroethane	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
1,1,2-Trichloroethane	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
1,1-Dichloroethane	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
1,1-Dichloroethene	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
1,2-Dibromoethane	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
1,2-Dichlorobenzene	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
1,2-Dichloroethane	ND		3.0	ug/L	5	10/08/17	MH	SW8260C
1,2-Dichloropropane	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
1,3-Dichlorobenzene	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
1,4-Dichlorobenzene	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
2-Hexanone	ND		13	ug/L	5	10/08/17	MH	SW8260C
4-Methyl-2-pentanone	ND		13	ug/L	5	10/08/17	MH	SW8260C
Acetone	67	S	13	ug/L	5	10/08/17	MH	SW8260C
Benzene	ND		3.5	ug/L	5	10/08/17	MH	SW8260C
Bromochloromethane	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
Bromodichloromethane	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
Bromoform	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
Bromomethane	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
Carbon Disulfide	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
Carbon tetrachloride	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
Chlorobenzene	ND		5.0	ug/L	5	10/08/17	MH	SW8260C
Chloroethane	ND		5.0	ug/L	5	10/08/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: SB-13

Phoenix I.D.: BZ13309

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloroform	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
cis-1,2-Dichloroethene	190	20	ug/L	20	10/05/17	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.0	ug/L	5	10/08/17	MH	SW8260C
Cyclohexane	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Methyl ethyl ketone	110	13	ug/L	5	10/08/17	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Methylacetate	ND	25	ug/L	5	10/08/17	MH	SW8260C
Methylcyclohexane	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Methylene chloride	ND	15	ug/L	5	10/08/17	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Tetrachloroethene	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Total Xylenes	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.0	ug/L	5	10/08/17	MH	SW8260C
Trichloroethene	110	5.0	ug/L	5	10/08/17	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
Vinyl chloride	ND	5.0	ug/L	5	10/08/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	5	10/08/17	MH	70 - 130 %
% Bromofluorobenzene	101		%	5	10/08/17	MH	70 - 130 %
% Dibromofluoromethane	100		%	5	10/08/17	MH	70 - 130 %
% Toluene-d8	104		%	5	10/08/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	500	ug/l	5	10/08/17	MH	SW8260C
Volatile Library Search Top 10	Completed				10/09/17	MH	1

Project ID: JOLYN ENTERPRISES
Client ID: SB-13

Phoenix I.D.: BZ13309

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

BZ13309 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.

Phyllis Shiller, Laboratory Director
October 11, 2017
Reviewed and Released by: Maryam Taylor, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/02/17	10:40
Location Code:	BIOTECH	Received by:	LB	10/03/17	10:49
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	100217				

Laboratory Data

SDG ID: GBZ13303
Phoenix ID: BZ13310

Project ID: JOLYN ENTERPRISES
Client ID: SB-14

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1,1-Trichloroethane	ND		20	ug/L	20	10/05/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND		20	ug/L	20	10/05/17	MH	SW8260C
1,1,2-Trichloroethane	ND		20	ug/L	20	10/05/17	MH	SW8260C
1,1-Dichloroethane	ND		20	ug/L	20	10/05/17	MH	SW8260C
1,1-Dichloroethene	28		20	ug/L	20	10/05/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND		20	ug/L	20	10/05/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND		20	ug/L	20	10/05/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND		20	ug/L	20	10/05/17	MH	SW8260C
1,2-Dibromoethane	ND		20	ug/L	20	10/05/17	MH	SW8260C
1,2-Dichlorobenzene	ND		20	ug/L	20	10/05/17	MH	SW8260C
1,2-Dichloroethane	ND		12	ug/L	20	10/05/17	MH	SW8260C
1,2-Dichloropropane	ND		20	ug/L	20	10/05/17	MH	SW8260C
1,3-Dichlorobenzene	ND		20	ug/L	20	10/05/17	MH	SW8260C
1,4-Dichlorobenzene	ND		20	ug/L	20	10/05/17	MH	SW8260C
2-Hexanone	ND		50	ug/L	20	10/05/17	MH	SW8260C
4-Methyl-2-pentanone	ND		50	ug/L	20	10/05/17	MH	SW8260C
Acetone	130	S	50	ug/L	20	10/05/17	MH	SW8260C
Benzene	ND		14	ug/L	20	10/05/17	MH	SW8260C
Bromochloromethane	ND		20	ug/L	20	10/05/17	MH	SW8260C
Bromodichloromethane	ND		20	ug/L	20	10/05/17	MH	SW8260C
Bromoform	ND		20	ug/L	20	10/05/17	MH	SW8260C
Bromomethane	ND		20	ug/L	20	10/05/17	MH	SW8260C
Carbon Disulfide	ND		20	ug/L	20	10/05/17	MH	SW8260C
Carbon tetrachloride	ND		20	ug/L	20	10/05/17	MH	SW8260C
Chlorobenzene	ND		20	ug/L	20	10/05/17	MH	SW8260C
Chloroethane	ND		20	ug/L	20	10/05/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: SB-14

Phoenix I.D.: BZ13310

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloroform	ND	20	ug/L	20	10/05/17	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/05/17	MH	SW8260C
cis-1,2-Dichloroethene	2600	200	ug/L	200	10/08/17	MH	SW8260C
cis-1,3-Dichloropropene	ND	8.0	ug/L	20	10/05/17	MH	SW8260C
Cyclohexane	ND	20	ug/L	20	10/05/17	MH	SW8260C
Dibromochloromethane	ND	20	ug/L	20	10/05/17	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/05/17	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/05/17	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/05/17	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/05/17	MH	SW8260C
Methyl ethyl ketone	96	50	ug/L	20	10/05/17	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/05/17	MH	SW8260C
Methylacetate	ND	100	ug/L	20	10/05/17	MH	SW8260C
Methylcyclohexane	ND	20	ug/L	20	10/05/17	MH	SW8260C
Methylene chloride	ND	60	ug/L	20	10/05/17	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/05/17	MH	SW8260C
Styrene	ND	20	ug/L	20	10/05/17	MH	SW8260C
Tetrachloroethene	ND	20	ug/L	20	10/05/17	MH	SW8260C
Toluene	ND	20	ug/L	20	10/05/17	MH	SW8260C
Total Xylenes	ND	20	ug/L	20	10/05/17	MH	SW8260C
trans-1,2-Dichloroethene	45	20	ug/L	20	10/05/17	MH	SW8260C
trans-1,3-Dichloropropene	ND	8.0	ug/L	20	10/05/17	MH	SW8260C
Trichloroethene	410	200	ug/L	200	10/08/17	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/05/17	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/05/17	MH	SW8260C
Vinyl chloride	370	20	ug/L	20	10/05/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	20	10/05/17	MH	70 - 130 %
% Bromofluorobenzene	102		%	20	10/05/17	MH	70 - 130 %
% Dibromofluoromethane	85		%	20	10/05/17	MH	70 - 130 %
% Toluene-d8	101		%	20	10/05/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	2000	ug/l	20	10/05/17	HM	SW8260C
Volatile Library Search Top 10	Completed				10/06/17	HM	1

Project ID: JOLYN ENTERPRISES
Client ID: SB-14

Phoenix I.D.: BZ13310

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

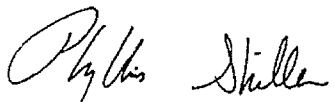
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
October 11, 2017
Reviewed and Released by: Maryam Taylor, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/02/17	10:50
Location Code:	BIOTECH	Received by:	LB	10/03/17	10:49
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	100217				

Laboratory Data

SDG ID: GBZ13303
Phoenix ID: BZ13311

Project ID: JOLYN ENTERPRISES
Client ID: SB-22

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1,1-Trichloroethane	ND	100	ug/L	100	10/08/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	100	ug/L	100	10/08/17	MH	SW8260C
1,1,2-Trichloroethane	ND	100	ug/L	100	10/08/17	MH	SW8260C
1,1-Dichloroethane	ND	100	ug/L	100	10/08/17	MH	SW8260C
1,1-Dichloroethene	ND	100	ug/L	100	10/08/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND	100	ug/L	100	10/08/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND	100	ug/L	100	10/08/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	100	ug/L	100	10/08/17	MH	SW8260C
1,2-Dibromoethane	ND	100	ug/L	100	10/08/17	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	10/08/17	MH	SW8260C
1,2-Dichloroethane	ND	60	ug/L	100	10/08/17	MH	SW8260C
1,2-Dichloropropane	ND	100	ug/L	100	10/08/17	MH	SW8260C
1,3-Dichlorobenzene	ND	100	ug/L	100	10/08/17	MH	SW8260C
1,4-Dichlorobenzene	ND	100	ug/L	100	10/08/17	MH	SW8260C
2-Hexanone	ND	250	ug/L	100	10/08/17	MH	SW8260C
4-Methyl-2-pentanone	ND	250	ug/L	100	10/08/17	MH	SW8260C
Acetone	ND	250	ug/L	100	10/08/17	MH	SW8260C
Benzene	ND	70	ug/L	100	10/08/17	MH	SW8260C
Bromochloromethane	ND	100	ug/L	100	10/08/17	MH	SW8260C
Bromodichloromethane	ND	100	ug/L	100	10/08/17	MH	SW8260C
Bromoform	ND	100	ug/L	100	10/08/17	MH	SW8260C
Bromomethane	ND	100	ug/L	100	10/08/17	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	100	10/08/17	MH	SW8260C
Carbon tetrachloride	ND	100	ug/L	100	10/08/17	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	10/08/17	MH	SW8260C
Chloroethane	ND	100	ug/L	100	10/08/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: SB-22

Phoenix I.D.: BZ13311

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloroform	ND	100	ug/L	100	10/08/17	MH	SW8260C
Chloromethane	ND	100	ug/L	100	10/08/17	MH	SW8260C
cis-1,2-Dichloroethene	2500	100	ug/L	100	10/08/17	MH	SW8260C
cis-1,3-Dichloropropene	ND	40	ug/L	100	10/08/17	MH	SW8260C
Cyclohexane	ND	100	ug/L	100	10/08/17	MH	SW8260C
Dibromochloromethane	ND	100	ug/L	100	10/08/17	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	10/08/17	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	10/08/17	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	10/08/17	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	10/08/17	MH	SW8260C
Methyl ethyl ketone	ND	250	ug/L	100	10/08/17	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	100	ug/L	100	10/08/17	MH	SW8260C
Methylacetate	ND	500	ug/L	100	10/08/17	MH	SW8260C
Methylcyclohexane	ND	100	ug/L	100	10/08/17	MH	SW8260C
Methylene chloride	ND	300	ug/L	100	10/08/17	MH	SW8260C
o-Xylene	ND	100	ug/L	100	10/08/17	MH	SW8260C
Styrene	ND	100	ug/L	100	10/08/17	MH	SW8260C
Tetrachloroethene	ND	100	ug/L	100	10/08/17	MH	SW8260C
Toluene	ND	100	ug/L	100	10/08/17	MH	SW8260C
Total Xylenes	ND	100	ug/L	100	10/08/17	MH	SW8260C
trans-1,2-Dichloroethene	ND	100	ug/L	100	10/08/17	MH	SW8260C
trans-1,3-Dichloropropene	ND	40	ug/L	100	10/08/17	MH	SW8260C
Trichloroethene	12000	1000	ug/L	1000	10/08/17	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	10/08/17	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	10/08/17	MH	SW8260C
Vinyl chloride	ND	100	ug/L	100	10/08/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	100	10/08/17	MH	70 - 130 %
% Bromofluorobenzene	101		%	100	10/08/17	MH	70 - 130 %
% Dibromofluoromethane	97		%	100	10/08/17	MH	70 - 130 %
% Toluene-d8	93		%	100	10/08/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	10000	ug/l	100	10/08/17	MH	SW8260C
Volatile Library Search Top 10	Completed				10/09/17	MH	1

Project ID: JOLYN ENTERPRISES
Client ID: SB-22

Phoenix I.D.: BZ13311

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

BZ13311 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 11, 2017
Reviewed and Released by: Maryam Taylor, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/02/17	11:00
Location Code:	BIOTECH	Received by:	LB	10/03/17	10:49
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	100217				

Laboratory Data

SDG ID: GBZ13303
Phoenix ID: BZ13312

Project ID: JOLYN ENTERPRISES
Client ID: SB-28

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1,1-Trichloroethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,1,2-Trichloroethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,1-Dichloroethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,1-Dichloroethene	240	200	ug/L	200	10/08/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,2-Dibromoethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,2-Dichlorobenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,2-Dichloroethane	ND	120	ug/L	200	10/08/17	MH	SW8260C
1,2-Dichloropropane	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,3-Dichlorobenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
1,4-Dichlorobenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
2-Hexanone	ND	500	ug/L	200	10/08/17	MH	SW8260C
4-Methyl-2-pentanone	ND	500	ug/L	200	10/08/17	MH	SW8260C
Acetone	ND	500	ug/L	200	10/08/17	MH	SW8260C
Benzene	ND	140	ug/L	200	10/08/17	MH	SW8260C
Bromochloromethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Bromodichloromethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Bromoform	ND	200	ug/L	200	10/08/17	MH	SW8260C
Bromomethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Carbon Disulfide	ND	200	ug/L	200	10/08/17	MH	SW8260C
Carbon tetrachloride	ND	200	ug/L	200	10/08/17	MH	SW8260C
Chlorobenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Chloroethane	ND	200	ug/L	200	10/08/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: SB-28

Phoenix I.D.: BZ13312

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloroform	ND	200	ug/L	200	10/08/17	MH	SW8260C
Chloromethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
cis-1,2-Dichloroethene	120000	E 2000	ug/L	2000	10/08/17	MH	SW8260C
cis-1,3-Dichloropropene	ND	80	ug/L	200	10/08/17	MH	SW8260C
Cyclohexane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Dibromochloromethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Dichlorodifluoromethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Ethylbenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Isopropylbenzene	ND	200	ug/L	200	10/08/17	MH	SW8260C
m&p-Xylene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Methyl ethyl ketone	ND	500	ug/L	200	10/08/17	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	200	ug/L	200	10/08/17	MH	SW8260C
Methylacetate	ND	1000	ug/L	200	10/08/17	MH	SW8260C
Methylcyclohexane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Methylene chloride	ND	600	ug/L	200	10/08/17	MH	SW8260C
o-Xylene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Styrene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Tetrachloroethene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Toluene	ND	200	ug/L	200	10/08/17	MH	SW8260C
Total Xylenes	ND	200	ug/L	200	10/08/17	MH	SW8260C
trans-1,2-Dichloroethene	740	200	ug/L	200	10/08/17	MH	SW8260C
trans-1,3-Dichloropropene	ND	80	ug/L	200	10/08/17	MH	SW8260C
Trichloroethene	52000	2000	ug/L	2000	10/08/17	MH	SW8260C
Trichlorofluoromethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Trichlorotrifluoroethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
Vinyl chloride	13000	2000	ug/L	2000	10/08/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	200	10/08/17	MH	70 - 130 %
% Bromofluorobenzene	102		%	200	10/08/17	MH	70 - 130 %
% Dibromofluoromethane	98		%	200	10/08/17	MH	70 - 130 %
% Toluene-d8	96		%	200	10/08/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	20000	ug/l	200	10/08/17	MH	SW8260C
Volatile Library Search Top 10	Completed				10/09/17	MH	1

Project ID: JOLYN ENTERPRISES
Client ID: SB-28

Phoenix I.D.: BZ13312

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

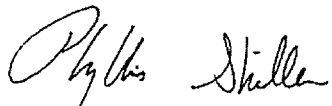
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

E = Estimated value. Sample result was above the calibration range. Subsequent dilution did not correlate well with original analysis results. The higher results are reported.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
October 11, 2017
Reviewed and Released by: Maryam Taylor, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/02/17	11:10
Location Code:	BIOTECH	Received by:	LB	10/03/17	10:49
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	100217				

Laboratory Data

SDG ID: GBZ13303
Phoenix ID: BZ13313

Project ID: JOLYN ENTERPRISES
Client ID: SB-14D

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1,1-Trichloroethane	ND		20	ug/L	20	10/08/17	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND		20	ug/L	20	10/08/17	MH	SW8260C
1,1,2-Trichloroethane	ND		20	ug/L	20	10/08/17	MH	SW8260C
1,1-Dichloroethane	ND		20	ug/L	20	10/08/17	MH	SW8260C
1,1-Dichloroethene	30		20	ug/L	20	10/08/17	MH	SW8260C
1,2,3-Trichlorobenzene	ND		20	ug/L	20	10/08/17	MH	SW8260C
1,2,4-Trichlorobenzene	ND		20	ug/L	20	10/08/17	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND		20	ug/L	20	10/08/17	MH	SW8260C
1,2-Dibromoethane	ND		20	ug/L	20	10/08/17	MH	SW8260C
1,2-Dichlorobenzene	ND		20	ug/L	20	10/08/17	MH	SW8260C
1,2-Dichloroethane	ND		12	ug/L	20	10/08/17	MH	SW8260C
1,2-Dichloropropane	ND		20	ug/L	20	10/08/17	MH	SW8260C
1,3-Dichlorobenzene	ND		20	ug/L	20	10/08/17	MH	SW8260C
1,4-Dichlorobenzene	ND		20	ug/L	20	10/08/17	MH	SW8260C
2-Hexanone	ND		50	ug/L	20	10/08/17	MH	SW8260C
4-Methyl-2-pentanone	ND		50	ug/L	20	10/08/17	MH	SW8260C
Acetone	60	S	50	ug/L	20	10/08/17	MH	SW8260C
Benzene	ND		14	ug/L	20	10/08/17	MH	SW8260C
Bromochloromethane	ND		20	ug/L	20	10/08/17	MH	SW8260C
Bromodichloromethane	ND		20	ug/L	20	10/08/17	MH	SW8260C
Bromoform	ND		20	ug/L	20	10/08/17	MH	SW8260C
Bromomethane	ND		20	ug/L	20	10/08/17	MH	SW8260C
Carbon Disulfide	ND		20	ug/L	20	10/08/17	MH	SW8260C
Carbon tetrachloride	ND		20	ug/L	20	10/08/17	MH	SW8260C
Chlorobenzene	ND		20	ug/L	20	10/08/17	MH	SW8260C
Chloroethane	ND		20	ug/L	20	10/08/17	MH	SW8260C

Project ID: JOLYN ENTERPRISES
Client ID: SB-14D

Phoenix I.D.: BZ13313

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Chloroform	ND	20	ug/L	20	10/08/17	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/08/17	MH	SW8260C
cis-1,2-Dichloroethene	3400	200	ug/L	200	10/08/17	MH	SW8260C
cis-1,3-Dichloropropene	ND	8.0	ug/L	20	10/08/17	MH	SW8260C
Cyclohexane	ND	20	ug/L	20	10/08/17	MH	SW8260C
Dibromochloromethane	ND	20	ug/L	20	10/08/17	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/08/17	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/08/17	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/08/17	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/08/17	MH	SW8260C
Methyl ethyl ketone	120	50	ug/L	20	10/08/17	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/08/17	MH	SW8260C
Methylacetate	ND	100	ug/L	20	10/08/17	MH	SW8260C
Methylcyclohexane	ND	20	ug/L	20	10/08/17	MH	SW8260C
Methylene chloride	ND	60	ug/L	20	10/08/17	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/08/17	MH	SW8260C
Styrene	ND	20	ug/L	20	10/08/17	MH	SW8260C
Tetrachloroethene	ND	20	ug/L	20	10/08/17	MH	SW8260C
Toluene	ND	20	ug/L	20	10/08/17	MH	SW8260C
Total Xylenes	ND	20	ug/L	20	10/08/17	MH	SW8260C
trans-1,2-Dichloroethene	47	20	ug/L	20	10/08/17	MH	SW8260C
trans-1,3-Dichloropropene	ND	8.0	ug/L	20	10/08/17	MH	SW8260C
Trichloroethene	670	200	ug/L	200	10/08/17	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/08/17	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/08/17	MH	SW8260C
Vinyl chloride	400	20	ug/L	20	10/08/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	20	10/08/17	MH	70 - 130 %
% Bromofluorobenzene	102		%	20	10/08/17	MH	70 - 130 %
% Dibromofluoromethane	99		%	20	10/08/17	MH	70 - 130 %
% Toluene-d8	102		%	20	10/08/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	2000	ug/l	20	10/08/17	MH	SW8260C
Volatile Library Search Top 10	Completed				10/09/17	MH	1

Project ID: JOLYN ENTERPRISES
Client ID: SB-14D

Phoenix I.D.: BZ13313

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.

Phyllis Shiller, Laboratory Director
October 11, 2017
Reviewed and Released by: Maryam Taylor, Project Manager

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: EW-7 GW

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ13303

Matrix:(soil/water) WATER Lab Sample ID: BZ13303

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1007P39.D

Level: (low/med) Date Received: 10/03/17

% Moisture: not dec. 100 Date Analyzed: 10/07/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 200

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: EW-9 GW

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ13303

Matrix:(soil/water) WATER Lab Sample ID: BZ13304

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1008P09.D

Level: (low/med) Date Received: 10/03/17

% Moisture: not dec. 100 Date Analyzed: 10/08/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 200

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: EW-20 GW

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ13303

Matrix:(soil/water) WATER Lab Sample ID: BZ13305

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1008P12.D

Level: (low/med) Date Received: 10/03/17

% Moisture: not dec. 100 Date Analyzed: 10/08/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 2

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-8 GW

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ13303

Matrix:(soil/water) WATER Lab Sample ID: BZ13306

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1008P14.D

Level: (low/med) Date Received: 10/03/17

% Moisture: not dec. 100 Date Analyzed: 10/08/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 10

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000075-18-3	Dimethyl sulfide	2.146	440	JN
000096-37-7	Cyclopentane, methyl-	2.899	16	JN
108-67-8	1,3,5-Trimethylbenzene	7.307	13	Q
95-63-6	1,2,4-Trimethylbenzene	7.569	6	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: BZ13307 BLK

Lab Name: Phoenix Environmental Labs Client: _____

Lab Code: Phoenix Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix:(soil/water) WATER Lab Sample ID: BZ13307 BLK

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1005P28.D

Level: (low/med) Low Date Received: 10/03/17

% Moisture: not dec. 0 Date Analyzed: 10/05/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 1

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-11

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ13303

Matrix:(soil/water) WATER Lab Sample ID: BZ13307

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1005P33.D

Level: (low/med) Date Received: 10/03/17

% Moisture: not dec. 100 Date Analyzed: 10/05/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 1

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

CONCENTRATION UNITS:
Number TICs found: 10 (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000109-66-0	Pentane	1.717	15	JN
000107-87-9	2-Pentanone	4.703	64	JN
	unknown	5.561	6.9	J
000111-27-3	1-Hexanol	6.680	36	JN
003777-69-3	Furan, 2-pentyl-	7.397	15	JN
000111-70-6	1-Heptanol	7.611	4.1	JN
000111-13-7	2-Octanone	7.899	29	JN
000124-13-0	Octanal	7.925	22	JN
	unknown	8.532	5.5	J
000124-19-6	Nonanal	8.558	13	JN

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-12

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ13303

Matrix:(soil/water) WATER Lab Sample ID: BZ13308

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1009P08.D

Level: (low/med) Date Received: 10/03/17

% Moisture: not dec. 100 Date Analyzed: 10/09/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 50

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000075-18-3	Dimethyl sulfide	2.140	220	JN

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-13

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ13303

Matrix:(soil/water) WATER Lab Sample ID: BZ13309

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1008P18.D

Level: (low/med) Date Received: 10/03/17

% Moisture: not dec. 100 Date Analyzed: 10/08/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 5

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 3 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000075-18-3	Dimethyl sulfide	2.140	24	JN
000624-92-0	Disulfide, dimethyl	4.933	35	JN
003658-80-8	Dimethyl trisulfide	7.496	6.9	JN

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-14

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ13303

Matrix:(soil/water) WATER Lab Sample ID: BZ13310

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1005P36.D

Level: (low/med) Date Received: 10/03/17

% Moisture: not dec. 100 Date Analyzed: 10/05/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 20

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
007446-09-5	Sulfur dioxide	1.335	39	JN
000074-93-1	Methanethiol	1.518	170	JN

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-22

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ13303

Matrix:(soil/water) WATER Lab Sample ID: BZ13311

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1008P22.D

Level: (low/med) Date Received: 10/03/17

% Moisture: not dec. 100 Date Analyzed: 10/08/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 100

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-28

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ13303

Matrix:(soil/water) WATER Lab Sample ID: BZ13312

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1008P25.D

Level: (low/med) Date Received: 10/03/17

% Moisture: not dec. 100 Date Analyzed: 10/08/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 200

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-14D

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ13303

Matrix:(soil/water) WATER Lab Sample ID: BZ13313

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1008P28.D

Level: (low/med) Date Received: 10/03/17

% Moisture: not dec. 100 Date Analyzed: 10/08/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 20

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000075-18-3	Dimethyl sulfide	2.140	30	JN
000624-92-0	Disulfide, dimethyl	4.933	22	JN

FORM I VOA-TIC

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

October 11, 2017

QA/QC Data

SDG I.D.: GBZ13303

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 404878 (ug/L), QC Sample No: BZ13304 (BZ13304 (200X, 2000X) , BZ13305 (2X, 10X) , BZ13306 (10X, 200X) , BZ13307 (20X) , BZ13309 (5X) , BZ13310 (200X) , BZ13311 (100X, 1000X) , BZ13312 (200X, 2000X) , BZ13313 (20X, 200X))										
Volatiles - Ground Water										
1,1,1-Trichloroethane	ND	1.0	107	107	0.0				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	119	116	2.6				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	112	111	0.9				70 - 130	30
1,1-Dichloroethane	ND	1.0	107	107	0.0				70 - 130	30
1,1-Dichloroethene	ND	1.0	101	100	1.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	119	122	2.5				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	115	116	0.9				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	127	128	0.8				70 - 130	30
1,2-Dibromoethane	ND	1.0	117	116	0.9				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	110	110	0.0				70 - 130	30
1,2-Dichloroethane	ND	1.0	110	108	1.8				70 - 130	30
1,2-Dichloropropane	ND	1.0	107	108	0.9				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	114	114	0.0				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	110	110	0.0				70 - 130	30
1,4-dioxane	ND	100	86	104	18.9				70 - 130	30
2-Hexanone	ND	5.0	110	111	0.9				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	112	107	4.6				70 - 130	30
Acetone	ND	5.0	105	104	1.0				70 - 130	30
Benzene	ND	0.70	106	106	0.0				70 - 130	30
Bromochloromethane	ND	1.0	115	113	1.8				70 - 130	30
Bromodichloromethane	ND	0.50	113	112	0.9				70 - 130	30
Bromoform	ND	1.0	134	129	3.8				70 - 130	30
Bromomethane	ND	1.0	126	130	3.1				70 - 130	30
Carbon Disulfide	ND	1.0	112	109	2.7				70 - 130	30
Carbon tetrachloride	ND	1.0	115	115	0.0				70 - 130	30
Chlorobenzene	ND	1.0	107	107	0.0				70 - 130	30
Chloroethane	ND	1.0	104	102	1.9				70 - 130	30
Chloroform	ND	1.0	104	104	0.0				70 - 130	30
Chloromethane	ND	1.0	107	104	2.8				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	109	108	0.9				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	116	114	1.7				70 - 130	30
Cyclohexane	ND	5.0	88	88	0.0				70 - 130	30
Dibromochloromethane	ND	0.50	126	125	0.8				70 - 130	30
Dichlorodifluoromethane	ND	1.0	93	92	1.1				70 - 130	30
Ethylbenzene	ND	1.0	107	108	0.9				70 - 130	30
Isopropylbenzene	ND	1.0	111	111	0.0				70 - 130	30
m&p-Xylene	ND	1.0	113	114	0.9				70 - 130	30
Methyl ethyl ketone	ND	5.0	108	107	0.9				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	118	117	0.9				70 - 130	30
Methylacetate	ND	2.5	102	100	2.0				70 - 130	30

QA/QC Data

SDG I.D.: GBZ13303

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Methylcyclohexane	ND	1.0	90	90	0.0				70 - 130	30
Methylene chloride	ND	1.0	105	103	1.9				70 - 130	30
o-Xylene	ND	1.0	110	109	0.9				70 - 130	30
Styrene	ND	1.0	111	110	0.9				70 - 130	30
Tetrachloroethene	ND	1.0	109	109	0.0				70 - 130	30
Toluene	ND	1.0	106	104	1.9				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	108	108	0.0				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	114	112	1.8				70 - 130	30
Trichloroethene	ND	1.0	109	109	0.0				70 - 130	30
Trichlorofluoromethane	ND	1.0	88	88	0.0				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	90	90	0.0				70 - 130	30
Vinyl chloride	ND	1.0	102	101	1.0				70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	101	101	0.0				70 - 130	30
% Bromofluorobenzene	102	%	101	101	0.0				70 - 130	30
% Dibromofluoromethane	96	%	103	101	2.0				70 - 130	30
% Toluene-d8	103	%	98	99	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 404524 (ug/L), QC Sample No: BZ13307 (BZ13307, BZ13309 (20X) , BZ13310 (20X))

Volatiles - Ground Water

1,1,1-Trichloroethane	ND	1.0	82	83	1.2				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	91	95	4.3				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	87	91	4.5				70 - 130	30
1,1-Dichloroethane	ND	1.0	88	89	1.1				70 - 130	30
1,1-Dichloroethene	ND	1.0	83	84	1.2				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	80	86	7.2				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	80	84	4.9				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	86	94	8.9				70 - 130	30
1,2-Dibromoethane	ND	1.0	90	94	4.3				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	84	87	3.5				70 - 130	30
1,2-Dichloroethane	ND	1.0	86	88	2.3				70 - 130	30
1,2-Dichloropropane	ND	1.0	88	89	1.1				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	88	89	1.1				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	85	87	2.3				70 - 130	30
1,4-dioxane	ND	100	81	81	0.0				70 - 130	30
2-Hexanone	ND	5.0	85	92	7.9				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	84	88	4.7				70 - 130	30
Acetone	ND	5.0	86	93	7.8				70 - 130	30
Benzene	ND	0.70	86	88	2.3				70 - 130	30
Bromochloromethane	ND	1.0	88	91	3.4				70 - 130	30
Bromodichloromethane	ND	0.50	87	89	2.3				70 - 130	30
Bromoform	ND	1.0	88	94	6.6				70 - 130	30
Bromomethane	ND	1.0	87	90	3.4				70 - 130	30
Carbon Disulfide	ND	1.0	91	90	1.1				70 - 130	30
Carbon tetrachloride	ND	1.0	81	83	2.4				70 - 130	30
Chlorobenzene	ND	1.0	87	89	2.3				70 - 130	30
Chloroethane	ND	1.0	90	89	1.1				70 - 130	30
Chloroform	ND	1.0	91	89	2.2				70 - 130	30
Chloromethane	ND	1.0	79	77	2.6				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	89	88	1.1				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	87	90	3.4				70 - 130	30

QA/QC Data

SDG I.D.: GBZ13303

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Cyclohexane	ND	5.0	93	93	0.0				70 - 130	30	
Dibromochloromethane	ND	0.50	89	94	5.5				70 - 130	30	
Dichlorodifluoromethane	ND	1.0	84	84	0.0				70 - 130	30	
Ethylbenzene	ND	1.0	86	89	3.4				70 - 130	30	
Isopropylbenzene	ND	1.0	88	89	1.1				70 - 130	30	
m&p-Xylene	ND	1.0	91	93	2.2				70 - 130	30	
Methyl ethyl ketone	ND	5.0	89	94	5.5				70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	91	95	4.3				70 - 130	30	
Methylacetate	ND	2.5	85	91	6.8				70 - 130	30	
Methylcyclohexane	ND	1.0	85	85	0.0				70 - 130	30	
Methylene chloride	ND	1.0	88	90	2.2				70 - 130	30	
o-Xylene	ND	1.0	88	91	3.4				70 - 130	30	
Styrene	ND	1.0	90	91	1.1				70 - 130	30	
Tetrachloroethene	ND	1.0	83	85	2.4				70 - 130	30	
Toluene	ND	1.0	85	87	2.3				70 - 130	30	
trans-1,2-Dichloroethene	ND	1.0	86	87	1.2				70 - 130	30	
trans-1,3-Dichloropropene	ND	0.40	83	86	3.6				70 - 130	30	
Trichloroethene	ND	1.0	86	87	1.2				70 - 130	30	
Trichlorofluoromethane	ND	1.0	87	85	2.3				70 - 130	30	
Trichlorotrifluoroethane	ND	1.0	91	90	1.1				70 - 130	30	
Vinyl chloride	ND	1.0	79	81	2.5				70 - 130	30	
% 1,2-dichlorobenzene-d4	99	%	98	98	0.0				70 - 130	30	
% Bromofluorobenzene	101	%	101	100	1.0				70 - 130	30	
% Dibromofluoromethane	90	%	98	95	3.1				70 - 130	30	
% Toluene-d8	105	%	98	98	0.0				70 - 130	30	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 404889 (ug/L), QC Sample No: BZ17364 (BZ13303 (200X, 2000X))

Volatiles - Ground Water

1,1,1-Trichloroethane	ND	1.0	100	105	4.9	111	115	3.5	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	0.50	102	101	1.0	105	111	5.6	70 - 130	30	
1,1,2-Trichloroethane	ND	1.0	98	99	1.0	95	99	4.1	70 - 130	30	
1,1-Dichloroethane	ND	1.0	97	101	4.0	109	115	5.4	70 - 130	30	
1,1-Dichloroethene	ND	1.0	98	102	4.0	115	118	2.6	70 - 130	30	
1,2,3-Trichlorobenzene	ND	1.0	102	104	1.9	93	107	14.0	70 - 130	30	
1,2,4-Trichlorobenzene	ND	1.0	100	102	2.0	94	105	11.1	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	1.0	110	106	3.7	105	113	7.3	70 - 130	30	
1,2-Dibromoethane	ND	1.0	104	106	1.9	105	110	4.7	70 - 130	30	
1,2-Dichlorobenzene	ND	1.0	97	100	3.0	102	108	5.7	70 - 130	30	
1,2-Dichloroethane	ND	1.0	96	99	3.1	100	106	5.8	70 - 130	30	
1,2-Dichloropropane	ND	1.0	96	98	2.1	100	105	4.9	70 - 130	30	
1,3-Dichlorobenzene	ND	1.0	100	103	3.0	103	111	7.5	70 - 130	30	
1,4-Dichlorobenzene	ND	1.0	97	100	3.0	102	108	5.7	70 - 130	30	
1,4-dioxane	ND	100	95	96	1.0	96	95	1.0	70 - 130	30	
2-Hexanone	ND	5.0	95	97	2.1	99	104	4.9	70 - 130	30	
4-Methyl-2-pentanone	ND	5.0	93	93	0.0	54	58	7.1	70 - 130	30	m
Acetone	ND	5.0	91	92	1.1	112	112	0.0	70 - 130	30	
Benzene	ND	0.70	96	100	4.1	101	108	6.7	70 - 130	30	
Bromochloromethane	ND	1.0	102	106	3.8	107	111	3.7	70 - 130	30	
Bromodichloromethane	ND	0.50	98	101	3.0	101	108	6.7	70 - 130	30	
Bromoform	ND	1.0	109	109	0.0	112	121	7.7	70 - 130	30	

QA/QC Data

SDG I.D.: GBZ13303

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Bromomethane	ND	1.0	104	113	8.3	106	137	25.5	70 - 130	30	m
Carbon Disulfide	ND	1.0	103	109	5.7	120	124	3.3	70 - 130	30	
Carbon tetrachloride	ND	1.0	108	116	7.1	120	130	8.0	70 - 130	30	
Chlorobenzene	ND	1.0	97	100	3.0	104	111	6.5	70 - 130	30	
Chloroethane	ND	1.0	94	99	5.2	111	115	3.5	70 - 130	30	
Chloroform	ND	1.0	94	98	4.2	104	110	5.6	70 - 130	30	
Chloromethane	ND	1.0	93	98	5.2	108	111	2.7	70 - 130	30	
cis-1,2-Dichloroethene	ND	1.0	97	101	4.0	NC	NC	NC	70 - 130	30	
cis-1,3-Dichloropropene	ND	0.40	100	101	1.0	97	102	5.0	70 - 130	30	
Cyclohexane	ND	5.0	96	101	5.1	104	104	0.0	70 - 130	30	
Dibromochloromethane	ND	0.50	108	111	2.7	110	121	9.5	70 - 130	30	
Dichlorodifluoromethane	ND	1.0	106	112	5.5	107	108	0.9	70 - 130	30	
Ethylbenzene	ND	1.0	98	102	4.0	105	113	7.3	70 - 130	30	
Isopropylbenzene	ND	1.0	100	103	3.0	106	114	7.3	70 - 130	30	
m&p-Xylene	ND	1.0	103	107	3.8	111	119	7.0	70 - 130	30	
Methyl ethyl ketone	ND	5.0	100	93	7.3	105	103	1.9	70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	102	103	1.0	109	114	4.5	70 - 130	30	
Methylacetate	ND	2.5	88	87	1.1	88	90	2.2	70 - 130	30	
Methylcyclohexane	ND	1.0	100	105	4.9	111	111	0.0	70 - 130	30	
Methylene chloride	ND	1.0	91	94	3.2	99	104	4.9	70 - 130	30	
o-Xylene	ND	1.0	98	103	5.0	105	113	7.3	70 - 130	30	
Styrene	ND	1.0	99	102	3.0	103	110	6.6	70 - 130	30	
Tetrachloroethene	ND	1.0	100	104	3.9	NC	NC	NC	70 - 130	30	
Toluene	ND	1.0	94	99	5.2	100	105	4.9	70 - 130	30	
trans-1,2-Dichloroethene	ND	1.0	99	103	4.0	108	115	6.3	70 - 130	30	
trans-1,3-Dichloropropene	ND	0.40	96	97	1.0	97	101	4.0	70 - 130	30	
Trichloroethene	ND	1.0	99	105	5.9	NC	NC	NC	70 - 130	30	
Trichlorofluoromethane	ND	1.0	95	99	4.1	110	110	0.0	70 - 130	30	
Trichlorotrifluoroethane	ND	1.0	99	103	4.0	107	106	0.9	70 - 130	30	
Vinyl chloride	ND	1.0	97	103	6.0	115	117	1.7	70 - 130	30	
% 1,2-dichlorobenzene-d4	100	%	100	100	0.0	101	101	0.0	70 - 130	30	
% Bromofluorobenzene	101	%	100	100	0.0	102	101	1.0	70 - 130	30	
% Dibromofluoromethane	94	%	100	100	0.0	98	99	1.0	70 - 130	30	
% Toluene-d8	102	%	99	99	0.0	96	94	2.1	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 11, 2017

Wednesday, October 11, 2017

Criteria: None

State: NY

Sample Criteria Exceedances Report

GBZ13303 - BIOTECH

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

October 11, 2017 SDG I.D.: GBZ13303

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

VOA Narration

CHEM02 10/05/17-2: BZ13307, BZ13309, BZ13310
The following Initial Calibration compounds did not meet RSD% criteria: Bromoform 24% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.025 (0.05), 2-Hexanone 0.054 (0.1), 4-Methyl-2-pentanone 0.080 (0.1), Acetone 0.038 (0.1), Bromoform 0.068 (0.1), Methyl ethyl ketone 0.060 (0.1), Methylacetate 0.090 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 1,1,2,2-Tetrachloroethane 0.277 (0.3), 1,2-Dibromo-3-chloropropane 0.023 (0.05), Bromoform 0.063 (0.1)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

CHEM02 10/07/17-2: BZ13303
The following Initial Calibration compounds did not meet RSD% criteria: Bromoform 27% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.024 (0.05), 2-Hexanone 0.052 (0.1), 4-Methyl-2-pentanone 0.073 (0.1), Acetone 0.034 (0.1), Bromoform 0.060 (0.1), Methyl ethyl ketone 0.055 (0.1), Methylacetate 0.084 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 1,1,2,2-Tetrachloroethane 0.290 (0.3), 1,2-Dibromo-3-chloropropane 0.026 (0.05), Bromoform 0.067 (0.1)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

CHEM02 10/08/17-1: BZ13304, BZ13305, BZ13306, BZ13307, BZ13309, BZ13310, BZ13311, BZ13312, BZ13313
The following Initial Calibration compounds did not meet RSD% criteria: Bromoform 27% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.024 (0.05), 2-Hexanone 0.052 (0.1), 4-Methyl-2-pentanone 0.073 (0.1), Acetone 0.034 (0.1), Bromoform 0.060 (0.1), Methyl ethyl ketone 0.055 (0.1), Methylacetate 0.084 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.029 (0.05), Bromoform 0.078 (0.1)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

CHEM02 10/09/17-1: BZ13308

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

Analysis Comments

October 11, 2017 SDG I.D.: GBZ13303

The following Initial Calibration compounds did not meet RSD% criteria: Bromoform 27% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.024 (0.05), 2-Hexanone 0.052 (0.1), 4-Methyl-2-pentanone 0.073 (0.1), Acetone 0.034 (0.1), Bromoform 0.060 (0.1), Methyl ethyl ketone 0.055 (0.1), Methylacetate 0.084 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 1,1,2,2-Tetrachloroethane 0.294 (0.3), 1,2-Dibromo-3-chloropropane 0.026 (0.05), Bromoform 0.072 (0.1)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

NY Temperature Narration

October 11, 2017

SDG I.D.: GBZ13303

The samples in this delivery group were received at 1.0°C.
(Note acceptance criteria is above freezing up to 6°C)

Cooler: Yes [X] No [ ]
Coolant: IPK [ ] ICE [X] No [ ]

PHOENIX
Environmental Laboratories, Inc.

NY/NJ CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Temp 4.0° C Pg of

Contact Options:
[ ] Fax: 724-981-9030
[ ] Phone: 724-242-1990
[X] Email: brichnofsky@ecs-env.com

Customer: BioRemedial Technologies, Inc.
Address: 2706 Kirila Blvd.
Hermitage, PA 16148

Project: Jolyn Enterprises
Report to: Bert Richnofsky
Invoice to: Jan Mozzocio

Project P.O: 100217

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 10/2/17

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe
OIL=Oil B=Bulk L=Liquid

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOCs Partial List (see below)	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [X] As is [ ] (HCl)	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml [ ] 1000ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle
13303	EW-7 GW	GW	10/2/17	9:30am	X				2						
13304	EW-9	GW		9:40am	X				2						
13305	EW-20			9:50am	X				2						
13306	SB-8			10:00 AM	X				2						
13307	SB-11			10:10 AM	X				2						
13308	SB-12			10:20 AM	X				2						
13309	SB-13			10:30 AM	X				2						
13310	SB-14			10:40 AM	X				2						
13311	SB-22			10:50AM	X				2						
13312	SB-23			11:00 AM	X				2						
* 13313	SB-MD			11:10 AM	X				2						

Relinquished by:	Accepted by:	Date:	Time:
[signature]	Tamy Fuller	10/2/17	3:10pm
Tamy Fuller		10/2/17	3:15pm
FedEx	Paradise	10/3/17	1049

Comments, Special Requirements or Regulations:
Parameters To Report - 1,1-Dichloroethane; 2-Butanone; 2-Hexanone; Acetone; Benzene; cis-1,2-Dichloroethene; Cyclohexane; Methyl Cyclohexane; Tetrachloroethane; trans-1,2-Dichloroethene; Trichloroethene; Vinyl Chloride.
*One vial labeled w/ time 1040 - ID matches (EP)

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[X] 5 Days
[ ] 10 Days
[ ] Other
*SURCHARGE APPLIES

NJ
[ ] Res. Criteria
[ ] Non-Res. Criteria
[ ] Impact to GW Soil Cleanup Criteria
[ ] GW Criteria

NY
[ ] NY 375 GWP
[ ] NY375 Unrestricted Use Soil
[ ] NY375 Residential Soil
[ ] Restricted/Residential
[ ] Commercial
[ ] Industrial

Data Format
[ ] Phoenix Std Report
[ ] Excel
[ ] PDF
[ ] GIS/Key
[ ] EQuIS
[ ] NJ Hazsite EDD
[ ] NY EZ EDD (ASP)
[ ] Other

Data Package
[ ] NJ Reduced Deliv. *
[ ] NY Enhanced (ASP B) *
[ ] Other

State where samples were collected: NY

PHOENIX
Environmental Laboratories, Inc.

Friday, December 15, 2017

Attn: Mr. Bert Richnafsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Sample ID#s: BZ52831 - BZ52836

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

Phyllis Shiller

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 15, 2017

FOR: Attn: Mr. Bert Richnafsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	12/05/17	10:10
Location Code:	BIOTECH	Received by:	LB	12/07/17	11:17
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	120517				

Laboratory Data

SDG ID: GBZ52831
Phoenix ID: BZ52831

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: EW-7 GW

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1-Dichloroethane	ND		2.0	ug/L	2	12/12/17	MH	SW8260C
2-Hexanone	ND		5.0	ug/L	2	12/12/17	MH	SW8260C
Acetone	11	S	5.0	ug/L	2	12/12/17	MH	SW8260C
Benzene	ND		1.4	ug/L	2	12/12/17	MH	SW8260C
cis-1,2-Dichloroethene	340		20	ug/L	20	12/09/17	MH	SW8260C
Cyclohexane	ND		2.0	ug/L	2	12/12/17	MH	SW8260C
Methyl ethyl ketone	21		5.0	ug/L	2	12/12/17	MH	SW8260C
Methylcyclohexane	ND		2.0	ug/L	2	12/12/17	MH	SW8260C
Tetrachloroethene	ND		2.0	ug/L	2	12/12/17	MH	SW8260C
trans-1,2-Dichloroethene	5.0		2.0	ug/L	2	12/12/17	MH	SW8260C
Trichloroethene	2.7		2.0	ug/L	2	12/12/17	MH	SW8260C
Vinyl chloride	220		20	ug/L	20	12/09/17	MH	SW8260C
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	101			%	2	12/12/17	MH	70 - 130 %
% Bromofluorobenzene	99			%	2	12/12/17	MH	70 - 130 %
% Dibromofluoromethane	106			%	2	12/12/17	MH	70 - 130 %
% Toluene-d8	103			%	2	12/12/17	MH	70 - 130 %
1,4-dioxane								
1,4-dioxane	ND		200	ug/l	2	12/12/17	MH	SW8260C
Volatile Library Search Top 10	Completed					12/12/17	MH	1

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: EW-7 GW

Phoenix I.D.: BZ52831

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

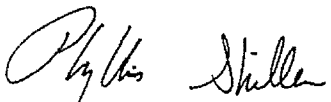
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
December 15, 2017
Reviewed and Released by: Ethan Lee, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 15, 2017

FOR: Attn: Mr. Bert Richnafsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	12/05/17	10:25
Location Code:	BIOTECH	Received by:	LB	12/07/17	11:17
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	120517				

Laboratory Data

SDG ID: GBZ52831
Phoenix ID: BZ52832

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: EW-20 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	1.0	ug/L	1	12/12/17	MH	SW8260C
2-Hexanone	ND	2.5	ug/L	1	12/12/17	MH	SW8260C
Acetone	ND	2.5	ug/L	1	12/12/17	MH	SW8260C
Benzene	ND	0.70	ug/L	1	12/12/17	MH	SW8260C
cis-1,2-Dichloroethene	160	20	ug/L	20	12/09/17	MH	SW8260C
Cyclohexane	ND	1.0	ug/L	1	12/12/17	MH	SW8260C
Methyl ethyl ketone	ND	2.5	ug/L	1	12/12/17	MH	SW8260C
Methylcyclohexane	ND	1.0	ug/L	1	12/12/17	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	12/12/17	MH	SW8260C
trans-1,2-Dichloroethene	1.6	1.0	ug/L	1	12/12/17	MH	SW8260C
Trichloroethene	56	20	ug/L	20	12/09/17	MH	SW8260C
Vinyl chloride	3.0	1.0	ug/L	1	12/12/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	12/12/17	MH	70 - 130 %
% Bromofluorobenzene	100		%	1	12/12/17	MH	70 - 130 %
% Dibromofluoromethane	107		%	1	12/12/17	MH	70 - 130 %
% Toluene-d8	107		%	1	12/12/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	100	ug/l	1	12/12/17	MH	SW8260C
Volatile Library Search Top 10	Completed				12/12/17	MH	1

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: EW-20 GW

Phoenix I.D.: BZ52832

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
December 15, 2017
Reviewed and Released by: Ethan Lee, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 15, 2017

FOR: Attn: Mr. Bert Richnafsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	12/05/17	10:40
Location Code:	BIOTECH	Received by:	LB	12/07/17	11:17
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	120517				

Laboratory Data

SDG ID: GBZ52831
Phoenix ID: BZ52833

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-12 GW

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1-Dichloroethane	ND		20	ug/L	20	12/09/17	MH	SW8260C
2-Hexanone	ND		50	ug/L	20	12/09/17	MH	SW8260C
Acetone	56	S	50	ug/L	20	12/09/17	MH	SW8260C
Benzene	ND		14	ug/L	20	12/09/17	MH	SW8260C
cis-1,2-Dichloroethene	6600		400	ug/L	400	12/12/17	MH	SW8260C
Cyclohexane	ND		20	ug/L	20	12/09/17	MH	SW8260C
Methyl ethyl ketone	95		50	ug/L	20	12/09/17	MH	SW8260C
Methylcyclohexane	ND		20	ug/L	20	12/09/17	MH	SW8260C
Tetrachloroethene	ND		20	ug/L	20	12/09/17	MH	SW8260C
trans-1,2-Dichloroethene	64		20	ug/L	20	12/09/17	MH	SW8260C
Trichloroethene	21		20	ug/L	20	12/09/17	MH	SW8260C
Vinyl chloride	3700		400	ug/L	400	12/12/17	MH	SW8260C
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	100			%	20	12/09/17	MH	70 - 130 %
% Bromofluorobenzene	99			%	20	12/09/17	MH	70 - 130 %
% Dibromofluoromethane	101			%	20	12/09/17	MH	70 - 130 %
% Toluene-d8	100			%	20	12/09/17	MH	70 - 130 %
1,4-dioxane								
1,4-dioxane	ND		2000	ug/l	20	12/09/17	MH	SW8260C
Volatile Library Search Top 10	Completed					12/11/17	MH	1

Project ID: JO-LYN (FMR STANDARD PORTABLE) Phoenix I.D.: BZ52833
Client ID: SB-12 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

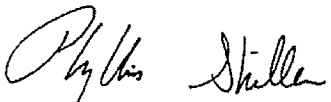
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
December 15, 2017
Reviewed and Released by: Ethan Lee, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 15, 2017

FOR: Attn: Mr. Bert Richnafsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	12/05/17	10:55
Location Code:	BIOTECH	Received by:	LB	12/07/17	11:17
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	120517				

Laboratory Data

SDG ID: GBZ52831
Phoenix ID: BZ52834

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-14 GW

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)								
1,1-Dichloroethane	ND		1.0	ug/L	1	12/12/17	MH	SW8260C
2-Hexanone	ND		2.5	ug/L	1	12/12/17	MH	SW8260C
Acetone	8.7	S	2.5	ug/L	1	12/12/17	MH	SW8260C
Benzene	ND		0.70	ug/L	1	12/12/17	MH	SW8260C
cis-1,2-Dichloroethene	390		20	ug/L	20	12/12/17	MH	SW8260C
Cyclohexane	ND		1.0	ug/L	1	12/12/17	MH	SW8260C
Methyl ethyl ketone	8.6		2.5	ug/L	1	12/12/17	MH	SW8260C
Methylcyclohexane	ND		1.0	ug/L	1	12/12/17	MH	SW8260C
Tetrachloroethene	ND		1.0	ug/L	1	12/12/17	MH	SW8260C
trans-1,2-Dichloroethene	4.7		1.0	ug/L	1	12/12/17	MH	SW8260C
Trichloroethene	5.5		1.0	ug/L	1	12/12/17	MH	SW8260C
Vinyl chloride	140		20	ug/L	20	12/12/17	MH	SW8260C
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	102			%	1	12/12/17	MH	70 - 130 %
% Bromofluorobenzene	100			%	1	12/12/17	MH	70 - 130 %
% Dibromofluoromethane	105			%	1	12/12/17	MH	70 - 130 %
% Toluene-d8	104			%	1	12/12/17	MH	70 - 130 %
1,4-dioxane								
1,4-dioxane	ND		100	ug/l	1	12/12/17	MH	SW8260C
Volatile Library Search Top 10	Completed					12/12/17	MH	1

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-14 GW

Phoenix I.D.: BZ52834

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

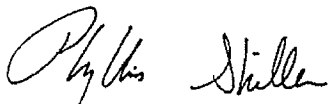
1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
December 15, 2017
Reviewed and Released by: Ethan Lee, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

Analysis Report

December 15, 2017

FOR: Attn: Mr. Bert Richnafsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	12/05/17	11:10
Location Code:	BIOTECH	Received by:	LB	12/07/17	11:17
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	120517				

Laboratory Data

SDG ID: GBZ52831
Phoenix ID: BZ52835

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-22 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	400	ug/L	400	12/09/17	MH	SW8260C
2-Hexanone	ND	1000	ug/L	400	12/09/17	MH	SW8260C
Acetone	ND	1000	ug/L	400	12/09/17	MH	SW8260C
Benzene	ND	280	ug/L	400	12/09/17	MH	SW8260C
cis-1,2-Dichloroethene	29000	4000	ug/L	4000	12/12/17	MH	SW8260C
Cyclohexane	ND	400	ug/L	400	12/09/17	MH	SW8260C
Methyl ethyl ketone	ND	1000	ug/L	400	12/09/17	MH	SW8260C
Methylcyclohexane	ND	400	ug/L	400	12/09/17	MH	SW8260C
Tetrachloroethene	ND	400	ug/L	400	12/09/17	MH	SW8260C
trans-1,2-Dichloroethene	ND	400	ug/L	400	12/09/17	MH	SW8260C
Trichloroethene	140000	5000	ug/L	5000	12/13/17	MH	SW8260C
Vinyl chloride	ND	400	ug/L	400	12/09/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	400	12/09/17	MH	70 - 130 %
% Bromofluorobenzene	99		%	400	12/09/17	MH	70 - 130 %
% Dibromofluoromethane	101		%	400	12/09/17	MH	70 - 130 %
% Toluene-d8	110		%	400	12/09/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	40000	ug/l	400	12/09/17	MH	SW8260C
Volatile Library Search Top 10	Completed				12/11/17	MH	1

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-22 GW

Phoenix I.D.: BZ52835

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

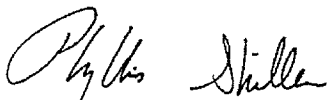
1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
December 15, 2017
Reviewed and Released by: Ethan Lee, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 15, 2017

FOR: Attn: Mr. Bert Richnafsky
Bioremidal Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	12/05/17	11:25
Location Code:	BIOTECH	Received by:	LB	12/07/17	11:17
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	120517				

Laboratory Data

SDG ID: GBZ52831
Phoenix ID: BZ52836

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-28 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	100	ug/L	100	12/12/17	MH	SW8260C
2-Hexanone	ND	250	ug/L	100	12/12/17	MH	SW8260C
Acetone	ND	250	ug/L	100	12/12/17	MH	SW8260C
Benzene	ND	70	ug/L	100	12/12/17	MH	SW8260C
cis-1,2-Dichloroethene	73000	5000	ug/L	5000	12/13/17	MH	SW8260C
Cyclohexane	ND	100	ug/L	100	12/12/17	MH	SW8260C
Methyl ethyl ketone	ND	250	ug/L	100	12/12/17	MH	SW8260C
Methylcyclohexane	ND	100	ug/L	100	12/12/17	MH	SW8260C
Tetrachloroethene	ND	100	ug/L	100	12/12/17	MH	SW8260C
trans-1,2-Dichloroethene	430	100	ug/L	100	12/12/17	MH	SW8260C
Trichloroethene	24000	1000	ug/L	1000	12/12/17	MH	SW8260C
Vinyl chloride	7200	1000	ug/L	1000	12/12/17	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	100	12/12/17	MH	70 - 130 %
% Bromofluorobenzene	100		%	100	12/12/17	MH	70 - 130 %
% Dibromofluoromethane	108		%	100	12/12/17	MH	70 - 130 %
% Toluene-d8	118		%	100	12/12/17	MH	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	10000	ug/l	100	12/12/17	MH	SW8260C
Volatile Library Search Top 10	Completed				12/12/17	MH	1

Project ID: JO-LYN (FMR STANDARD PORTABLE) Phoenix I.D.: BZ52836

Client ID: SB-28 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

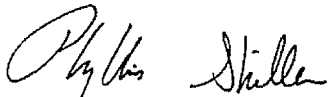
1 = This parameter is not certified by NY NELAC for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
December 15, 2017
Reviewed and Released by: Ethan Lee, Project Manager

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: EW-7 GW

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ52831

Matrix:(soil/water) WATER Lab Sample ID: BZ52831

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1211P46.D

Level: (low/med) Date Received: 12/07/17

% Moisture: not dec. 100 Date Analyzed: 12/12/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 2

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000075-18-3	Dimethyl sulfide	2.140	4.2	JN

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: EW-20 GW

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ52831

Matrix:(soil/water) WATER Lab Sample ID: BZ52832

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1211P48.D

Level: (low/med) Date Received: 12/07/17

% Moisture: not dec. 100 Date Analyzed: 12/12/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 1

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-12 GW

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ52831

Matrix:(soil/water) WATER Lab Sample ID: BZ52833

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1209P10.D

Level: (low/med) Date Received: 12/07/17

% Moisture: not dec. 100 Date Analyzed: 12/09/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 20

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000074-93-1	Methanethiol	1.518	32	JN
000075-18-3	Dimethyl sulfide	2.140	97	JN

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-14 GW

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ52831

Matrix:(soil/water) WATER Lab Sample ID: BZ52834

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1211P52.D

Level: (low/med) Date Received: 12/07/17

% Moisture: not dec. 100 Date Analyzed: 12/12/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 1

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-22 GW

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ52831

Matrix:(soil/water) WATER Lab Sample ID: BZ52835

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1209P12.D

Level: (low/med) Date Received: 12/07/17

% Moisture: not dec. 100 Date Analyzed: 12/09/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 400

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: SB-28 GW

Lab Name: Phoenix Environmental Labs Client: BIOTECH

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GBZ52831

Matrix:(soil/water) WATER Lab Sample ID: BZ52836

Sample wt/vol: 25 (g/mL) mL Lab File ID: 1211P56.D

Level: (low/med) Date Received: 12/07/17

% Moisture: not dec. 100 Date Analyzed: 12/12/17

GC Column: rtx-vms ID: 0.18 (mm) Dilution Factor: 100

Purge Volume 25000 (uL) Soil Aliquot Vol (uL): n.a.

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

December 15, 2017

QA/QC Data

SDG I.D.: GBZ52831

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 412771 (ug/L), QC Sample No: BZ51038 (BZ52831 (2X) , BZ52832, BZ52833 (400X) , BZ52834 (1X, 20X) , BZ52835 (4000X) , BZ52836 (100X, 1000X))										
Volatiles - Ground Water										
1,1-Dichloroethane	ND	1.0	91	94	3.2				70 - 130	30
1,4-dioxane	ND	100	102	102	0.0				70 - 130	30
2-Hexanone	ND	5.0	92	94	2.2				70 - 130	30
Acetone	ND	5.0	82	83	1.2				70 - 130	30
Benzene	ND	0.70	90	92	2.2				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	88	91	3.4				70 - 130	30
Cyclohexane	ND	5.0	89	90	1.1				70 - 130	30
Methyl ethyl ketone	ND	5.0	90	92	2.2				70 - 130	30
Methylcyclohexane	ND	1.0	90	90	0.0				70 - 130	30
Tetrachloroethene	ND	1.0	99	101	2.0				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	88	90	2.2				70 - 130	30
Trichloroethene	ND	1.0	98	99	1.0				70 - 130	30
Vinyl chloride	ND	1.0	84	85	1.2				70 - 130	30
% 1,2-dichlorobenzene-d4	102	%	101	103	2.0				70 - 130	30
% Bromofluorobenzene	100	%	104	104	0.0				70 - 130	30
% Dibromofluoromethane	106	%	105	107	1.9				70 - 130	30
% Toluene-d8	102	%	104	104	0.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 412615 (ug/L), QC Sample No: BZ53225 (BZ52831 (20X) , BZ52832 (20X) , BZ52833 (20X) , BZ52835 (400X))										
Volatiles - Ground Water										
1,1-Dichloroethane	ND	1.0	95	93	2.1				70 - 130	30
1,4-dioxane	ND	100	114	116	1.7				70 - 130	30
2-Hexanone	ND	5.0	106	101	4.8				70 - 130	30
Acetone	ND	5.0	99	96	3.1				70 - 130	30
Benzene	ND	0.70	94	90	4.3				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	94	91	3.2				70 - 130	30
Cyclohexane	ND	5.0	101	99	2.0				70 - 130	30
Methyl ethyl ketone	ND	5.0	111	110	0.9				70 - 130	30
Methylcyclohexane	ND	1.0	102	97	5.0				70 - 130	30
Tetrachloroethene	ND	1.0	101	97	4.0				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	93	90	3.3				70 - 130	30
Trichloroethene	ND	1.0	99	95	4.1				70 - 130	30
Vinyl chloride	ND	1.0	105	105	0.0				70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	101	100	1.0				70 - 130	30
% Bromofluorobenzene	99	%	104	103	1.0				70 - 130	30
% Dibromofluoromethane	100	%	102	103	1.0				70 - 130	30
% Toluene-d8	99	%	100	100	0.0				70 - 130	30

QA/QC Data

SDG I.D.: GBZ52831

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Comment:										
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.										
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.										
QA/QC Batch 413077 (ug/L), QC Sample No: BZ59267 (BZ52835 (5000X) , BZ52836 (5000X))										
Volatiles - Ground Water										
cis-1,2-Dichloroethene	ND	1.0	99	94	5.2				70 - 130	30
Trichloroethene	ND	1.0	101	93	8.2				70 - 130	30
Comment:										
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.										
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.										

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
December 15, 2017

Friday, December 15, 2017

Criteria: None

State: NY

Sample Criteria Exceedances Report

GBZ52831 - BIOTECH

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

December 15, 2017 SDG I.D.: GBZ52831

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

VOA Narration

CHEM02 12/11/17-2: BZ52831, BZ52832, BZ52833, BZ52834, BZ52835, BZ52836
The following Initial Calibration compounds did not meet RSD% criteria: Acetone 23% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: 2-Hexanone 0.043 (0.1), Acetone 0.025 (0.1), Methyl ethyl ketone 0.032 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

NY Temperature Narration

December 15, 2017

SDG I.D.: GBZ52831

The samples in this delivery group were received at 1.0°C.
(Note acceptance criteria is above freezing up to 6°C)

Cooler: Yes ☒ No ☐
Coolant: IPK ☐ ICE ☒ No ☐
Temp .0 °C Pg of

NY/NJ CHAIN OF CUSTODY RECORD

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Contact Options:
☐ Fax:
☐ Phone:
☒ Email: brichnafsky@ces-env.com

Customer: BioRemedial Technologies, Inc.
Address: 2700 Kirila Blvd. Hermitage, PA 16148
Project: Jo-Lyn (Fmr Standard Portable)
Report to: Bert Richnafsky
Invoice to: Jan Mozzocio
Project P.O: 120517

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification
Sampler's Signature: Albert M Richnafsky Date: 12-5-17

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe
OIL=Oil B=Bulk L=Liquid

Analysis Request: VOCs Partial List (see below)

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOCs Partial List (see below)	40ml VOA Vial [ ] As is [X] HCl
52831	EW-7 GW	GW	12-5-17	10:10 am	X	2
52832	EW-20 GW	GW	"	10:25	X	2
52833	SB-12 GW	GW	"	10:40	X	2
52834	SB-14 GW	GW	"	10:55	X	2
52835	SB-22 GW	GW	"	11:10	X	2
52836	SB-28 GW	GW	"	11:25 am	X	2

Other bottle columns (blank): Soil VOA Vials [ ] methanol [ ] H2O; GL Soil container ( )oz; GL Soil container ( )oz; GL Amber 1000ml [ ] As is [ ] H2SO4; PL As is [ ] 250ml [ ] 500ml [ ] 1000ml; PL H2SO4 [ ] 250ml [ ] 500ml; PL HNO3 250ml; PL NaOH 250ml; Bacteria Bottle

Relinquished by:	Accepted by:	Date:	Time:
A Richnafsky	Mozzocio	12/6/17	3:15 pm
[illegible]	Phoenix	12/7/17	11:17

Turnaround: ☐ 1 Day* ☐ 2 Days* ☐ 3 Days* ☒ 5 Days ☐ 10 Days ☐ Other
* SURCHARGE APPLIES

NJ: ☐ Res. Criteria ☐ Non-Res. Criteria ☐ Impact to GW Soil Cleanup Criteria ☐ GW Criteria

NY: ☐ NY 375 GWP ☐ NY375 Unrestricted Use Soil ☐ NY375 Residential Soil ☐ Restricted/Residential ☐ Commercial ☐ Industrial

Data Format: ☐ Phoenix Std Report ☐ Excel ☐ PDF ☐ GIS/Key ☐ EQuIS ☐ NJ Hazsite EDD ☐ NY EZ EDD (ASP) ☐ Other

Data Package: ☐ NJ Reduced Deliv.* ☐ NY Enhanced (ASP B)* ☐ Other

State where samples were collected: NY

Comments, Special Requirements or Regulations:
Report: 1,1-Dichloroethane; 2-Butanox; 2-Hexanone; Acetone; Benzene; cis-1,2-Dichloroethene; Cyclohexane; methyl Cyclohexane; Tetrachloroethane; trans-1,2-Dichloroethene; Trichloroethene; Vinyl Chloride
Note - Vigorous fermentation occurring at SB-22. Test sample as is.

PHOENIX
Environmental Laboratories, Inc.

Friday, May 04, 2018

Attn: Bert Richnafsky
BioRemedial Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Project ID: JO-LYN FMR STANDARD PORTABLE
Sample ID#s: CA36451 - CA36456

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

Phyllis Shiller

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 04, 2018

FOR: Attn: Bert Richnafsky
BioRemedial Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	04/24/18	10:50
Location Code:	BIOTECH	Received by:	CP	04/26/18	10:39
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA36451
Phoenix ID: CA36451

Project ID: JO-LYN FMR STANDARD PORTABLE
Client ID: SB-22 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1-Dichloroethane	ND	100	ug/L	100	05/01/18	HM	SW8260C	
2-Hexanone	ND	500	ug/L	100	05/01/18	HM	SW8260C	
Acetone	ND	2500	ug/L	100	05/01/18	HM	SW8260C	
Benzene	ND	70	ug/L	100	05/01/18	HM	SW8260C	
cis-1,2-Dichloroethene	21000	10000	ug/L	10000	05/01/18	HM	SW8260C	
Cyclohexane	ND	100	ug/L	100	05/01/18	HM	SW8260C	
Methyl ethyl ketone	ND	500	ug/L	100	05/01/18	HM	SW8260C	
Methylcyclohexane	ND	100	ug/L	100	05/01/18	HM	SW8260C	
Tetrachloroethene	220	100	ug/L	100	05/01/18	HM	SW8260C	
trans-1,2-Dichloroethene	110	100	ug/L	100	05/01/18	HM	SW8260C	
Trichloroethene	98000	10000	ug/L	10000	05/01/18	HM	SW8260C	
Vinyl chloride	190	100	ug/L	100	05/01/18	HM	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	98		%	100	05/01/18	HM	70 - 130 %	
% Bromofluorobenzene	96		%	100	05/01/18	HM	70 - 130 %	
% Dibromofluoromethane	97		%	100	05/01/18	HM	70 - 130 %	
% Toluene-d8	141		%	100	05/01/18	HM	70 - 130 %	3

Project ID: JO-LYN FMR STANDARD PORTABLE
Client ID: SB-22 GW

Phoenix I.D.: CA36451

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

3 = This parameter exceeds laboratory specified limits.

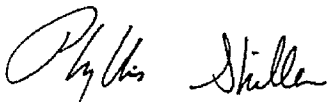
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

CA36451 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services.



Phyllis Shiller, Laboratory Director
May 04, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 04, 2018

FOR: Attn: Bert Richnafsky
BioRemedial Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	04/24/18	11:05
Location Code:	BIOTECH	Received by:	CP	04/26/18	10:39
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA36451
Phoenix ID: CA36452

Project ID: JO-LYN FMR STANDARD PORTABLE
Client ID: SB-28 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1-Dichloroethane	ND	20	ug/L	20	05/01/18	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	05/01/18	MH	SW8260C
Acetone	ND	500	ug/L	20	05/01/18	MH	SW8260C
Benzene	ND	14	ug/L	20	05/01/18	MH	SW8260C
cis-1,2-Dichloroethene	2200	200	ug/L	200	05/01/18	MH	SW8260C
Cyclohexane	ND	20	ug/L	20	05/01/18	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	05/01/18	MH	SW8260C
Methylcyclohexane	ND	20	ug/L	20	05/01/18	MH	SW8260C
Tetrachloroethene	ND	20	ug/L	20	05/01/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	05/01/18	MH	SW8260C
Trichloroethene	170	20	ug/L	20	05/01/18	MH	SW8260C
Vinyl chloride	460	20	ug/L	20	05/01/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	20	05/01/18	MH	70 - 130 %
% Bromofluorobenzene	96		%	20	05/01/18	MH	70 - 130 %
% Dibromofluoromethane	96		%	20	05/01/18	MH	70 - 130 %
% Toluene-d8	99		%	20	05/01/18	MH	70 - 130 %

Project ID: JO-LYN FMR STANDARD PORTABLE
Client ID: SB-28 GW

Phoenix I.D.: CA36452

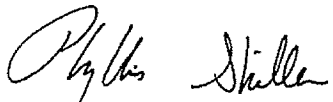
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
May 04, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH NELAC NY # 11301

Analysis Report

May 04, 2018

FOR: Attn: Bert Richnafsky
BioRemedial Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	04/24/18	11:20
Location Code:	BIOTECH	Received by:	CP	04/26/18	10:39
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA36451
Phoenix ID: CA36453

Project ID: JO-LYN FMR STANDARD PORTABLE
Client ID: SB-14 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1-Dichloroethane	ND	20	ug/L	20	05/01/18	MH	SW8260C
2-Hexanone	ND	100	ug/L	20	05/01/18	MH	SW8260C
Acetone	ND	500	ug/L	20	05/01/18	MH	SW8260C
Benzene	ND	14	ug/L	20	05/01/18	MH	SW8260C
cis-1,2-Dichloroethene	1100	50	ug/L	50	05/01/18	MH	SW8260C
Cyclohexane	ND	20	ug/L	20	05/01/18	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	20	05/01/18	MH	SW8260C
Methylcyclohexane	ND	20	ug/L	20	05/01/18	MH	SW8260C
Tetrachloroethene	ND	20	ug/L	20	05/01/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	05/01/18	MH	SW8260C
Trichloroethene	ND	20	ug/L	20	05/01/18	MH	SW8260C
Vinyl chloride	330	20	ug/L	20	05/01/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	20	05/01/18	MH	70 - 130 %
% Bromofluorobenzene	96		%	20	05/01/18	MH	70 - 130 %
% Dibromofluoromethane	97		%	20	05/01/18	MH	70 - 130 %
% Toluene-d8	98		%	20	05/01/18	MH	70 - 130 %

Project ID: JO-LYN FMR STANDARD PORTABLE
Client ID: SB-14 GW

Phoenix I.D.: CA36453

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
May 04, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 04, 2018

FOR: Attn: Bert Richnafsky
BioRemedial Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	04/24/18	11:40
Location Code:	BIOTECH	Received by:	CP	04/26/18	10:39
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA36451
Phoenix ID: CA36454

Project ID: JO-LYN FMR STANDARD PORTABLE
Client ID: SB-12 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1-Dichloroethane	ND	1.0	ug/L	1	04/28/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	04/28/18	MH	SW8260C
Acetone	ND	25	ug/L	1	04/28/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	04/28/18	MH	SW8260C
cis-1,2-Dichloroethene	68	10	ug/L	10	05/01/18	MH	SW8260C
Cyclohexane	ND	1	ug/L	1	05/01/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	04/28/18	MH	SW8260C
Methylcyclohexane	ND	1	ug/L	1	05/01/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	04/28/18	MH	SW8260C
trans-1,2-Dichloroethene	2.0	1.0	ug/L	1	04/28/18	MH	SW8260C
Trichloroethene	2.9	1.0	ug/L	1	04/28/18	MH	SW8260C
Vinyl chloride	48	10	ug/L	10	05/01/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	04/28/18	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	04/28/18	MH	70 - 130 %
% Dibromofluoromethane	89		%	1	04/28/18	MH	70 - 130 %
% Toluene-d8	94		%	1	04/28/18	MH	70 - 130 %

Project ID: JO-LYN FMR STANDARD PORTABLE
Client ID: SB-12 GW

Phoenix I.D.: CA36454

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
May 04, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 04, 2018

FOR: Attn: Bert Richnafsky
BioRemedial Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	04/24/18	12:00
Location Code:	BIOTECH	Received by:	CP	04/26/18	10:39
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA36451
Phoenix ID: CA36455

Project ID: JO-LYN FMR STANDARD PORTABLE
Client ID: EW-9 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1-Dichloroethane	ND	1.0	ug/L	1	04/28/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	04/28/18	MH	SW8260C
Acetone	ND	25	ug/L	1	04/28/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	04/28/18	MH	SW8260C
cis-1,2-Dichloroethene	200	20	ug/L	20	05/01/18	MH	SW8260C
Cyclohexane	ND		ug/L	1	05/01/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	04/28/18	MH	SW8260C
Methylcyclohexane	ND		ug/L	1	05/01/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	04/28/18	MH	SW8260C
trans-1,2-Dichloroethene	1.7	1.0	ug/L	1	04/28/18	MH	SW8260C
Trichloroethene	13	1.0	ug/L	1	04/28/18	MH	SW8260C
Vinyl chloride	270	20	ug/L	20	05/01/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	96		%	1	04/28/18	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	04/28/18	MH	70 - 130 %
% Dibromofluoromethane	89		%	1	04/28/18	MH	70 - 130 %
% Toluene-d8	103		%	1	04/28/18	MH	70 - 130 %

Project ID: JO-LYN FMR STANDARD PORTABLE
Client ID: EW-9 GW

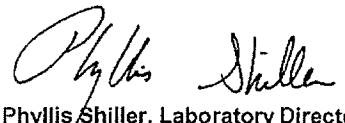
Phoenix I.D.: CA36455

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
May 04, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 04, 2018

FOR: Attn: Bert Richnafsky
BioRemedial Technologies, Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	04/24/18	12:20
Location Code:	BIOTECH	Received by:	CP	04/26/18	10:39
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA36451
Phoenix ID: CA36456

Project ID: JO-LYN FMR STANDARD PORTABLE
Client ID: EW-20 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1-Dichloroethane	ND	1.0	ug/L	1	05/01/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	05/01/18	MH	SW8260C
Acetone	ND	25	ug/L	1	05/01/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	05/01/18	MH	SW8260C
cis-1,2-Dichloroethene	1.1	1.0	ug/L	1	05/01/18	MH	SW8260C
Cyclohexane	ND	1	ug/L	1	05/01/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	05/01/18	MH	SW8260C
Methylcyclohexane	ND	1	ug/L	1	05/01/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	05/01/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/01/18	MH	SW8260C
Trichloroethene	3.0	1.0	ug/L	1	05/01/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	05/01/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	05/01/18	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	05/01/18	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	05/01/18	MH	70 - 130 %
% Toluene-d8	98		%	1	05/01/18	MH	70 - 130 %

Project ID: JO-LYN FMR STANDARD PORTABLE
Client ID: EW-20 GW

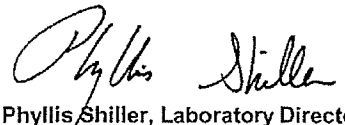
Phoenix I.D.: CA36456

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
May 04, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

May 04, 2018

QA/QC Data

SDG I.D.: GCA36451

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 428557 (ug/L), QC Sample No: CA35846 (CA36454, CA36455)										
Volatiles - Ground Water										
1,1-Dichloroethane	ND	1.0	90	103	13.5				70 - 130	30
2-Hexanone	ND	5.0	75	90	18.2				70 - 130	30
Acetone	ND	5.0	67	82	20.1				70 - 130	30
Benzene	ND	0.70	90	101	11.5				70 - 130	30
Methyl ethyl ketone	ND	5.0	74	91	20.6				70 - 130	30
Tetrachloroethene	ND	1.0	85	104	20.1				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	92	104	12.2				70 - 130	30
Trichloroethene	ND	1.0	92	103	11.3				70 - 130	30
% 1,2-dichlorobenzene-d4	97	%	99	100	1.0				70 - 130	30
% Bromofluorobenzene	98	%	96	98	2.1				70 - 130	30
% Dibromofluoromethane	100	%	91	98	7.4				70 - 130	30
% Toluene-d8	94	%	102	104	1.9				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 428733 (ug/L), QC Sample No: CA36149 (CA36451 (100X, 10000X) , CA36452 (20X) , CA36453 (20X, 50X) , CA36454 (10X) , CA36455 (20X) , CA36456)										
Volatiles - Ground Water										
1,1-Dichloroethane	ND	1.0	81	85	4.8				70 - 130	30
2-Hexanone	ND	5.0	82	90	9.3				70 - 130	30
Acetone	ND	5.0	77	83	7.5				70 - 130	30
Benzene	ND	0.70	82	87	5.9				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	86	89	3.4				70 - 130	30
Methyl ethyl ketone	ND	5.0	88	96	8.7				70 - 130	30
Tetrachloroethene	ND	1.0	81	84	3.6				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	85	89	4.6				70 - 130	30
Trichloroethene	ND	1.0	84	87	3.5				70 - 130	30
Vinyl chloride	ND	1.0	73	76	4.0				70 - 130	30
% 1,2-dichlorobenzene-d4	99	%	99	100	1.0				70 - 130	30
% Bromofluorobenzene	97	%	98	100	2.0				70 - 130	30
% Dibromofluoromethane	98	%	99	100	1.0				70 - 130	30
% Toluene-d8	99	%	99	99	0.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 428873 (ug/L), QC Sample No: CA37312 (CA36452 (200X))										
Volatiles - Ground Water										
cis-1,2-Dichloroethene	ND	1.0	98	101	3.0				70 - 130	30

QA/QC Data

SDG I.D.: GCA36451

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

I = This parameter is outside laboratory LCS/LCSD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
May 04, 2018

Friday, May 04, 2018

Criteria: None

State: NY

Sample Criteria Exceedances Report

GCA36451 - BIOTECH

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

Analysis Comments

May 04, 2018 SDG I.D.: GCA36451

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

NY Temperature Narration

May 04, 2018

SDG I.D.: GCA36451

The samples in this delivery group were received at 1.0°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler. Yes [X] No [ ]
Coolant: IPK [ ] ICE [X] No [ ]

NY/NJ CHAIN OF CUSTODY RECORD

Temp 10 °C Pg 1 of 1

PHOENIX
Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Contact Options:
[ ] Fax:
[ ] Phone:
[X] Email: brichnafsky@eces-env.com

Customer: BioRemedial Technologies, Inc.
Address: 2700 Kirila Blvd.
Hermitage, PA 16148

Project: Ja-Lyn (Fmr Standard Portable) Project P.O:
Report to: Bert Richnafsky
Invoice to: Dan Mozzocio

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: Albert M. Richnafsky Date: 4/25/18

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe
OIL=Oil B=Bulk L=Liquid

Analysis Request: VOCs Partial List (see below)

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [X] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
36451	SB-22 GW	GW	4/24/18	10:50	X			2						
36452	SB-28 GW	"	"	11:05	X			2						
36453	SB-14 GW	"	"	11:20	X			2						
36454	SB-12 GW	"	"	11:40	X			2						
36455	EW-9 GW	"	"	12:00	X			2						
36456	EW-20 GW	"	"	12:20	X			2						

Relinquished by:	Accepted by:	Date:	Time:
A Richnafsky	Tammy Miller	4/25/18	10:35 am
Tammy Miller		4/25/18	3:15 pm
FedEx	TRANSIT	4/26/18	10:39

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[X] 5 Days
[ ] 10 Days
[ ] Other
* SURCHARGE APPLIES

NJ
[ ] Res. Criteria
[ ] Non-Res. Criteria
[ ] Impact to GW Soil Cleanup Criteria
[ ] Impact to GW soil screen Criteria
[ ] GW Criteria

What State were samples collected? NY

NY
[ ] TOGS GW
[ ] CP-51 SOIL
[ ] 375SCO Unrestricted Soil
[ ] 375SCO Residential Soil
[ ] 375SCO Residential
[ ] 375SCO Commercial Soil
[ ] 375SCO Industrial Soil
[ ] Subpart 5 DW

Data Format
[ ] Phoenix Std Report
[ ] Excel
[ ] PDF
[ ] GIS/Key
[ ] EQuIS
[ ] NJ Hazsite EDD
[ ] NY EZ EDD (ASP)
[ ] Other

Data Package
[ ] NJ Reduced Deliv. *
[ ] NY Enhanced (ASP B) *
[ ] Other

Comments, Special Requirements or Regulations:
Report: 1,1-Dichloroethane; 2-Butanone; 2-Hexanone; Acetone; Benzene; cis-1,2-Dichloroethene; Cyclohexane; Methyl Cyclohexane; Tetrachloroethene; trans-1,2-Dichloroethene; Trichloroethene; Vinyl Chloride
Note: May be a small amount of air in the sample bottles due to active fermentation.

PHOENIX
Environmental Laboratories, Inc.

Tuesday, October 02, 2018

Attn: Bert Richnafsky
Compliance Env Services Inc
2700 Kirila Drive
Hermitage, PA 16148

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Sample ID#s: CB35211 - CB35221

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

Phyllis Shiller

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 02, 2018

FOR: Attn: Bert Richnafsky
Compliance Env Services Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	09/18/18	11:15
Location Code:	COMPENV-PA	Received by:	CP	09/20/18	10:37
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	JO-LYN				

Laboratory Data

SDG ID: GCB35211
Phoenix ID: CB35211

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: EW-7

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles								
1,1-Dichloroethane	ND		1.0	ug/L	1	09/26/18	MH	SW8260C
2-Hexanone	ND		5.0	ug/L	1	09/26/18	MH	SW8260C
Acetone	51	S	40	ug/L	20	09/24/18	MH	SW8260C
Benzene	ND		0.70	ug/L	1	09/26/18	MH	SW8260C
cis-1,2-Dichloroethene	110		20	ug/L	20	09/24/18	MH	SW8260C
Cyclohexane	ND		1	ug/L	1	09/24/18	MH	SW8260C
Methyl ethyl ketone	64		40	ug/L	20	09/24/18	MH	SW8260C
Methylcyclohexane	ND		1	ug/L	1	09/24/18	MH	SW8260C
Tetrachloroethene	ND		1.0	ug/L	1	09/26/18	MH	SW8260C
trans-1,2-Dichloroethene	11		1.0	ug/L	1	09/26/18	MH	SW8260C
Trichloroethene	3.8		1.0	ug/L	1	09/26/18	MH	SW8260C
Vinyl chloride	170		20	ug/L	20	09/24/18	MH	SW8260C
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	101			%	1	09/26/18	MH	70 - 130 %
% Bromofluorobenzene	97			%	1	09/26/18	MH	70 - 130 %
% Dibromofluoromethane	99			%	1	09/26/18	MH	70 - 130 %
% Toluene-d8	99			%	1	09/26/18	MH	70 - 130 %

Project ID: JO-LYN (FMR STANDARD PORTABLE) Phoenix I.D.: CB35211
Client ID: EW-7

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 02, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 02, 2018

FOR: Attn: Bert Richnafsky
Compliance Env Services Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	09/18/18	11:25
Location Code:	COMPENV-PA	Received by:	CP	09/20/18	10:37
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	JO-LYN				

Laboratory Data

SDG ID: GCB35211
Phoenix ID: CB35212

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: EW-9

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles								
1,1-Dichloroethane	ND		1.0	ug/L	1	09/27/18	HM	SW8260C
2-Hexanone	ND		5.0	ug/L	1	09/27/18	HM	SW8260C
Acetone	25	S	25	ug/L	1	09/27/18	HM	SW8260C
Benzene	ND		0.70	ug/L	1	09/27/18	HM	SW8260C
cis-1,2-Dichloroethene	110		20	ug/L	20	09/24/18	HM	SW8260C
Cyclohexane	ND		1	ug/L	1	09/24/18	HM	SW8260C
Methyl ethyl ketone	ND		5.0	ug/L	1	09/27/18	HM	SW8260C
Methylcyclohexane	ND		1	ug/L	1	09/24/18	HM	SW8260C
Tetrachloroethene	ND		1.0	ug/L	1	09/27/18	HM	SW8260C
trans-1,2-Dichloroethene	1.1		1.0	ug/L	1	09/27/18	HM	SW8260C
Trichloroethene	1.8		1.0	ug/L	1	09/27/18	HM	SW8260C
Vinyl chloride	600		20	ug/L	20	09/24/18	HM	SW8260C
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	99			%	1	09/27/18	HM	70 - 130 %
% Bromofluorobenzene	97			%	1	09/27/18	HM	70 - 130 %
% Dibromofluoromethane	91			%	1	09/27/18	HM	70 - 130 %
% Toluene-d8	98			%	1	09/27/18	HM	70 - 130 %

Project ID: JO-LYN (FMR STANDARD PORTABLE) Phoenix I.D.: CB35212
Client ID: EW-9

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 02, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 02, 2018

FOR: Attn: Bert Richnafsky
Compliance Env Services Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	09/18/18	11:35
Location Code:	COMPENV-PA	Received by:	CP	09/20/18	10:37
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	JO-LYN				

Laboratory Data

SDG ID: GCB35211
Phoenix ID: CB35213

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: EW-20

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1-Dichloroethane	ND	20	ug/L	20	09/24/18	RM	SW8260C
2-Hexanone	ND	100	ug/L	20	09/24/18	RM	SW8260C
Acetone	1100	500	ug/L	100	09/27/18	RM	SW8260C
Benzene	ND	14	ug/L	20	09/24/18	RM	SW8260C
cis-1,2-Dichloroethene	39	20	ug/L	20	09/24/18	RM	SW8260C
Cyclohexane	ND	20	ug/L	20	09/27/18	RM	SW8260C
Methyl ethyl ketone	680	500	ug/L	100	09/27/18	RM	SW8260C
Methylcyclohexane	ND	20	ug/L	20	09/27/18	RM	SW8260C
Tetrachloroethene	ND	20	ug/L	20	09/24/18	RM	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	09/24/18	RM	SW8260C
Trichloroethene	38	20	ug/L	20	09/24/18	RM	SW8260C
Vinyl chloride	ND	20	ug/L	20	09/24/18	RM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	95		%	20	09/24/18	RM	70 - 130 %
% Bromofluorobenzene	97		%	20	09/24/18	RM	70 - 130 %
% Dibromofluoromethane	93		%	20	09/24/18	RM	70 - 130 %
% Toluene-d8	97		%	20	09/24/18	RM	70 - 130 %

Project ID: JO-LYN (FMR STANDARD PORTABLE) Phoenix I.D.: CB35213
Client ID: EW-20

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

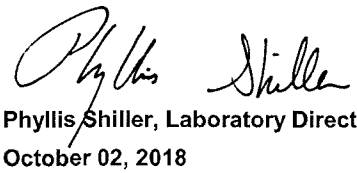
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits due to the foamy nature of the sample.

CB35213 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
October 02, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 02, 2018

FOR: Attn: Bert Richnafsky
Compliance Env Services Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	09/18/18	11:45
Location Code:	COMPENV-PA	Received by:	CP	09/20/18	10:37
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	JO-LYN				

Laboratory Data

SDG ID: GCB35211
Phoenix ID: CB35214

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-8

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles								
1,1-Dichloroethane	ND		5.0	ug/L	5	09/25/18	RM	SW8260C
2-Hexanone	ND		25	ug/L	5	09/25/18	RM	SW8260C
Acetone	440	S	100	ug/L	20	09/24/18	RM	SW8260C
Benzene	33		3.5	ug/L	5	09/25/18	RM	SW8260C
cis-1,2-Dichloroethene	130		5.0	ug/L	5	09/25/18	RM	SW8260C
Cyclohexane	12		5	ug/L	5	09/27/18	RM	SW8260C
Methyl ethyl ketone	1000		250	ug/L	50	09/27/18	RM	SW8260C
Methylcyclohexane	ND		5	ug/L	5	09/27/18	RM	SW8260C
Tetrachloroethene	ND		5.0	ug/L	5	09/25/18	RM	SW8260C
trans-1,2-Dichloroethene	8.5		5.0	ug/L	5	09/25/18	RM	SW8260C
Trichloroethene	ND		5.0	ug/L	5	09/25/18	RM	SW8260C
Vinyl chloride	94		5.0	ug/L	5	09/25/18	RM	SW8260C
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	99			%	5	09/25/18	RM	70 - 130 %
% Bromofluorobenzene	99			%	5	09/25/18	RM	70 - 130 %
% Dibromofluoromethane	98			%	5	09/25/18	RM	70 - 130 %
% Toluene-d8	95			%	5	09/25/18	RM	70 - 130 %

Project ID: JO-LYN (FMR STANDARD PORTABLE) Phoenix I.D.: CB35214
Client ID: SB-8

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

CB35214 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.

Phyllis Shiller, Laboratory Director
October 02, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 02, 2018

FOR: Attn: Bert Richnafsky
Compliance Env Services Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	09/18/18	11:55
Location Code:	COMPENV-PA	Received by:	CP	09/20/18	10:37
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	JO-LYN				

Laboratory Data

SDG ID: GCB35211
Phoenix ID: CB35215

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-11

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1-Dichloroethane	ND	1.0	ug/L	1	09/25/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/18	MH	SW8260C
Acetone	ND	25	ug/L	1	09/25/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/25/18	MH	SW8260C
cis-1,2-Dichloroethene	1.9	1.0	ug/L	1	09/25/18	MH	SW8260C
Cyclohexane	ND	1	ug/L	1	09/25/18	MH	SW8260C
Methyl ethyl ketone	15	5.0	ug/L	1	09/25/18	MH	SW8260C
Methylcyclohexane	ND	1	ug/L	1	09/25/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/25/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/25/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	09/25/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/25/18	MH	70 - 130 %
% Bromofluorobenzene	102		%	1	09/25/18	MH	70 - 130 %
% Dibromofluoromethane	104		%	1	09/25/18	MH	70 - 130 %
% Toluene-d8	95		%	1	09/25/18	MH	70 - 130 %

Project ID: JO-LYN (FMR STANDARD PORTABLE) Phoenix I.D.: CB35215
Client ID: SB-11

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 02, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 02, 2018

FOR: Attn: Bert Richnafsky
Compliance Env Services Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	09/18/18	12:05
Location Code:	COMPENV-PA	Received by:	CP	09/20/18	10:37
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	JO-LYN				

Laboratory Data

SDG ID: GCB35211
Phoenix ID: CB35216

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-12

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles								
1,1-Dichloroethane	ND		5.0	ug/L	5	09/25/18	MH	SW8260C
2-Hexanone	ND		25	ug/L	5	09/25/18	MH	SW8260C
Acetone	170	S	100	ug/L	20	09/24/18	MH	SW8260C
Benzene	ND		3.5	ug/L	5	09/25/18	MH	SW8260C
cis-1,2-Dichloroethene	170		20	ug/L	20	09/24/18	MH	SW8260C
Cyclohexane	ND		5	ug/L	5	09/24/18	MH	SW8260C
Methyl ethyl ketone	300		100	ug/L	20	09/24/18	MH	SW8260C
Methylcyclohexane	ND		5	ug/L	5	09/24/18	MH	SW8260C
Tetrachloroethene	ND		5.0	ug/L	5	09/25/18	MH	SW8260C
trans-1,2-Dichloroethene	14		5.0	ug/L	5	09/25/18	MH	SW8260C
Trichloroethene	ND		5.0	ug/L	5	09/25/18	MH	SW8260C
Vinyl chloride	380		20	ug/L	20	09/24/18	MH	SW8260C
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	102			%	5	09/25/18	MH	70 - 130 %
% Bromofluorobenzene	103			%	5	09/25/18	MH	70 - 130 %
% Dibromofluoromethane	102			%	5	09/25/18	MH	70 - 130 %
% Toluene-d8	96			%	5	09/25/18	MH	70 - 130 %

Project ID: JO-LYN (FMR STANDARD PORTABLE) Phoenix I.D.: CB35216
Client ID: SB-12

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

CB35216 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.

Phyllis Shiller, Laboratory Director
October 02, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 02, 2018

FOR: Attn: Bert Richnafsky
Compliance Env Services Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	09/18/18	12:15
Location Code:	COMPENV-PA	Received by:	CP	09/20/18	10:37
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	JO-LYN				

Laboratory Data

SDG ID: GCB35211
Phoenix ID: CB35217

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-13

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles								
1,1-Dichloroethane	ND		5.0	ug/L	5	09/24/18	MH	SW8260C
2-Hexanone	ND		25	ug/L	5	09/24/18	MH	SW8260C
Acetone	600	S	250	ug/L	50	09/25/18	MH	SW8260C
Benzene	ND		3.5	ug/L	5	09/24/18	MH	SW8260C
cis-1,2-Dichloroethene	240		50	ug/L	50	09/25/18	MH	SW8260C
Cyclohexane	ND		5	ug/L	5	09/25/18	MH	SW8260C
Methyl ethyl ketone	1200		250	ug/L	50	09/25/18	MH	SW8260C
Methylcyclohexane	ND		5	ug/L	5	09/25/18	MH	SW8260C
Tetrachloroethene	ND		5.0	ug/L	5	09/24/18	MH	SW8260C
trans-1,2-Dichloroethene	ND		5.0	ug/L	5	09/24/18	MH	SW8260C
Trichloroethene	49		5.0	ug/L	5	09/24/18	MH	SW8260C
Vinyl chloride	33		5.0	ug/L	5	09/24/18	MH	SW8260C
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	102			%	5	09/24/18	MH	70 - 130 %
% Bromofluorobenzene	99			%	5	09/24/18	MH	70 - 130 %
% Dibromofluoromethane	95			%	5	09/24/18	MH	70 - 130 %
% Toluene-d8	98			%	5	09/24/18	MH	70 - 130 %

Project ID: JO-LYN (FMR STANDARD PORTABLE) Phoenix I.D.: CB35217
Client ID: SB-13

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits due to the foamy nature of the sample.

CB35217 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 02, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 02, 2018

FOR: Attn: Bert Richnafsky
Compliance Env Services Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	09/18/18	12:25
Location Code:	COMPENV-PA	Received by:	CP	09/20/18	10:37
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	JO-LYN				

Laboratory Data

SDG ID: GCB35211
Phoenix ID: CB35218

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-14

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1-Dichloroethane	ND	1.0	ug/L	1	09/26/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/26/18	MH	SW8260C
Acetone	ND	25	ug/L	1	09/26/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	09/26/18	MH	SW8260C
cis-1,2-Dichloroethene	150	10	ug/L	10	09/25/18	MH	SW8260C
Cyclohexane	ND	1	ug/L	1	09/25/18	MH	SW8260C
Methyl ethyl ketone	11	5.0	ug/L	1	09/26/18	MH	SW8260C
Methylcyclohexane	ND	1	ug/L	1	09/25/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/26/18	MH	SW8260C
trans-1,2-Dichloroethene	3.6	1.0	ug/L	1	09/26/18	MH	SW8260C
Trichloroethene	15	1.0	ug/L	1	09/26/18	MH	SW8260C
Vinyl chloride	24	1.0	ug/L	1	09/26/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	09/26/18	MH	70 - 130 %
% Bromofluorobenzene	101		%	1	09/26/18	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	09/26/18	MH	70 - 130 %
% Toluene-d8	102		%	1	09/26/18	MH	70 - 130 %

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-14

Phoenix I.D.: CB35218

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 02, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 02, 2018

FOR: Attn: Bert Richnafsky
Compliance Env Services Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	09/18/18	12:35
Location Code:	COMPENV-PA	Received by:	CP	09/20/18	10:37
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	JO-LYN				

Laboratory Data

SDG ID: GCB35211
Phoenix ID: CB35219

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-22

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1-Dichloroethane	ND	500	ug/L	500	09/26/18	MH	SW8260C
2-Hexanone	ND	2500	ug/L	500	09/26/18	MH	SW8260C
Acetone	ND	13000	ug/L	500	09/26/18	MH	SW8260C
Benzene	ND	350	ug/L	500	09/26/18	MH	SW8260C
cis-1,2-Dichloroethene	70000	5000	ug/L	5000	09/26/18	MH	SW8260C
Cyclohexane	ND	500	ug/L	500	09/26/18	MH	SW8260C
Methyl ethyl ketone	ND	2500	ug/L	500	09/26/18	MH	SW8260C
Methylcyclohexane	ND	500	ug/L	500	09/26/18	MH	SW8260C
Tetrachloroethene	ND	500	ug/L	500	09/26/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	500	ug/L	500	09/26/18	MH	SW8260C
Trichloroethene	42000	5000	ug/L	5000	09/26/18	MH	SW8260C
Vinyl chloride	2100	500	ug/L	500	09/26/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	500	09/26/18	MH	70 - 130 %
% Bromofluorobenzene	101		%	500	09/26/18	MH	70 - 130 %
% Dibromofluoromethane	93		%	500	09/26/18	MH	70 - 130 %
% Toluene-d8	112		%	500	09/26/18	MH	70 - 130 %

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-22

Phoenix I.D.: CB35219

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services.

Phyllis Shiller, Laboratory Director
October 02, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 02, 2018

FOR: Attn: Bert Richnafsky
Compliance Env Services Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	09/18/18	12:45
Location Code:	COMPENV-PA	Received by:	CP	09/20/18	10:37
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	JO-LYN				

Laboratory Data

SDG ID: GCB35211
Phoenix ID: CB35220

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-28

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1-Dichloroethane	ND	500	ug/L	500	09/26/18	MH	SW8260C
2-Hexanone	ND	2500	ug/L	500	09/26/18	MH	SW8260C
Acetone	ND	13000	ug/L	500	09/26/18	MH	SW8260C
Benzene	ND	350	ug/L	500	09/26/18	MH	SW8260C
cis-1,2-Dichloroethene	81000	5000	ug/L	5000	09/26/18	MH	SW8260C
Cyclohexane	ND	500	ug/L	500	09/26/18	MH	SW8260C
Methyl ethyl ketone	ND	2500	ug/L	500	09/26/18	MH	SW8260C
Methylcyclohexane	ND	500	ug/L	500	09/26/18	MH	SW8260C
Tetrachloroethene	ND	500	ug/L	500	09/26/18	MH	SW8260C
trans-1,2-Dichloroethene	600	500	ug/L	500	09/26/18	MH	SW8260C
Trichloroethene	55000	5000	ug/L	5000	09/26/18	MH	SW8260C
Vinyl chloride	10000	500	ug/L	500	09/26/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	500	09/26/18	MH	70 - 130 %
% Bromofluorobenzene	101		%	500	09/26/18	MH	70 - 130 %
% Dibromofluoromethane	98		%	500	09/26/18	MH	70 - 130 %
% Toluene-d8	112		%	500	09/26/18	MH	70 - 130 %

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-28

Phoenix I.D.: CB35220

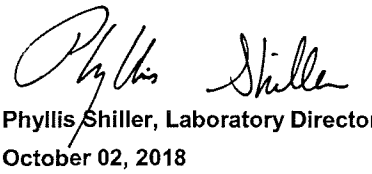
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
October 02, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 02, 2018

FOR: Attn: Bert Richnafsky
Compliance Env Services Inc
2700 Kirila Drive
Hermitage, PA 16148

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:	AR	09/18/18	12:46
Location Code:	COMPENV-PA	Received by:	CP	09/20/18	10:37
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	JO-LYN				

Laboratory Data

SDG ID: GCB35211
Phoenix ID: CB35221

Project ID: JO-LYN (FMR STANDARD PORTABLE)
Client ID: SB-28 DUP

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1-Dichloroethane	ND	500	ug/L	500	09/26/18	MH	SW8260C
2-Hexanone	ND	2500	ug/L	500	09/26/18	MH	SW8260C
Acetone	ND	13000	ug/L	500	09/26/18	MH	SW8260C
Benzene	ND	350	ug/L	500	09/26/18	MH	SW8260C
cis-1,2-Dichloroethene	83000	5000	ug/L	5000	09/26/18	MH	SW8260C
Cyclohexane	ND	500	ug/L	500	09/26/18	MH	SW8260C
Methyl ethyl ketone	ND	2500	ug/L	500	09/26/18	MH	SW8260C
Methylcyclohexane	ND	500	ug/L	500	09/26/18	MH	SW8260C
Tetrachloroethene	ND	500	ug/L	500	09/26/18	MH	SW8260C
trans-1,2-Dichloroethene	560	500	ug/L	500	09/26/18	MH	SW8260C
Trichloroethene	55000	5000	ug/L	5000	09/26/18	MH	SW8260C
Vinyl chloride	10000	500	ug/L	500	09/26/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	500	09/26/18	MH	70 - 130 %
% Bromofluorobenzene	101		%	500	09/26/18	MH	70 - 130 %
% Dibromofluoromethane	103		%	500	09/26/18	MH	70 - 130 %
% Toluene-d8	111		%	500	09/26/18	MH	70 - 130 %

Project ID: JO-LYN (FMR STANDARD PORTABLE) Phoenix I.D.: CB35221
Client ID: SB-28 DUP

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 02, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

October 02, 2018

QA/QC Data

SDG I.D.: GCB35211

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 449128 (ug/L), QC Sample No: CB35214 (CB35214 (5X) , CB35215, CB35216 (5X) , CB35217 (50X) , CB35218 (1X, 10X) , CB35219 (500X, 5000X) , CB35220 (500X, 5000X) , CB35221 (500X, 5000X))											
Volatiles - Ground Water											
1,1-Dichloroethane	ND	1.0	94	93	1.1				70 - 130	30	
2-Hexanone	ND	5.0	91	102	11.4				70 - 130	30	
Acetone	ND	5.0	83	78	6.2				70 - 130	30	
Benzene	ND	0.70	91	86	5.6				70 - 130	30	
cis-1,2-Dichloroethene	ND	1.0	92	92	0.0				70 - 130	30	
Methyl ethyl ketone	ND	5.0	70	105	40.0				70 - 130	30	r
Tetrachloroethene	ND	1.0	89	89	0.0				70 - 130	30	
trans-1,2-Dichloroethene	ND	1.0	96	94	2.1				70 - 130	30	
Trichloroethene	ND	1.0	96	90	6.5				70 - 130	30	
Vinyl chloride	ND	1.0	106	100	5.8				70 - 130	30	
% 1,2-dichlorobenzene-d4	99	%	97	103	6.0				70 - 130	30	
% Bromofluorobenzene	98	%	96	102	6.1				70 - 130	30	
% Dibromofluoromethane	105	%	94	104	10.1				70 - 130	30	
% Toluene-d8	93	%	100	100	0.0				70 - 130	30	
Comment:											
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.											
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.											
QA/QC Batch 449077 (ug/L), QC Sample No: CB35630 (CB35211)											
Volatiles - Ground Water											
1,1-Dichloroethane	ND	1.0	92	93	1.1				70 - 130	30	
2-Hexanone	ND	5.0	82	83	1.2				70 - 130	30	
Benzene	ND	0.70	93	91	2.2				70 - 130	30	
Tetrachloroethene	ND	1.0	92	91	1.1				70 - 130	30	
trans-1,2-Dichloroethene	ND	1.0	90	91	1.1				70 - 130	30	
Trichloroethene	ND	1.0	94	93	1.1				70 - 130	30	
% 1,2-dichlorobenzene-d4	102	%	99	99	0.0				70 - 130	30	
% Bromofluorobenzene	96	%	97	98	1.0				70 - 130	30	
% Dibromofluoromethane	102	%	101	105	3.9				70 - 130	30	
% Toluene-d8	97	%	99	99	0.0				70 - 130	30	
Comment:											
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.											
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.											
QA/QC Batch 448762 (ug/L), QC Sample No: CB36229 (CB35211 (20X) , CB35212 (20X) , CB35213 (20X) , CB35214 (20X) , CB35216 (20X) , CB35217 (5X))											
Volatiles - Ground Water											
1,1-Dichloroethane	ND	1.0	98	99	1.0				70 - 130	30	
2-Hexanone	ND	5.0	93	106	13.1				70 - 130	30	
Acetone	ND	5.0	74	86	15.0				70 - 130	30	

QA/QC Data

SDG I.D.: GCB35211

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzene	ND	0.70	90	93	3.3				70 - 130	30	
cis-1,2-Dichloroethene	ND	1.0	96	98	2.1				70 - 130	30	
Methyl ethyl ketone	ND	5.0	85	102	18.2				70 - 130	30	
Tetrachloroethene	ND	1.0	92	97	5.3				70 - 130	30	
trans-1,2-Dichloroethene	ND	1.0	99	101	2.0				70 - 130	30	
Trichloroethene	ND	1.0	95	97	2.1				70 - 130	30	
Vinyl chloride	ND	1.0	111	108	2.7				70 - 130	30	
% 1,2-dichlorobenzene-d4	99	%	100	102	2.0				70 - 130	30	
% Bromofluorobenzene	100	%	99	102	3.0				70 - 130	30	
% Dibromofluoromethane	104	%	100	102	2.0				70 - 130	30	
% Toluene-d8	91	%	99	99	0.0				70 - 130	30	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 449248 (ug/L), QC Sample No: CB37252 (CB35212, CB35213 (100X) , CB35214 (50X))

Volatiles - Ground Water

1,1-Dichloroethane	ND	1.0	88	100	12.8				70 - 130	30	
2-Hexanone	ND	5.0	85	102	18.2				70 - 130	30	
Acetone	ND	5.0	78	111	34.9				70 - 130	30	r
Benzene	ND	0.70	85	98	14.2				70 - 130	30	
Methyl ethyl ketone	ND	5.0	93	95	2.1				70 - 130	30	
Tetrachloroethene	ND	1.0	89	102	13.6				70 - 130	30	
trans-1,2-Dichloroethene	ND	1.0	90	103	13.5				70 - 130	30	
Trichloroethene	ND	1.0	90	101	11.5				70 - 130	30	
% 1,2-dichlorobenzene-d4	97	%	101	99	2.0				70 - 130	30	
% Bromofluorobenzene	95	%	99	98	1.0				70 - 130	30	
% Dibromofluoromethane	100	%	94	101	7.2				70 - 130	30	
% Toluene-d8	93	%	102	101	1.0				70 - 130	30	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 02, 2018

Tuesday, October 02, 2018

Criteria: None

State: NY

Sample Criteria Exceedances Report

GCB35211 - COMPENV-PA

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

October 02, 2018 SDG I.D.: GCB35211

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

VOA Narration

CHEM17 09/26/18-2: CB35212, CB35213, CB35214

The following Initial Calibration compounds did not meet RSD% criteria: Acetone 26% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: 2-Hexanone 0.070 (0.1), Acetone 0.038 (0.1), Methyl ethyl ketone 0.061 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

NY Temperature Narration

October 02, 2018

SDG I.D.: GCB35211

The samples in this delivery group were received at 1.0°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Coolant: Cooler: Yes ☑ No ☐ IPK ☐ ICE ☑ No ☐ Temp 1.0 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

NY/NJ CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Contact Options:
☐ Fax:
☐ Phone:
☒ Email: brichnafsky@ces-env.com

Customer: Compliance Environ. Svcs.
Address: 2760 Kirila Blvd. Hermitage, PA 16148

Project: Jo-Lyn (Fmr. Standard Portable) Project P.O: Jo-Lyn
Report to: Bert Richnafsky
Invoice to: Jan Mozzocio

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: Albert M. Richnafsky Date: 9/18/18

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe
OIL=Oil **B**=Bulk **L**=Liquid

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOCs Part 1 List (See Below)	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [X] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL HNO3 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
35211	EW-7	GW	9-18-18	11:15	X				3							
35212	EW-9	GW	"	11:25	X				3							
35213	EW-20	GW	"	11:35	X				3							
35214	SB-8	GW	"	11:45	X				3							
35215	SB-11	GW	"	11:55	X				3							
35216	SB-12	GW	"	12:05	X				3							
35217	SB-13	GW	"	12:15	X				3							
35218	SB-14	GW	"	12:25	X				3							
35219	SB-22	GW	"	12:35	X				3							
35220	SB-28	GW	"	12:45	X				3							
35221	SB-28 Dup	GW	"	12:46	X				3							

Relinquished by:	Accepted by:	Date:	Time:
A. M. Richnafsky	Tanya Fuller	9-19-18	10:00 Am
Tanya Fuller		9-19-18	3:25 pm
Fedex		9/20/18	10:37

Comments, Special Requirements or Regulations:
Report: 1,1-Dichloroethane; 2-Butanone; 2-Hexanone; Acetone; Benzene; cis-1,2-Dichloroethene; Cyclohexane; Methylcyclohexane; Tetrachloroethene; trans-1,2-Dichloro ethene; Trichloroethene; Vinyl Chloride.

Note: There may be a small amount of air in the sample bottles due to active fermentation.

Turnaround:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☒ 5 Days
☐ 10 Days
☐ Other
* SURCHARGE APPLIES

NJ
☐ Res. Criteria
☐ Non-Res. Criteria
☐ Impact to GW Soil Cleanup Criteria
☐ Impact to GW soil screen Criteria
☐ GW Criteria

What State were samples collected? NY

NY
☐ TOGS GW
☐ CP-51 SOIL
☐ 375SCO Unrestricted Soil
☐ 375SCO Residential Soil
☐ 375SCO Residential
☐ 375SCO Commercial Soil
☐ 375SCO Industrial Soil
☐ Subpart 5 DW

Data Format
☐ Phoenix Std Report
☐ Excel
☒ PDF
☐ GIS/Key
☐ EQuIS
☐ NJ Hazsite EDD
☐ NY EZ EDD (ASP)
☐ Other

Data Package
☐ NJ Reduced Deliv. *
☐ NY Enhanced (ASP B) *
☐ Other