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## 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.

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April 29, 2021

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## 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

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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.

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**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.

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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.

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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

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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).

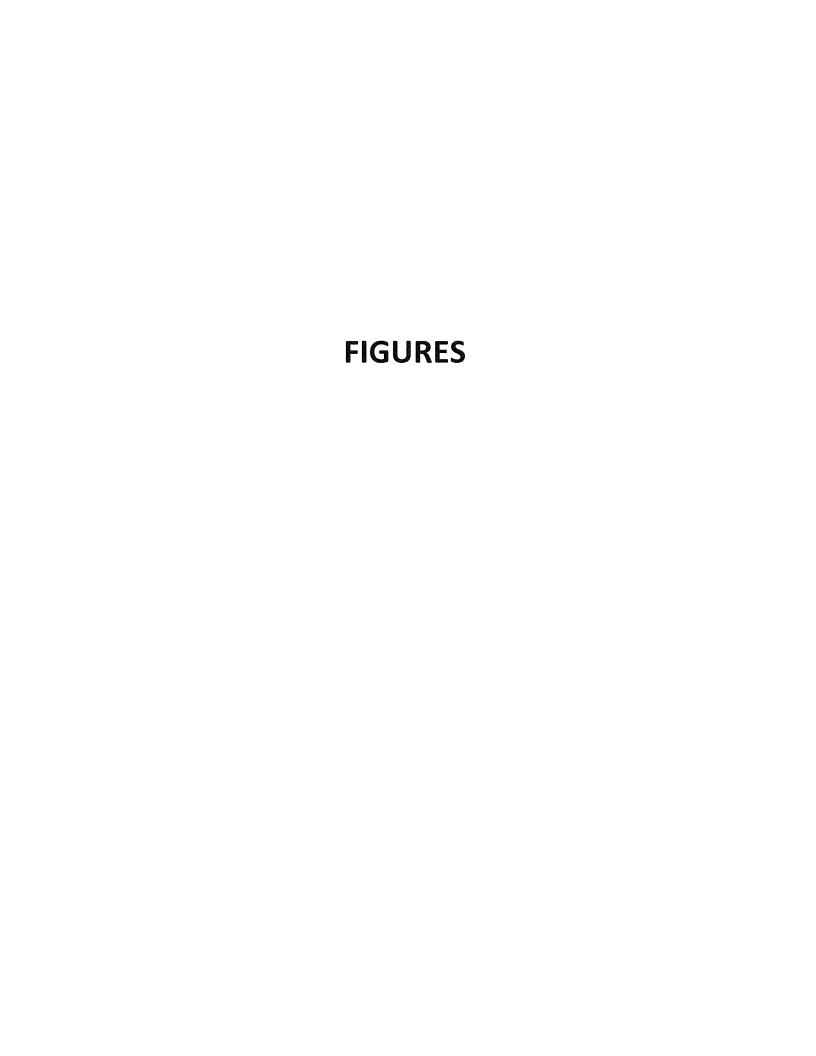
#### 9.0 Qualified Environmental Professional

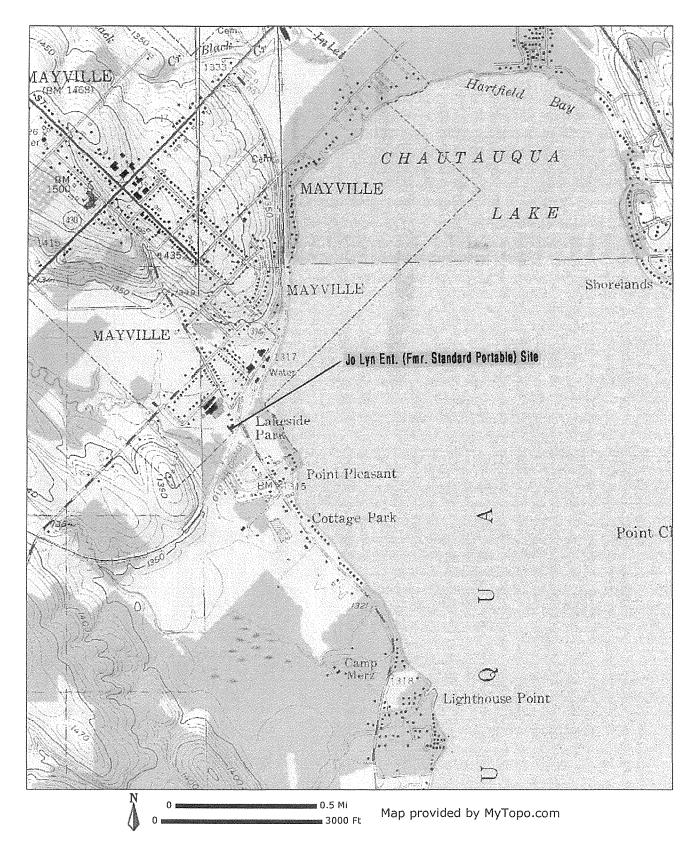
The Pilot Test and continuing remedial action is being supervised by Albert M. Richnafsky, PG (PA), LRS (WV), CPG (AIPG), whom will be responsible for the technical correctness of work performed. Mr. Richnafsky has over 42 years of experience in site investigations and remedial actions, including extensive 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. Richnafsby 4/29/21



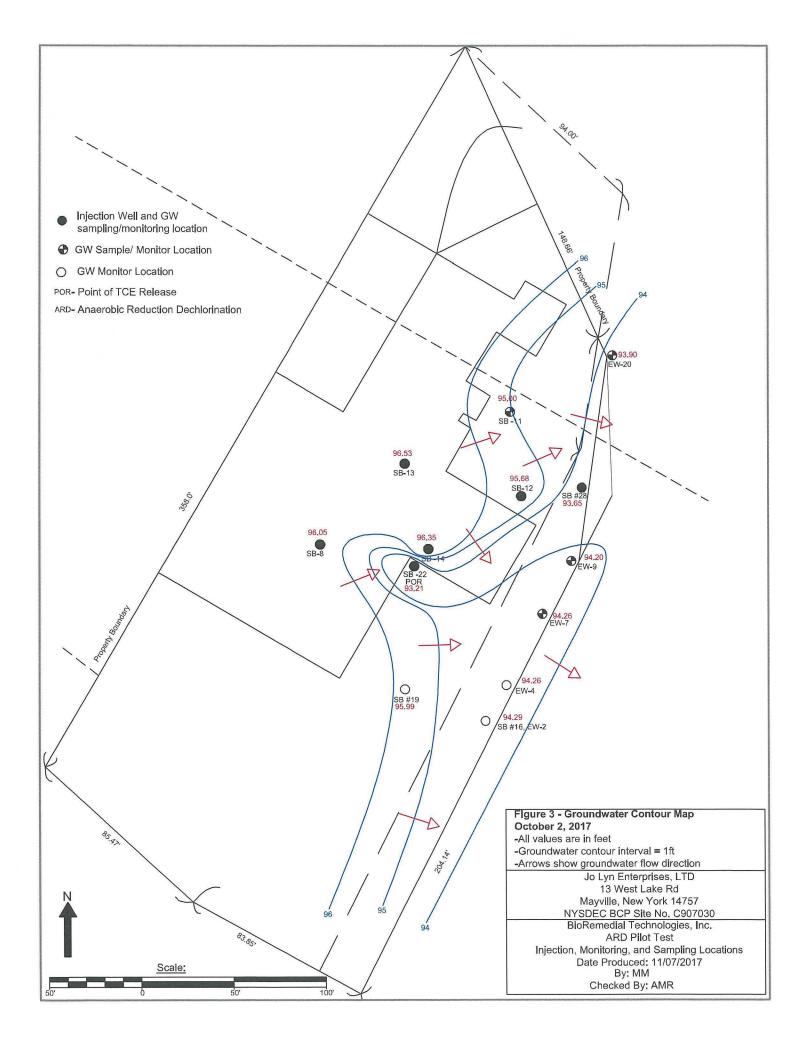


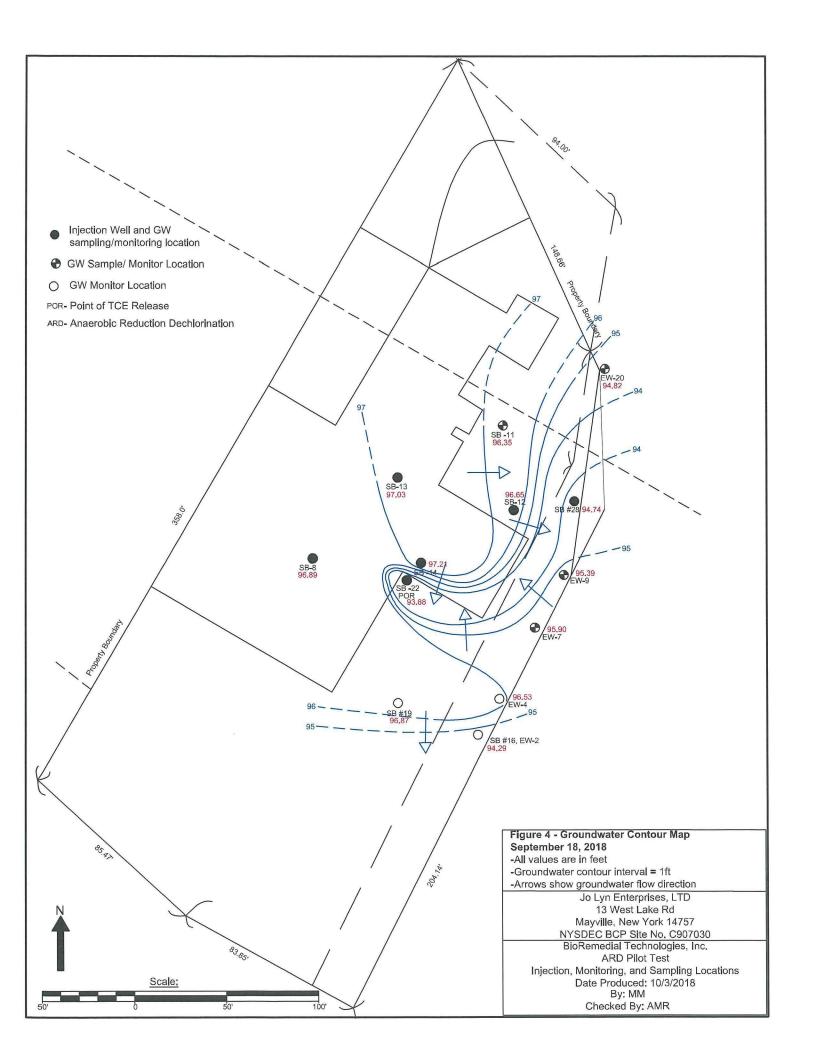
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Mayville, NY 14757
NYSDEC BCP Site No. C907030

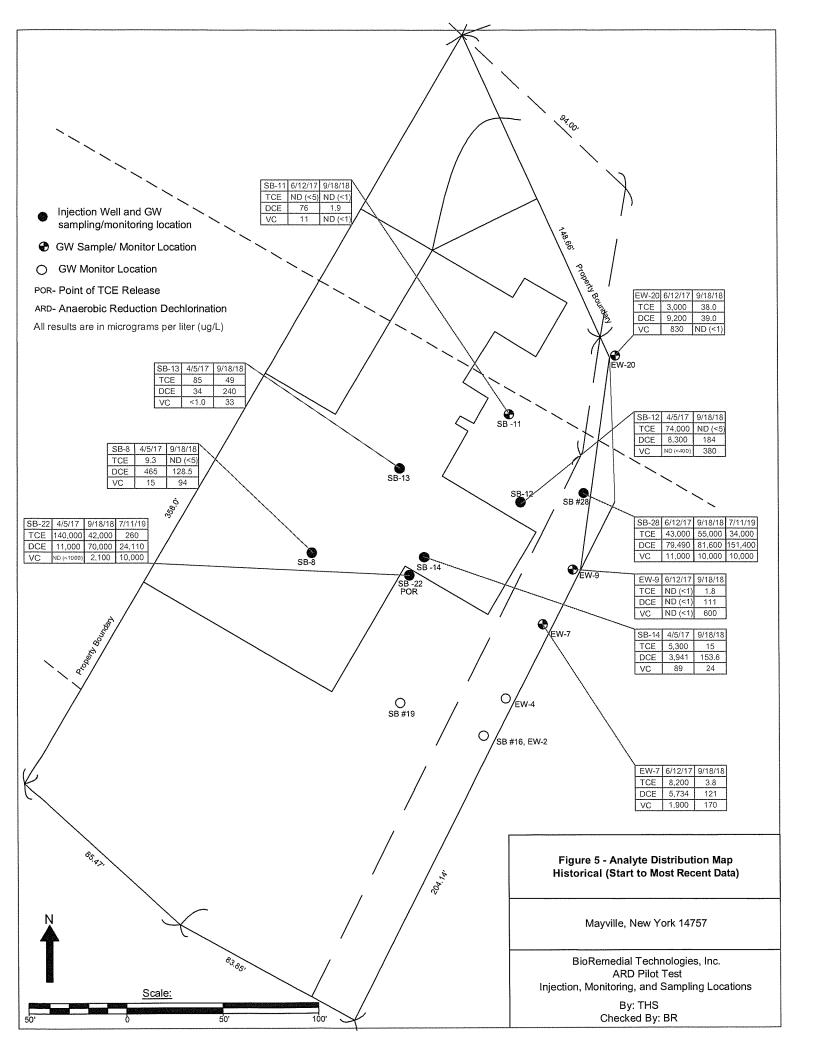
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Jo Lyn Enterprises Site 13 West Lake Road Mayville, NY 14757 NYSDEC BCP Site No. C907030 April 24, 2017







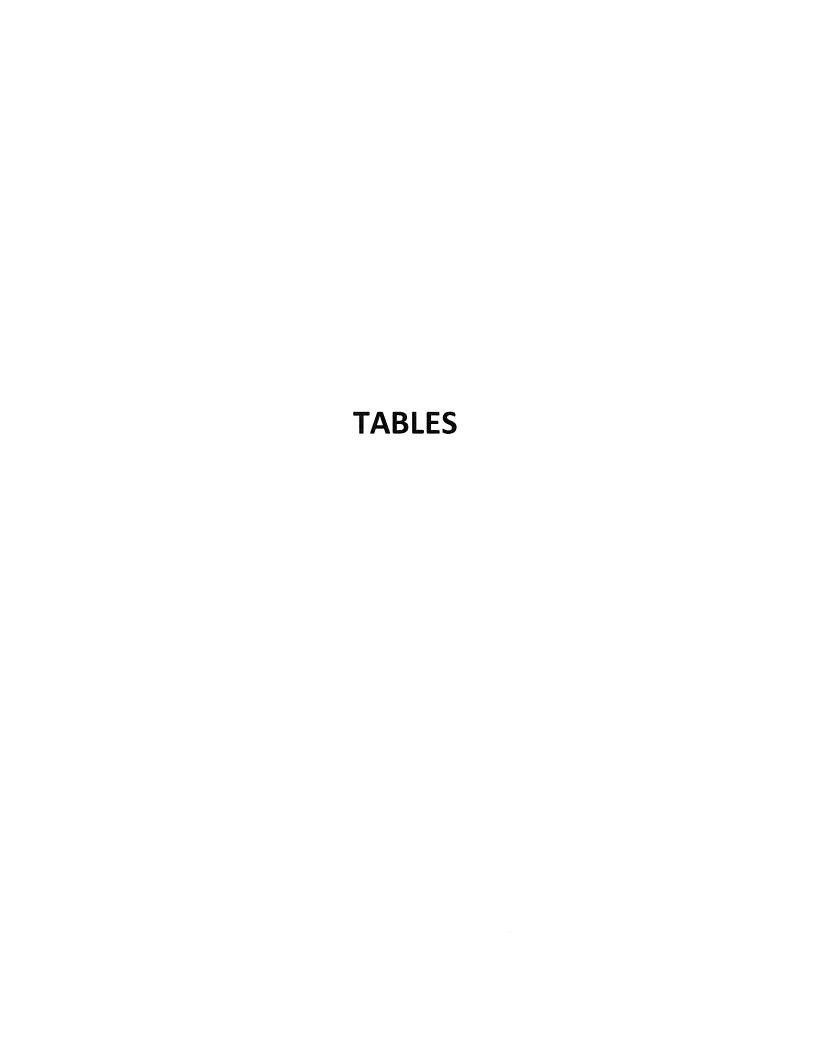


Table 1
Groundwater Analytical Results - Pre Pilot Test
Former Standard Portable (a.k.a. Jo-Lyn) Site
21 Valley Street

Mayville, Chautauqua County, New York NYDEC Site No. C907030

Sample		*NYSDEC Class	Sample Location						
Date	Parameter	GA Standard	SB-8	SB-12	SB-13	SB-14	SB-22		
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l		
	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		
4/5/2017	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		

<sup>\*</sup> 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

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 6/12/2017 ND (< 200) 47,000 4,000 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 58 84 6.6 EW-20 10/2/2017 58 84 6.6 EW-20 10/2/2017 58 84 6.6 EW-20 10/2/2017 58 84 6.6 EW-20 4/24/2018 3.0 1.1 ND (< 1) EW-20 9/18/2018 38.0 39.0 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 ND (< 5) 76 11 SB-11 10/2/2017 ND (< 5) 76 11 SB-11 10/2/2017 ND (< 5) 76 11 SB-11 9/18/2018 ND (< 1) 14 12 SB-11 9/18/2018 ND (< 1) 14 12 SB-12 12/5/2017 100 29,140 730 SB-12 12/5/2017 210 16,100 2,400 SB-12 12/5/2017 21 6,664 3,700 SB-12 12/5/2017 21 6,664 3,700 SB-12 12/5/2017 21 6,664 3,700 SB-12 12/5/2017 110 190 ND (< 1) SB-13 4/5/2017 SB-13 10/2/2017 110 190 ND (< 1) SB-14 4/2/2018 ND (< 5) 184 380 SB-13 10/2/2017 150 5.4 ND (< 5) SB-14 10/2/2017 100 3,941 89 SB-15 9/18/2018 ND (< 5) 184 380 SB-16 4/5/2017 5.5 394.7 140 SB-17 10/2/2017 150 5.4 ND (< 2) SB-18 10/2/2017 5.5 394.7 140 SB-14 12/5/2017 5.5 394.7 140 SB-15 12/5/2017 5.5 394.7 140 SB-16 12/5/2017 5.5 394.7 140 SB-17 12/5/2017 5.5 394.7 140 SB-18 12/5/2017 5.5 394.7 140 SB-19 10/2/2017 5.5 394.7 140 SB-20 10/2/2017 5.5 394.7 140 S	Location	Date	Trichloroethene	Total Dichloroethene	Vinyl Chloride
EW-7 10/2/2017 ND (< 200) 16,000 2,200 EW-7 12/5/2017 2.7 345 220 170 170 EW-9 9/18/2018 3.8 121 170 ND (< 1) ND (< 1) ND (< 1) EW-9 6/12/2017 ND (< 1) ND (< 1) 1,300 53 EW-9 10/2/2017 ND (< 200) 47,000 4,000 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 58 84 6.6 EW-20 10/2/2017 58 84 6.6 EW-20 10/2/2017 56 161.6 3.0 1.1 ND (<1) EW-20 9/18/2018 38.0 1.1 ND (<1) EW-20 9/18/2018 38.0 39.0 ND (<1) SB-8 4/5/2017 18 207 31 SB-8 10/2/2017 18 207 31 SB-8 10/2/2017 ND (< 5) 128.5 94 SB-11 10/2/2017 ND (< 5) 76 11 SB-11 10/2/2017 ND (< 1) 14 12 SB-11 9/18/2018 ND (< 1) 14 12 SB-11 9/18/2018 ND (< 1) 14 12 SB-12 10/2/2017 210 16,100 2,400 SB-12 12/5/2017 210 16,100 2,400 SB-12 12/5/2017 210 16,100 2,400 SB-12 12/5/2017 21 6,664 3,700 SB-12 12/5/2017 21 6,664 3,700 SB-12 12/5/2017 100 29,140 730 SB-12 12/5/2017 100 29,140 730 SB-12 12/5/2017 21 6,664 3,700 SB-12 12/5/2017 58-12 12/5/2017 58-12 12/5/2017 58-12 12/5/2017 58-12 12/5/2017 58-12 12/5/2017 58-12 12/5/2017 58-12 12/5/2017 58-12 12/5/2017 58-12 12/5/2017 58-13 10/2/2017 58-13 10/2/2017 58-13 10/2/2017 58-13 10/2/2017 58-14 4/24/2018 2.9 70 48 SB-13 10/2/2017 5.5 34 ND (< 5) SB-14 4/5/2017 5.5 394.7 400 SB-14 10/2/2017 5.5 394.7 400 SB-14 10/2/2017 5.5 394.7 140 SB-14 12/5/2017 5.5 394.7 140 SB-12 12/5/2017 12,000 2,500 ND (< 100) SB-12 12/5/2017 12,000 33,560 10,000 SB-12,000 33					
EW-7 9/18/2017 2.7 3.45 121 170  EW-9 6/12/2017 ND (< 1) ND (< 1) ND (< 1) SW-9 7/27/2017 3,400 1,300 53  EW-9 10/2/2017 ND (<200) 47,000 4,000  EW-9 10/2/2017 3,000 202 270  EW-9 4/24/2018 13.0 202 270  EW-9 9/18/2018 1.8 111 600  EW-20 10/2/2017 58 84 6.6  EW-20 10/2/2017 56 161.6 3.0  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)  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 10/2/2017 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 210 16,100 2,400  SB-12 7/27/2017 210 16,664 3,700  SB-12 10/2/2017 21 16,664 3,700  SB-12 10/2/2017 21 16,666 3,700  SB-12 10/2/2017 21 16,666 3,700  SB-12 10/2/2017 21 100 29,140 730  SB-12 10/2/2017 100 29,140 730  SB-12 10/2/2017 210 16,100 2,400  SB-13 4/5/2017 85 34 <1.0  SB-13 4/5/2017 85 34 <1.0  SB-13 4/5/2017 5.50 3,941 89  SB-14 4/5/2017 5.50 3,941 89  SB-13 10/2/2017 100 190 ND (< 5)  SB-14 4/5/2017 5.5 34 ND (< 2)  SB-14 4/5/2017 5.5 394.7 140  SB-15 11 10/2/2017 5.5 394.7 140  SB-16 11 12/5/2017 5.5 394.7 140  SB-17 5B-18 10/2/2017 5.5 394.7 140  SB-19 12/5/2017 5.5 394.7 140  SB-10 12/5/2017 5.5 394.7 140  SB-11 12/5/2017 5.5 394.7 140  SB-12 12/5/2017 5.5 394.7 140  SB-13 10/2/2017 5.5 394.7 140  SB-14 4/5/2017 5.5 394.7 140  SB-15 15.6 24  SB-16 12/5/2017 5.5 394.7 140  SB-17 12/5/2017 5.5 394.7 140  SB-18 12/5/2017 5.5 394.7 140  SB-19 12/5/2017 5.5 394.7 140  SB-10 12/5/2017 5.5 394.7 140  SB-11 12/5/2017 5.5 394.7 140  SB-12 12/5/2017 12,000 2,500 ND (< 100  SB-22 10/2/2017 12,000 2,500 ND (< 20  SB-22 10/2/2017 52,000 120,980 13,000  SB-28 10/5/2017 52,000 120,980 13,000  SB-28 10/5/2017 55,000 33,560 10,000  SB-28 ND 9/18/2018 55,000 83,560 10,000	- AND COMP AND		100000000000000000000000000000000000000		
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EW-9	EW-9	6/12/2017	ND (< 1)	ND (< 1)	ND (< 1)
EW-9	EW-9	7/27/2017	3,400	1,300	53
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 10/2/2017 210 16,100 2,400  SB-12 10/2/2017 210 16,604 3,700  SB-12 12/5/2017 21 6,664 3,700  SB-12 12/5/2017 21 6,664 3,700  SB-12 12/5/2017 85 34 <1.0  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 10/2/2017 5,50 3,941 89  SB-14 10/2/2017 5.5 394.7 140  SB-14 10/2/2017 12,000 2,500 ND (<100  SB-12 1/5/2017 140,000 11,000 ND (<100  SB-12 1/5/2017 140,000 11,000 ND (<100  SB-12 1/5/2017 12,000 2,500 ND (<100  SB-12 1/5/2017 140,000 29,000 ND (<400  SB-12 1/5/2017 140,000 29,000 ND (<400)  SB-12 1/5/2017 12,000 29,000 ND (<400)  SB-12 1/5/2017 140,000 11,000 ND (<100  SB-12 1/5/2017 140,000 29,000 ND (<400)  SB-12 1/5/2017 5,000 12,090 890  SB-12 1/5/2017 140,000 79,490 11,000  SB-12 1/5/2017 52,000 120,980 13,000  SB-28 6/12/2017 52,000 73,430 1,000  SB-28 10/2/2017 52,000 81,600 10,000  SB-28 ND 9/18/2018 55,000 81,600 10,000	EW-9	10/2/2017	ND (<200)	47,000	4,000
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SB-8					
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-11         10/2/2017         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         10/2/2017         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         10/2/2017         85         34         < 1.0         ND (<5)           SB-13         10/2/2017         85         34         < 1.0         ND (<5)           SB-13         9/18/2018         49         240         33           SB-14         7/27/2017         150         5.4					
SB-8         9/18/2018         ND (<5)         128.5         94           SB-11         6/12/2017         ND (<5)					
SB-11         6/12/2017         ND (<5)         76         11           SB-11         10/2/2017         ND (<1)		100000000000000000000000000000000000000			
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         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         5.5         394.7         140 <t< td=""><td>SB-8</td><td>9/18/2018</td><td>ND (&lt;5)</td><td>128.5</td><td>94</td></t<>	SB-8	9/18/2018	ND (<5)	128.5	94
SB-11         9/18/2018         ND (<1)         1.9         ND (<1)           SB-12         4/5/2017         74,000         8,300         ND <400)	SB-11	6/12/2017	ND (< 5)	76	11
SB-12	SB-11	10/2/2017	ND (<1)	14	12
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)	SB-11	the state of the s	ND (<1)	1.9	0.000
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)	CD 12	A/E/2017	74.000	9 300	ND <400)
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)	The same of the sa				
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)	170000000000000000000000000000000000000		190000-000		
SB-12         4/24/2018         2.9         70         48           SB-12         9/18/2018         ND (<5)					111111111111111111111111111111111111111
SB-12         9/18/2018         ND (<5)         184         380           SB-13         4/5/2017         85         34         < 1.0			DOM:		
SB-13         4/5/2017         85         34         < 1.0           SB-13         10/2/2017         110         190         ND (<5)					
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         9/18/2018         ND (<20)         1,100         330           SB-14         9/18/2018         15         153.6         24           SB-22         4/5/2017         140,000         11,000         ND (<100)           SB-22         10/2/2017         12,000         2,500         ND (<100)           SB-22         10/2/2017         140,000         29,000         ND (<400)           SB-22         1/23/2018         120,000         29,000         890           SB-22         1/23/2018         42,000         70,000         2,100           SB-22         9/18/2018         42,000         70,000         2,100           SB-28         6/12/2017         43,000         79,490 <th< td=""><td>CD 12</td><td></td><td></td><td>24</td><td>-10</td></th<>	CD 12			24	-10
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)		The second second			
SB-14         4/5/2017         5,300         3,941         89           SB-14         7/27/2017         150         5.4         ND (< 2)					100
SB-14         7/27/2017         150         5.4         ND (< 2)	2B-13	9/18/2018	49	240	33
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)	SB-14		5,300	3,941	
SB-14         12/5/2017         5.5         394.7         140           SB-14         4/24/2018         ND (<20)	SB-14	7/27/2017		5.4	ND (< 2)
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-14	10/2/2017	670	3,477	400
SB-14         9/18/2018         15         153.6         24           SB-22         4/5/2017         140,000         11,000         ND (< 1000	SB-14	12/5/2017		394.7	140
SB-22         4/5/2017         140,000         11,000         ND (< 1000           SB-22         10/2/2017         12,000         2,500         ND (< 100)	SB-14	4/24/2018	ND (<20)		330
SB-22         10/2/2017         12,000         2,500         ND (<100)           SB-22         12/5/2017         140,000         29,000         ND (<400)	SB-14	9/18/2018	15	153.6	24
SB-22         10/2/2017         12,000         2,500         ND (<100)           SB-22         12/5/2017         140,000         29,000         ND (<400)	SB-22	4/5/2017	140,000	11,000	ND (< 1000)
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			10.025		ND (<100)
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		The same of the sa			ND (<400)
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-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		The same of the sa	The state of the s		
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					100000000000000000000000000000000000000
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-22	7/11/2019			
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	6/12/2017	43,000	79,490	11,000
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		The second second			
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	The State of the S	The same of the sa	Construction of the Constr		
SB-28         9/18/2018         55,000         81,600         10,000           SB-28 Dup         9/18/2018         55,000         83,560         10,000		and the second second	17		
SB-28 Dup 9/18/2018 55,000 83,560 10,000					
3D-20   //11/2019   34,000   151.400   10.000	SB-28	7/11/2019	34,000	151,400	10,000
GA Standard 5 10 2		-,,2025	The same of the same of the same of		THE RESERVE OF THE PERSON NAMED IN

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

					Total	Vinyl
	Depth to	<b>Ref Elev</b>	<b>GW Elev</b>	<b>Trichloroethene</b>	<b>Dichloroethene</b>	<b>Chloride</b>
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)

<sup>\*</sup>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

					Total	Vinyl
	Depth to	Ref Elev	<b>GW Elev</b>	<b>Trichloroethene</b>	<b>Dichloroethene</b>	<b>Chloride</b>
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)

<u>Date</u>	ARD Bilet Test West Blee	Comments  C/C/2017 Pilot Test World Plan American
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 April 29, 2021	<u>Description</u> 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).





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

**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





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



## Analysis Report

April 13, 2017

FOR:

Attn: Mr. Bert Richnatsky Bioremidal Technologies, Inc.

2700 Kirila Drive Hermitage, PA 16148

see "By" below

Sample Information

Matrix:

**GROUND WATER** 

Location Code:

**BIOTECH** 

Rush Request:

Standard

**Custody Information** 

AR

Date 04/05/17 Time 12:10

Collected by: Received by:

Analyzed by:

LB

04/08/17

11:57

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	Ву	Reference
Volatiles (TCL)						· · · · · · · · · · · · · · · · · · ·	
1,1-Dichloroethane	ND	2.0	ug/L	2	04/11/17	МН	SW8260C
2-Hexanone	ND	5.0	ug/L	2	04/11/17	МН	SW8260C
Acetone	5.5	\$ 5.0	ug/L	2	04/11/17	МН	SW8260C
Benzene	23	1.4	ug/L	2	04/11/17	МН	SW8260C
Chloroform	ND	2.0	ug/L	2	04/11/17	МН	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	МН	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	мн	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 Phoenix I.D.: BY01083

Client ID: SB-8 GW

RL/

Parameter Result 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 (preceded 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. 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



## Environmental Laboratories, Inc.

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



## **Analysis Report**

April 13, 2017

FOR: Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Samp	le Ir	ıform	nation

Matrix:

**GROUND WATER** 

Location Code:

**BIOTECH** 

Rush Request:

Standard

P.O.#:

040517

## **Custody Information**

Collected by: Received by:

AR LB

04/08/17

04/05/17

<u>Date</u>

12:43 11:57

<u>Time</u>

Analyzed by: see "By" below

## **Laboratory Data**

SDG ID: GBY01083

Phoenix ID: BY01084

Project ID:

JOLYN ENTERPRISES

Client ID:

**SB-13 GW** 

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	1.0	ug/L	1	04/10/17	МН	SW8260C
2-Hexanone	ND	2.5	ug/L	1	04/10/17	МН	SW8260C
Acetone	ND	2.5	ug/L	1	04/10/17	мн	SW8260C
Benzene	ND	0.70	ug/L	1	04/10/17	МН	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	МН	70 - 130 %

Project ID: JOLYN ENTERPRISES

Client ID: SB-13 GW

Phoenix I.D.: BY01084

RL/

Parameter

Result 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





## Environmental Laboratories, Inc.

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

## **Analysis Report**

April 13, 2017

Attn: Mr. Bert Richnatsky FOR:

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information

**GROUND WATER** 

Location Code:

**BIOTECH** 

Rush Request:

Standard

P.O.#:

Matrix:

040517

Collected by: Received by: LB

**Custody Information** 

<u>Date</u> 04/05/17 Time

04/08/17

13:25 11:57

Analyzed by:

see "By" below

SDG ID: GBY01083

Laboratory Data

Phoenix ID: BY01085

Project ID:

**JOLYN ENTERPRISES** 

Client ID:

SB-14 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	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	МН	70 - 130 %

Ver 1

Project ID: JOLYN ENTERPRISES

Client ID: SB-14 GW

Phoenix I.D.: BY01085

RL/ Parameter **PQL** Units Dilution Date/Time Result 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.

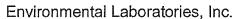
If there are any questions regarding this data, please call Phoenix Client Services at extension 200. This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director

April 13, 2017

Reviewed and Released by: Phyllis Shiller, Laboratory Director





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



<u>Time</u>

14:10

11:57

## **Analysis Report**

April 13, 2017

Attn: Mr. Bert Richnatsky FOR:

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Samp	le l	Inf	or	ma	tion

Matrix: **GROUND WATER** 

Location Code: **BIOTECH** Rush Request: Standard

P.O.#:

040517

**Custody Information** 

Collected by: Received by: LB

Analyzed by: see "By" below

**Laboratory Data** 

SDG ID: GBY01083

Phoenix ID: BY01086

<u>Date</u>

04/05/17

04/08/17

Project ID:

JOLYN ENTERPRISES

Client ID: **SB-12 GW** 

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	400	ug/L	400	04/10/17	МН	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	МН	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	МН	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	МН	70 - 130 %

Ver 1

Project ID: JOLYN ENTERPRISES Phoenix I.D.: BY01086

Client ID: \$B-12 GW

RL/

Parameter Result 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 (preceded 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





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



## **Analysis Report**

April 13, 2017

FOR:

Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information

**GROUND WATER** 

Location Code:

**BIOTECH** 

Rush Request:

Standard

P.O.#:

Matrix:

040517

**Custody Information** 

Received by:

Analyzed by:

Collected by:

AR

LB see "By" below 04/05/17 04/08/17

**Date** 

<u>Time</u> 15:00

11:57

Laboratory Data

SDG ID: GBY01083

Phoenix ID: BY01087

Project ID:

JOLYN ENTERPRISES

Client ID:

SB-22 GW

D1 /

	RL/						
Result	PQL	Units	Dilution	Date/Time	Ву	Reference	
ND	1000	ug/L	1000	04/10/17	МН	SW8260C	
ND	2500	ug/L	1000	04/10/17	МН	SW8260C	
ND	2500	ug/L	1000	04/10/17	MH	SW8260C	
ND	700	ug/L	1000	04/10/17	MH	SW8260C	
ND	1000	ug/L	1000	04/10/17	MH	SW8260C	
11000	1000	ug/L	1000	04/10/17	MH	SW8260C	
ND	1000	ug/L	1000	04/10/17	MH	SW8260C	
ND	2500	ug/L	1000	04/10/17	MH	SW8260C	
ND	1000	ug/L	1000	04/10/17	MH	SW8260C	
ND	1000	ug/L	1000	04/10/17	MH	SW8260C	
ND	1000	ug/L	1000	04/10/17	MH	SW8260C	
140000	2000	ug/L	2000	04/10/17	MH	SW8260C	
ND	1000	ug/L	1000	04/10/17	MH	SW8260C	
101		%	1000	04/10/17	MH	70 - 130 %	
97		%	1000	04/10/17	МН	70 - 130 %	
97		%	1000	04/10/17	MH	70 - 130 %	
99		%	1000	04/10/17	MH	70 - 130 %	
	ND ND ND ND 11000 ND ND ND ND ND 140000 ND	ND 1000 ND 2500 ND 2500 ND 700 ND 1000 11000 1000 ND 1000 140000 2000 ND 1000 101 97 97	Result         PQL         Units           ND         1000         ug/L           ND         2500         ug/L           ND         2500         ug/L           ND         700         ug/L           ND         1000         ug/L           ND         1000 <td>Result         PQL         Units         Dilution           ND         1000         ug/L         1000           ND         2500         ug/L         1000           ND         2500         ug/L         1000           ND         700         ug/L         1000           ND         1000         ug/L         1000           14000         2000         ug/L         1000           ND         1000         ug/L         1000           101         %         1000           97         %         1000           97         %         1000</td> <td>Result         PQL         Units         Dilution         Date/Time           ND         1000         ug/L         1000         04/10/17           ND         2500         ug/L         1000         04/10/17           ND         2500         ug/L         1000         04/10/17           ND         700         ug/L         1000         04/10/17           ND         1000         ug/L         1000         04/10/17           140000         2000         ug/L         2000         04/10/17           ND         1000         04/10/17         04/10/17           101         %         1000         04/10/17           97         %         1000         04/10/17           97         %         1000         04/10/17</td> <td>  ND   1000   ug/L   1000   04/10/17   MH   ND   2500   ug/L   1000   04/10/17   MH   ND   2500   ug/L   1000   04/10/17   MH   ND   700   ug/L   1000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   11000   1000   ug/L   1000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   ND   2500   ug/L   1000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   140000   2000   ug/L   2000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   101   %   1000   04/10/17   MH   1000   04/10/17   MH   1000   1000   1000   1000   10000   10000   10000   10000   10000   100000   100000   100000   100000   1000000   100000000</td>	Result         PQL         Units         Dilution           ND         1000         ug/L         1000           ND         2500         ug/L         1000           ND         2500         ug/L         1000           ND         700         ug/L         1000           ND         1000         ug/L         1000           14000         2000         ug/L         1000           ND         1000         ug/L         1000           101         %         1000           97         %         1000           97         %         1000	Result         PQL         Units         Dilution         Date/Time           ND         1000         ug/L         1000         04/10/17           ND         2500         ug/L         1000         04/10/17           ND         2500         ug/L         1000         04/10/17           ND         700         ug/L         1000         04/10/17           ND         1000         ug/L         1000         04/10/17           140000         2000         ug/L         2000         04/10/17           ND         1000         04/10/17         04/10/17           101         %         1000         04/10/17           97         %         1000         04/10/17           97         %         1000         04/10/17	ND   1000   ug/L   1000   04/10/17   MH   ND   2500   ug/L   1000   04/10/17   MH   ND   2500   ug/L   1000   04/10/17   MH   ND   700   ug/L   1000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   11000   1000   ug/L   1000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   ND   2500   ug/L   1000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   140000   2000   ug/L   2000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   ND   1000   ug/L   1000   04/10/17   MH   101   %   1000   04/10/17   MH   1000   04/10/17   MH   1000   1000   1000   1000   10000   10000   10000   10000   10000   100000   100000   100000   100000   1000000   100000000	

Ver 1

Project ID: JOLYN ENTERPRISES Phoenix I.D.: BY01087

Client ID: SB-22 GW

RL/
Parameter Result 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 (preceded 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



## Environmental Laboratories, Inc.

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



## QA/QC Report

April 13, 2017

% 1,2-dichlorobenzene-d4

% Dibromofluoromethane

% Bromofluorobenzene

% Toluene-d8

100

98

94

100

%

%

%

%

## 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, 200	0/))									
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 pe	erformed	instead of a matrix spike and matrix	spike dı	uplicate.						
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), Q	C Samp	le No: BY01825 (BY01083 (2X)	, BY016	085 (40)	())					
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
viriyi dilionde	140	1.0			4.0				.0 100	

100

100

99

100

99

101

102

99

1.0

1.0

3.0

1.0

70 - 130

70 - 130

70 - 130

70 - 130

30

30

30

30

## QA/QC Data

SDG I.D.: GBY01083

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

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

## Sample Criteria Exceedances Report GBY01083 - BIOTECH

Criteria: None State: NY

RL Analysis SampNo Acode Phoenix Analyte Criteria Units

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.

<sup>\*\*\*</sup> No Data to Display \*\*\*



## **Environmental Laboratories, Inc.**

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



## **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.



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

# **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)

				Coolant	IPK ICE V No
	N N	NY/NJ CHAIN OF C	JSTODY RECORD	Temp 3	
PHOENIX \$	587 6	East Middle Tumpike, P.O. B	ox 370, Manchester, CT 06040		et Options: 781-9430
Environmental Laboratoria	- White	Email: info@phoenixlabs.com			842-1980
Environmental Laboratories Bio-REMEDIAL 166	INC.	Client Services (	(860) 645-8726		rafsky Oles-env. com
Customer: Compliant	SE SE	Avuced Project:	John Enterprises	Project P.O	: 040577
Address: 2208 Kinila Bi	vd.		Beet Richnefsky		is section MUST be
HERMITTAL 7	16148	Invoice to:	Jan Horrocio		completed with
					Bottle Quantities.
Sampler's Citient Sample - Information Sampler's Compacture Compac	) - Identification Date: 4/5/	Analysis Request	2.00		(2.5° / 50° / )
Matrix Code:		75		////il/s/s/s	
DW=Drinking Water GW=Gound Water SW=5 RW=Raw Water SE=Sediment SL=Sludge S=	Surface Water <b>WW=</b> Waste Wate -Soil SD=Solid W=Wipe	° (9% ov)			
ONL=O1 B=Bulk L=Liquid				[ ] [ [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [	
PHOENIX USE Customer Sample ONLY SAMPLE # Identification		me hpled			\$\frac{1}{2}\frac{1}{2
01083 SB-8 GW	(3W) 4-5-17 12:10	0 / m X			'
01084 SB-13 GW	4 12:4	31-X	_1_1_1_1_1_1		
01085 \$6-14 GW	w 1:2.	51-12		X	
01086 18-12 GW	V 2110	o m		X	
01087 SB-22 GW	h 3:00	0 m X			
Relinquished by: Accepted b	y:	Date: Time:	Turnacound: NJ	NY	Data Format
Office hope Time	Dilla	4/7/17 317	1 Day Res. Criteria	TAGM 4046 GW	Phoenix Std Report
	,	, , .	☐ 2 Days* ☐ Non-Res. Criteri		Excel □ PDF
Kapi	lo Bella	4/8/17:11:57	S 5 Days Cleanup Criteria	Use Soil	☐ GIS/Key
Comments, Special Requirements or Regulati	ons: AnAlyts to Repo	at 1 1,1- Dichlars ether	Other GW Criteria	☐ NY375 Residential Soil	☐ EQuis ☐ NJ Hazsile EDD
2- Butanont; 2- Hexenons; A	LETONE; BENZENE; C.	15-1,2-DichloroerHene	SURCHARGE	Restricted/Residential	NY EZ EDD (ASP)
Comments, Special Requirements of Regulation 2- Butanons; A Chioro form; Cyclo hexan E TRANS-1,2- Dichloroethene; TR	, Kethyl Cyclohe	Xane, letrachiotoel		Commercial Industrial	Other
TRANS-1,2-Dichtoroethene; TR	ichloroethene; Vin	11 CAHORAGE .			Oata Package
			State where samples were coll	artest: 11V	NJ Reduced Deliv. " NY Enhanced (ASP B) *
			Agric attere admines were con	10/	Other

---Page 17 of 18-1

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	III VI	<b>人</b>	199					nixiabs.			ax (86)						F	x: one:	72						
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Customer: -	Comple	mus 🎉	-		بسيع	Ø	Proje	ct:	<u> </u>	مداء	W1	EnT	es	Ris	e s			Pro	oject f				527		
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RW=Raw Water S Off = ON B=Bulk (	E=Sediment S	L=Sludge S:	Soil SD=Sc	olid WaWipo	e e		X	$\mathcal{N}_{\mathcal{U}}$	8° /	Ι,	//	/ /	/,	//	//.	/,	//	19 d	1	\$	///		Str	/./	
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					****					***********											***************************************				-

Page 18 of 18



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

**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





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



## **Analysis Report**

June 23, 2017

FOR:

Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information

Matrix:

**GROUND WATER** 

Location Code:

**BIOTECH** 

Rush Request:

Standard

P.O.#:

061217

**Custody Information** 

Collected by:

Received by:

AR

Date 06/12/17 06/15/17

<u>Time</u> 10:10

LB

10:35

Analyzed by: see "By" below

\_aboratory Data

SDG ID: GBY40260

Phoenix ID: BY40260

Project ID:

JO LYN ENTERPRISES

Client ID:

EW-7

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference	
Volatiles (TCL)					Nima			_
1,1-Dichloroethane	ND	20	ug/L	20	06/17/17	МН	SW8260C	
2-Hexanone	ND	50	ug/L	20	06/17/17	МН	SW8260C	
Acetone	ND	50	ug/L	20	06/17/17	МН	SW8260C	
Benzene	ND	14	ug/L	20	06/17/17	МН	SW8260C	
cis-1,2-Dichloroethene	5200	500	ug/L	500	06/19/17	МН	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	МН	70 - 130 %	
Volatile Library Search Top 10	Completed				06/19/17	МН		1

Project ID: JO LYN ENTERPRISES Phoenix I.D.: BY40260

Client ID: EW-7

RL/
Parameter Result 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





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



## **Analysis Report**

June 23, 2017

FOR: Attn: Mr. Bert Richnatsky

see "By" below

AR

LB

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

<u>Sampl</u>	<u>e Inf</u>	ormation	

Matrix:

**GROUND WATER** 

Location Code:

BIOTECH

Rush Request:

Standard

P.O.#:

061217

Laboratory Data

**Custody Information** 

Collected by:

Received by:

Analyzed by:

SDG ID: GBY40260

Phoenix ID: BY40261

<u>Time</u>

10:10

10:35

<u>Date</u>

06/12/17

06/15/17

Project ID:

JO LYN ENTERPRISES

Client ID:

EW-7 DUP

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference	
Volatiles (TCL)								
1,1-Dichloroethane	ND	20	ug/L	20	06/17/17	МН	SW8260C	
2-Hexanone	ND	50	ug/L	20	06/17/17	МН	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	МН	70 - 130 %	
Volatile Library Search Top 10	Completed				06/19/17	МН		1

Project ID: JO LYN ENTERPRISES Phoenix I.D.: BY40261

Client ID: EW-7 DUP

RL/
Parameter Result 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 (preceded 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.

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Phyllis Shiller, Laboratory Director

June 23, 2017

Reviewed and Released by: Ethan Lee, Project Manager





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



## **Analysis Report**

June 23, 2017

FOR: Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information

**GROUND WATER** 

Location Code:

**BIOTECH** 

Rush Request:

Standard

P.O.#:

Matrix:

061217

Custody Information

AR

<u>Date</u> 06/12/17 <u>Time</u> 10:25

Collected by: Received by:

LB

06/15/17

10:35

Analyzed by: see "By" below

**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	Ву	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	1.0	ug/L	1	06/17/17	МН	SW8260C
2-Hexanone	ND	2.5	ug/L	1	06/17/17	МН	SW8260C
Acetone	96	S 13	ug/L	5	06/19/17	МН	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	МН	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	06/17/17	МН	SW8260C
Trichloroethene	ND	1.0	ug/L	1	06/17/17	МН	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	МН	70 - 130 %
% Dibromofluoromethane	90		%	1	06/17/17	МН	70 - 130 %
% Toluene-d8	93		%	1	06/17/17	МН	70 - 130 %
Volatile Library Search Top 10	Completed				06/19/17	МН	1

Project ID: JO LYN ENTERPRISES Phoenix I.D.: BY40262

Client ID: EW-9

RL/ Result 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 (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

#### **Comments:**

Parameter

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

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





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



## **Analysis Report**

June 23, 2017

FOR: Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc 2700 Kirila Drive Hermitage, PA 16148

Sample Information **Custody Information** Date <u>Time</u> Matrix: **GROUND WATER** 06/12/17 Collected by: AR 10:35 Location Code: **BIOTECH** Received by: LB 06/15/17 10:35

Rush Request: Standard Analyzed by: see "By" below

Laboratory Data

SDG ID: GBY40260
Phoenix ID: BY40263

Project ID: JO LYN ENTERPRISES

061217

Client ID: SB-28

P.O.#:

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
		. ~-			20.07		
Volatiles (TCL)							
1,1-Dichloroethane	ND	100	ug/L	100	06/19/17	МН	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	МН	70 - 130 %
% Bromofluorobenzene	102		%	100	06/19/17	МН	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	МН	1

Project ID: JO LYN ENTERPRISES Phoenix I.D.: BY40263

Client ID: SB-28

RL/

Parameter Result 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 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

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





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## **Analysis Report**

June 23, 2017

FOR: Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information

**GROUND WATER** 

Location Code:

Matrix:

**BIOTECH** Standard

Rush Request:

P.O.#: 061217 **Custody Information** 

**Laboratory Data** 

Collected by:

Received by:

Analyzed by:

AR

LB

see "By" below

06/12/17

Date

10:50

06/15/17

10:35

<u>Time</u>

SDG ID: GBY40260 Phoenix ID: BY40264

Project ID: JO LYN ENTERPRISES

Client ID: SB-11

RL/

Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference	S46529434
Volatiles (TCL)								
1,1-Dichloroethane	ND	5.0	ug/L	5	06/19/17	МН	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	МН	70 - 130 %	
Volatile Library Search Top 10	Completed				06/20/17	МН		1

Ver 1

Project ID: JO LYN ENTERPRISES Phoenix I.D.: BY40264

Client ID: SB-11

RL/

Parameter Result 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





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**Custody Information** 

Collected by:

Received by:



<u>Time</u>

11:05

10:35

## **Analysis Report**

June 23, 2017

FOR: Attn: Mr. Bert Richnatsky Bioremidal Technologies, Inc

AR

LB

2700 Kirila Drive Hermitage, PA 16148

Sample Information

Matrix: **GROUND WATER** 

Location Code:

**BIOTECH** 

Rush Request:

Standard

P.O.#:

Analyzed by: see "By" below 061217 \_aboratory Data

SDG ID: GBY40260

Phoenix ID: BY40265

<u>Date</u>

06/12/17

06/15/17

Project ID: JO LYN ENTERPRISES

Client ID: EW-20

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference	
Volatiles (TCL)								
1,1-Dichloroethane	ND	100	ug/L	100	06/19/17	МН	SW8260C	
2-Hexanone	ND	250	ug/L	100	06/19/17	МН	SW8260C	
Acetone	ND	250	ug/L	100	06/19/17	МН	SW8260C	
Benzene	ND	70	ug/L	100	06/19/17	МН	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	МН	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	МН	70 - 130 %	
Volatile Library Search Top 10	Completed				06/20/17	МН		1

Project ID: JO LYN ENTERPRISES Phoenix I.D.: BY40265

Client ID: EW-20

RL/

Parameter Result 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:**

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Phyllis Shiller, Laboratory Director

June 23, 2017

Reviewed and Released by: Ethan Lee, Project Manager

CLIENT ID	
EW-7	

Lab Name: Phoenix En	vironmental	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)	<u>mL</u>	Lab File ID:	0616P45.D	
Level: (low/med)		<u></u>		Date Received:	06/15/17	
% Moisture: not dec.	100	_		Date Analyzed:	06/17/17	
GC Column:	rtx-vms	_ ID:	<u>0.18 (mm)</u>	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	C	OMPOUND NA	ME	RT	EST. CONC.	Q
		· · · · · · · · · · · · · · · · · · ·	, manager (1878-1871)			
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CI	LIENT ID	
ΕV	W-7 DUP	

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Lab Name: Phoenix En	vironmental l	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)	<u>mL</u>	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:	<u>0.18 (mm)</u>	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	C	OMPOUND NA	AME	RT	EST. CONC.	Q
		·····				

CLIENT ID	
EW-9	

						l .	
Lab Name:	Phoenix E	nvironmental	Labs	Client	: BIOTECH	_	
Lab Code:	Phoenix	_ Case No.		_ SAS No.		SDG No.:	GBY40260
Matrix:(soil/	water)	WATER	<del></del>		Lab Sample ID:	BY40262	
Sample wt/\	ol:	25	(g/mL)	<u>mL</u>	Lab File ID:	0616P47.D	
Level: (low/ı	med)		_		Date Received:	06/15/17	
% Moisture:	not dec.	100	_		Date Analyzed:	06/17/17	
GC Column	:	rtx-vms	_ ID:	<u>0.18 (mm)</u>	Dilution Factor:	_	1
Purge Volur	me	25000	_(uL)		Soil Aliquot Vol (u	L):	n.a.
Number TIC	S found:	5		CONCENTRATION UNITS: (ug/L or ug/KG)	ug/L	-	
CAS N	UMBER	C	OMPOUND NA	AME	RT	EST. CONC.	Q
000543-59-9		Pentane, 1-c	hloro-		4.928	1.1	JN
000066-25-1		Hexanal			5.948	2.4	JN
000918-00-3			, 1,1,1-trichloro-		6.372	2.2	JN
000124-13-0		Octanal			7.930	1.5	JN
		unknown			8.563	8	J
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CLIENT ID	
SB-28	

Lab Name: Phoenix En	vironmental L	abs	_ 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)	<u>mL</u>	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:	<u>0.18 (mm)</u>	Dilution Factor:		100
Purge Volume		(uL)		Soil Aliquot Vol (u	- L):	n.a.
Number TICs found:	0	. ,	CONCENTRATION UNITS: (ug/L or ug/KG)	ug/L	_	
CAS NUMBER	cc	MPOUND NA	AME	RT	EST. CONC.	Q
	1			1	1	

CLIENT ID	
SB-11	

						l .	1
Lab Name:	Phoenix E	nvironmental	Labs	Clie	ent: BIOTECH	_	
Lab Code:	Phoenix	_ Case No.	•	SAS N	lo.:	SDG No.:	GBY40260
Matrix:(soil/	water)	WATER	_		Lab Sample ID:	BY40264	
Sample wt/	vol:	25	_ (g/mL)	<u>mL</u>	Lab File ID:	0619P30.D	
Level: (low/	med)		_		Date Received:	06/15/17	
% Moisture	: not dec.	100	_		Date Analyzed:	06/19/17	
GC Column	n:	rtx-vms	ID:	<u>0.18 (mm)</u>	Dilution Factor:	-	5
Purge Volu	me	25000	_(uL)		Soil Aliquot Vol (u	L): -	n.a.
Number TIC	Os found:	9	_	CONCENTRATION UNIT (ug/L or ug/KG)	S: _ug/L_	_	
CAS N	UMBER	С	COMPOUND N	AME	RT	EST. CONC.	Ø
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
		-					
		-					
		1					-
		-					
		1			1	1	1

CLIENT ID	
EW-20	

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Lab Name: Phoenix Er	nvironmental Labs	3	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)	<u>mL</u>	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	COMF	POUND NA	ME	RT	EST. CONC.	Q
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						-
	<u> </u>					
					<u> </u>	<u> </u>



## Environmental Laboratories, Inc.

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



## QA/QC Report

June 23, 2017

## QA/QC Data

SDG I.D.:	GBY40260

June 25, 2017		<u> </u>	<u> </u>				SDG I	.D.: C	2D 1 4U2	:00
Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 390515 (ug/L), Q	C Sampl	e No: BY39232 (BY40260 (20)	() , BY4	0261 (20	)X) , BY	40262	)			
Volatiles - Ground Water		· ·		•	Ť					
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 pe	erformed	instead of a matrix spike and matrix	spike d	uplicate.						
Additional 8260 criteria: 10% of LC	S/LCSD	compounds can be outside of acce	eptance o	riteria as	long as	recover	y is 40-1	60%.		
QA/QC Batch 390687 (ug/L), Q BY40265 (250X))	C Samp	e No: BY41982 (BY40260 (500	)X) , BY	40261 (	500X),	BY402	62 (5X)	, BY40	263 (25	00X) ,
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

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

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

SDG I.D.: GBY40260

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

#### Sample Criteria Exceedances Report GBY40260 - BIOTECH

State: NY			GB 14020	0 - BIOTECH				
State.	INT						RL	Analysis
SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	Criteria	Units

<sup>\*\*\*</sup> 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.



## **Environmental Laboratories, Inc.**

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## **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.



## **Environmental Laboratories, Inc.**

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# NY#11301

# **NY Temperature Narration**

June 23, 2017

SDG I.D.: GBY40260

The samples in this delivery group were received at  $3.0^{\circ}$ C. (Note acceptance criteria is above freezing up to  $6^{\circ}$ C)

																				Coola		ooler: PK	Ye:		No   No
					NY/I	NJ (	CHA	AIN C	OF C	UST	ODI	RE	CO	RD							mp3		Pg		
PHC	<u>)E\</u>	IX S	Inc		587 East Ema	ail: <u>in</u>	fo@p	hoenix	labs.co	m	Fax (8	60) 64	45-082		10		E	] Fax:	ne:	7 <u>ล</u> เ าล4	- 34	12-	103	0_	
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Sampler's Signature	Client Sam	ple - Information	- Identifica	tion Date: 6	-12-17		Analy Requ		/2	3										1,00					r.
Matrix Code: DW=Drinking Water S RW=Raw Water S OIL=Oil B=Bulk	E=Sediment L=Liquid	SL=Sludge S=	urface Wate Soil SD=Sol	r <b>WW=</b> Waste lid <b>W=</b> Wipe			k					/					/ S	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					4	/ /
HOENIX USE ONLY SAMPLE #		mer Sample Intification	Sample Matrix	Date Sampled	Time Sampled	1	\$\$\frac{1}{2}\rightarrow{1}{2}		Y/	//	//	/	//	/	/	//		3/0		) 3					\$ <sup>1</sup>
10260	EW	-7	GW	6-12-17	10:10	X													X			T			
10261	EW-	-7 Dup	GW	ц	10:10	N													X						
-10262	EW.	.9	SW	11	10:25	X						T						T	X	T		T		П	
40263	SB-	28	GW	N	10:35					T		T					T		X			Т			
40264	SB-	-//	Cu/	11	10:50	X													X						
40265	EW-	-20	GW	4	11:05														X						
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Relinquished by:	-/	Accepted b	y:	1 _	Date:			Tin	<u>1e:</u>		rnaroui 1 Dav		NJ	ا ا	. Crite		NY				-	ata Fo		td Repo	.,
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	earce			<del></del>	ره)	15	112	<u> </u>	<u>5√3</u>	<b>₽</b>	5 Day	ys		· Clea	nup C	nteria		NY37	5 Resid	dential		] EQ	ulS		
omments, Specia ) - Rutáva	i Kequiremei	Hexannel	Aceto	nt Ber	pore: 1,1 izene:	- W	icnio S - I	2-D:	one, chlor	۔ا۔	Other		-	1 944	Criter	ıd		-	cted/Re	siden	tial E		Hazsite EZ EDI	e EDD D (ASP)	, [
omments, specia 2 - Butano Unene; cyc irans-1, 2-	lohexa	ne' meth	yl cy	Johexa	ne; tet	300	chla	roet	thane		APPLIE	S						Comm	nercial		- 1	Oth		,	
mans-1.2-	Dichlor	oethene	"Trick	<i>iloroeth</i>	neńe 🖯	Vi	nyl	chi	ond	é_								Indust	ınaı			ata Da	ckage		j
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<sup>9</sup>age 25 of 25



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,

**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





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# 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



## Environmental Laboratories, Inc.

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



<u>Time</u>

## **Analysis Report**

July 22, 2019

FOR: Attn: Bert Richnafsky

CP

BioRemedial Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

see "By" below

Sample Information

**GROUND WATER** 

**BIOTECH** 

Location Code:

Standard

Rush Request: P.O.#:

**Laboratory Data** 

**Custody Information** 

Collected by:

Received by:

Analyzed by:

07/11/19

Date

11:05

07/16/19 11:03

SDG ID: GCD57679

Phoenix ID: CD57679

Matrix:

JO-LYN

Project ID: Client ID:

JO-LYN, SB-28

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
		,					
<u>Volatiles (TCL)</u>							
1,1-Dichloroethane	ND	200	ug/L	200	07/18/19	МН	SW8260C
2-Hexanone	ND	500	ug/L	200	07/18/19	МН	SW8260C
Acetone	ND	500	ug/L	200	07/18/19	МН	SW8260C
Benzene	ND	140	ug/L	200	07/18/19	МН	SW8260C
cis-1,2-Dichloroethene	150000	10000	ug/L	10000	07/18/19	МН	SW8260C
Cyclohexane	ND	200	ug/L	200	07/18/19	МН	SW8260C
Methyl ethyl ketone	ND	500	ug/L	200	07/18/19	МН	SW8260C
Methylcyclohexane	ND	200	ug/L	200	07/18/19	MH	SW8260C
Tetrachloroethene	ND	200	ug/L	200	07/18/19	МН	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	МН	70 - 130 %
% Bromofluorobenzene (10000x)	93		%	10000	07/18/19	MH	70 - 130 %
% Dibromofluoromethane (10000x)	105		%	10000	07/18/19	МН	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

RL/

Parameter Result 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 (preceded 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



## Environmental Laboratories, Inc.

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



## **Analysis Report**

July 22, 2019

FOR:

Attn: Bert Richnafsky

BioRemedial Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information

<u>Date</u>

<u>Time</u>

Matrix:

**GROUND WATER** 

Custody Information
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

RL/

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

Project ID: JO-LYN Phoenix I.D.: CD57680

Client ID: JO-LYN, SB-22

RL/

Parameter Result 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 (preceded 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



## Environmental Laboratories, Inc.

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## QA/QC Report

July 22, 2019

## QA/QC Data

SDG I.D.: GCD57679

Parameter	Blank	Blk RL		.CS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	Rec Limits	RPD Limits
QA/QC Batch 488550 (ug/L)	, QC Samp	le No: CD58	570 (CD57679 (200X,	1000	00X) , CI	D57680	) (20X,	2500X)	)		
Volatiles - Ground Wat	er										
1,1-Dichloroethane	ND	1.0		95	99	4.1				70 - 130	30
2-Hexanone	ND	5.0	1	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	1	03	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	1	04	110	5.6				70 - 130	30
% 1,2-dichlorobenzene-d4	101	%	1	02	101	1.0				70 - 130	30
% Bromofluorobenzene	94	%	1	00	100	0.0				70 - 130	30
% Dibromofluoromethane	110	%	1	05	107	1.9				70 - 130	30
% Toluene-d8  Comment:	99	%		99	100	1.0				70 - 130	30
Oommon.											

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

### Sample Criteria Exceedances Report

Criteria: None

GCD57679 - BIOTECH

State: NY

SampNo

Acode

Phoenix Analyte

Criteria

Result

Criteria

RL

RL Criteria

Analysis Units

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.

<sup>\*\*\*</sup> No Data to Display \*\*\*



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# **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%





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# NY Temperature Narration

July 22, 2019



SDG I.D.: GCD57679

The samples in this delivery group were received at  $5.0^{\circ}$ C. (Note acceptance criteria for relevant matrices is above freezing up to  $6^{\circ}$ C)

																				Coo	lant:	Coole IPK [		res L	No No	]
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Page 11 of

# G(D57679

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



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



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



# **Analysis Report**

August 11, 2017

FOR: Attn: Mr. Bert Richnafsky
Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample InformationCustody InformationDateTimeMatrix:GROUND WATERCollected by:07/27/179:45Location Code:BIOTECHReceived by:LB08/01/1710:24

Rush Request: Standard Analyzed by: see "By" below

Laboratory Data

SDG ID: GBY75590

Phoenix ID: BY75590

Project ID: JOLYN ENTERPRISES

072717

Client ID: SB-14 (GW)

P.O.#:

RL/ Parameter Result **PQL** Units Dilution Date/Time Βv Reference Volatiles (TCL) 1,1,1-Trichloroethane ND 2.0 ug/L 2 08/08/17 МН SW8260C 1,1,2,2-Tetrachloroethane ND 2.0 ug/L 2 08/08/17 МН SW8260C 1.1.2-Trichloroethane ND 2.0 2 08/08/17 МН SW8260C ug/L 2 ND 2.0 1,1-Dichloroethane ug/L 08/08/17 МН SW8260C 1,1-Dichloroethene ND 2.0 ug/L 2 08/08/17 МН SW8260C 2.0 2 1,2,3-Trichlorobenzene ND ug/L 08/08/17 МН SW8260C ND 2 2.0 08/08/17 SW8260C 1,2,4-Trichlorobenzene ug/L MH 2 SW8260C 1,2-Dibromo-3-chloropropane ND 2.0 ug/L 08/08/17 МН 1,2-Dibromoethane 2 08/08/17 ND 2.0 ug/L MH SW8260C ND 2.0 2 08/08/17 МН SW8260C 1,2-Dichlorobenzene ug/L 2 08/08/17 SW8260C 1,2-Dichloroethane ND 1.2 ug/L MH 2 1,2-Dichloropropane ND 2.0 ug/L 08/08/17 MH SW8260C ND 2.0 2 08/08/17 МН SW8260C 1,3-Dichlorobenzene ug/L ND 2.0 2 08/08/17 SW8260C 1,4-Dichlorobenzene ug/L 2 ND 5.0 08/08/17 МН SW8260C 2-Hexanone ug/L 2 4-Methyl-2-pentanone 18 5.0 ug/L 08/08/17 МН SW8260C 6000 50 20 08/04/17 МН SW8260C Acetone ug/L ND 2 08/08/17 SW8260C Benzene 1.4 ug/L MH ND 2.0 2 08/08/17 МН SW8260C Bromochloromethane ug/L ND 2.0 2 08/08/17 SW8260C Bromodichloromethane ug/L 2 ND 08/08/17 SW8260C 2.0 MH Bromoform ug/L 2 08/08/17 SW8260C Bromomethane ND 2.0 ug/L МН 2 Carbon Disulfide 4.3 2.0 ug/L 08/08/17 MH SW8260C ND 2.0 2 08/08/17 SW8260C ug/L MH Carbon tetrachloride ND 2 08/08/17 SW8260C Chlorobenzene 2.0 ug/L MH 2 SW8260C 08/08/17 Chloroethane ND 2.0 ug/L MH

Project ID: JOLYN ENTERPRISES Phoenix I.D.: BY75590

Client ID: SB-14 (GW)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	D.,	Reference	
						Ву		California
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	МН	SW8260C	
Total Xylenes	ND	2.0	ug/L	2	08/08/17	МН	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	МН	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	МН	70 - 130 %	
% Toluene-d8	103		%	2	08/08/17	МН	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	200	ug/l	2	08/08/17	МН	SW8260C	
Volatile Library Search Top 10	Completed				08/09/17	МН		1

Project ID: JOLYN ENTERPRISES

Client ID: SB-14 (GW)

Phoenix I.D.: BY75590

RL/

Parameter Result 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





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



# **Analysis Report**

August 11, 2017

FOR: Attn: Mr. Bert Richnafsky
Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample InformationCustody InformationDateTimeMatrix:GROUND WATERCollected by:07/27/1710:00Location Code:BIOTECHReceived by:LB08/01/1710:24

Rush Request: Standard Analyzed by: see "By" below

**Laboratory Data** 

SDG ID: GBY75590 Phoenix ID: BY75591

Project ID: JOLYN ENTERPRISES

072717

Client ID: SB-12 (GW)

P.O.#:

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

Project ID: JOLYN ENTERPRISES Phoenix I.D.: BY75591

Client ID: SB-12 (GW)

Doromotor	Dogult	RL/	Limita	Dilution	Data/Time	D	Deference
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	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	МН	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	МН	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	МН	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	2000	ug/l	20	08/04/17	МН	SW8260C
Volatile Library Search Top 10	Completed				08/06/17	МН	1

Project ID: JOLYN ENTERPRISES Phoenix I.D.: BY75591

Client ID: SB-12 (GW)

RL/

Parameter Result 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





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



# **Analysis Report**

August 11, 2017

Attn: Mr. Bert Richnafsky FOR: Bioremidal Technologies, Inc.

2700 Kirila Drive Hermitage, PA 16148

Sample Information **Custody Information** Date Time Matrix: **GROUND WATER** 07/27/17 10:15 Collected by: Location Code: Received by: 08/01/17 10:24 **BIOTECH** LB

Rush Request: Standard Analyzed by: see "By" below

∟aboratory Data

SDG ID: GBY75590

Phoenix ID: BY75592

Project ID: JOLYN ENTERPRISES

072717

EW-9 (GW) Client ID:

P.O.#:

RL/ Parameter Result **PQL** Units Dilution Date/Time Bv Reference Volatiles (TCL) 1,1,1-Trichloroethane МН SW8260C ND 20 ug/L 20 08/08/17 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 MΗ SW8260C SW8260C ND 20 20 08/08/17 МН 1,1-Dichloroethane ug/L 1,1-Dichloroethene ND 20 ug/L 20 08/08/17 MH SW8260C 20 20 08/08/17 MH SW8260C 1,2,3-Trichlorobenzene ND ug/L ND 20 20 08/08/17 МН SW8260C ug/L 1,2,4-Trichlorobenzene ND 20 20 08/08/17 MH SW8260C 1,2-Dibromo-3-chloropropane ug/L SW8260C ND 20 20 08/08/17 MH 1,2-Dibromoethane ug/L ND 20 ug/L 20 08/08/17 MH SW8260C 1,2-Dichlorobenzene ND 12 20 08/08/17 MH SW8260C 1,2-Dichloroethane ug/L SW8260C 20 20 08/08/17 MH 1,2-Dichloropropane ND ug/L 1,3-Dichlorobenzene ND 20 ua/L 20 08/08/17 SW8260C 1.4-Dichlorobenzene ND 20 ug/L 20 08/08/17 MH SW8260C 50 20 08/08/17 МН SW8260C ND ug/L 2-Hexanone ND 50 20 08/08/17 МН SW8260C 4-Methyl-2-pentanone ug/L 20 08/08/17 SW8260C 58 S 50 ug/L MH Acetone 20 SW8260C ND 14 ug/L 08/08/17 MH Benzene 20 08/08/17 МН SW8260C ND 20 ug/L Bromochloromethane Bromodichloromethane ND 20 ug/L 20 08/08/17 МН SW8260C 20 08/08/17 МН SW8260C ND 20 ug/L Bromoform 20 20 08/08/17 MH SW8260C Bromomethane ND ug/L 20 08/08/17 МН SW8260C Carbon Disulfide ND 20 ug/L ND 20 ug/L 20 08/08/17 МН SW8260C Carbon tetrachloride ND 20 20 08/08/17 MH SW8260C Chlorobenzene ug/L SW8260C ND 20 08/08/17 MH 20 Chloroethane ug/L

Project ID: JOLYN ENTERPRISES

Client ID: EW-9 (GW)

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

Phoenix I.D.: BY75592

Project ID: JOLYN ENTERPRISES Phoenix I.D.: BY75592

Client ID: EW-9 (GW)

RL/

Parameter Result 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 En	wironmontal Labo	Cliente	BIOTECH		
Lab Name. Phoenix En	ivironmentai 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)	<u>mL</u>	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	(uL)		Soil Aliquot Vol (uL	_):	n.a.
Number TICs found:	2	CONCENTRATION UNITS: (ug/L or ug/KG)	ug/L	-	
CAS NUMBER	COMPOUND NA	ME	RT	EST. CONC.	Q
000075-18-3	Dimethyl sulfide		2.151	5.1	JN
000067-63-0	Isopropyl Alcohol		2.329	6.7	JN
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					-

FORM I VOA-TIC

#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

					1	
Lab Name: Phoenix En	vironmental l	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)	<u>mL</u>	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		- _(uL)		Soil Aliquot Vol (ul	)·	n.a.
Number TICs found:	0	-	CONCENTRATION UNITS: (ug/L or ug/KG)	ug/L	-	
CAS NUMBER	C	OMPOUND NA	AME	RT	EST. CONC.	Q
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FORM I VOA-TIC

#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

 CLIENT ID	
EW-9 (GW)	

						l
Lab Name: Phoenix En	vironmental l	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)	<u>mL</u>	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	C	NA DNUOPMC	ME	RT	EST. CONC.	Q
					<u> </u>	
					1	
		·				

FORM I VOA-TIC



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



SDG I.D.: GBY75590

# QA/QC Report

August 11, 2017

### QA/QC Data

LCSD LCS MSD **RPD** Blk LCS MS MS Rec Blank **RPD** % **RPD** Limits Limits Parameter 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 93 1,1,2-Trichloroethane ND 1.0 94 1.1 70 - 130 30 1,1-Dichloroethane ND 101 99 1.0 2.0 70 - 130 30 ND 101 1.1-Dichloroethene 1.0 103 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 ND 1.0 99 97 2.0 1,3-Dichlorobenzene 30 70 - 130 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 ND 97 2-Hexanone 5.0 99 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 ND 0.70 98 97 70 - 130 30 Benzene 1.0 Bromochloromethane ND 1.0 98 97 1.0 70 - 130 30 Bromodichloromethane ND 99 0.50 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 30 70 - 130Carbon tetrachloride ND 1.0 102 101 1.0 70 - 130 30 Chlorobenzene ND 1.0 97 96 1.0 70 - 130 30 ND 106 Chloroethane 1.0 108 1.9 70 - 130 30 Chloroform ND 1.0 98 96 2.1 70 - 130 30 ND 1.0 111 111 0.0 70 - 130 30 Chloromethane ND 0.40 99 99 cis-1,3-Dichloropropene 0.0 70 - 130 30 ND 5.0 109 107 1.9 Cyclohexane 70 - 130 30 70 - 130 ND 0.50 105 103 1.9 Dibromochloromethane 30 Dichlorodifluoromethane ND 1.0 140 138 1.4 70 - 130 30 Ethylbenzene ND 1.0 98 97 1.0 70 - 130 30 ND 1.0 99 98 1.0 70 - 130 30 Isopropylbenzene ND 1.0 99 98 1.0 70 - 130 30 m&p-Xylene ND 5.0 103 107 3.8 70 - 130 30 Methyl ethyl ketone

113

105

106

95

111

103

104

94

1.8

1.9

1.9

1.1

ND

ND

ND

ND

1.0

2.5

1.0

1.0

Methyl t-butyl ether (MTBE)

Methylacetate

Methylcyclohexane

Methylene chloride

70 - 130

70 - 130

70 - 130

70 - 130

30

30

30

30

		QA/QC E	<u>Data</u>	<u>a</u> 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 per	formed	nstead of a matrix spike and matrix	spike du	ıplicate.							
Additional 8260 criteria: 10% of LCS	S/LCSD	compounds can be outside of acce	otance c	riteria as	long as	recovery	/ is 40-16	30%.			
QA/QC Batch 396739 (ug/L), QC	Sampl	e No: BY79133 (BY75592 (200)	X))								
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 per	formed	nstead of a matrix spike and matrix	spike du	ıplicate.							
Additional 8260 criteria: 10% of LCS	S/LCSD	compounds can be outside of accep	otance c	riteria as	long as	recovery	/ is 40-10	30%.			
QA/QC Batch 397007 (ug/L), QC	Sampl	e No: BY80397 (BY75590 (2X)	, BY755	591 (100	X, 200	0X) , B	Y75592	(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	

	<del>-</del>						
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

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

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

SDG I.D.: GBY75590

August 11, 2017

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

Friday, August 11, 2017 Criteria: None

#### Sample Criteria Exceedances Report GBY75590 - BIOTECH

State: NY

RL Analysis
SampNo Acode Phoenix Analyte Criteria Result RL Criteria Units

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.

<sup>\*\*\*</sup> No Data to Display \*\*\*



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# **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%.





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# **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  $6^{\circ}$ C)

											_				Coc	olant:	Coole IPK	er:	Yes ICE	No No
	λ <i>λ</i>	NY/N	1J C	HAI	N OF	CU	STC	DY I	REC	ORD						Temp	.3		Pg	of
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Comments, Special Requirements or Regulations:  Analyses To Report: 1, 1-Dichloro ethane; 2-Bistanex; 2-Hexano, Acetone; Benzerle; cis-1, 2-Dichloro ethane; cyclohexane; methyl cyclohexane; tetra chloro ethane; trans-1, 2-Dichlo Oethene; trichloro ethe ne; Viny/ Chloride.						anoxe	10	Other			V Criteria		_ S₀	il				QuIS NJ Ha	zsite El	מכ
						,	* SUI	RCHARGI PPLIES	•					stricted mmerc		ential			EDD (A	(SP)
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exellene trichloro ethe ne	Vinyl	hlaris	lo	יוי כ		•												Pack		lalis *
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rotrud @							l											Other	,	,,

### **Christine Paradise**

GBY 75590

From: Bert Richnafsky <br/>
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:** <u>brichnafsky@ces-env.com</u> **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



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

**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



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



# **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.



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



<u>Time</u>

9:30

10:49

# Analysis Report

October 11, 2017

FOR:

Attn: Mr. Bert Richnatsky Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

see "By" below

Sample Information

GROUND WATER

Matrix: Location Code:

BIOTECH

Rush Request:

Standard

P.O.#:

100217

**Laboratory Data** 

**Custody Information** 

LB

Collected by:

Received by:

Analyzed by:

SDG ID: GBZ13303

Phoenix ID: BZ13303

<u>Date</u>

10/02/17

10/03/17

Project ID:

JOLYN ENTERPRISES

Client ID:

EW-7 GW

Volatiles (TCL)           1,1,1-Trichloroethane         ND         200         ug/L         200         10/07/17         MH         SW8260C           1,1,2-Tertachloroethane         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-Dichloroethane         ND         200         ug/L         200         10/07/17         MH         SW8260C           1,1-Dichloroethane         ND         200         ug/L         200         10/07/17         MH         SW8260C           1,2-Diromotethane         ND         200         ug/L         200         10/07/17         MH         SW8260C           1,2-Jibromotenzene         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-Dichlorobenzene         ND         200         ug/L         200         10/07/17         MH         SW8260C           1,2-Dichlorobenzene         ND         200	Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Đư	Reference
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-Dichloroethane         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-Dichlorobenzene         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-Dichlorobenzene         ND         200         ug/L         200	raiailletei	resuit	- rwc	Units	ווטווטווע	Date/Time	Ву	Reference
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-Dichloroethane         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-Dichlorobenzene         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-Dichlorobenzene         ND         200         ug/L         200<	Volatiles (TCL)							
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-Dichlorobenzene         ND         200         ug/L         200         10/07/17         MH         SW8260C           1,3-Dichlorobenzene         ND         200         ug/L         200	1,1,1-Trichloroethane	ND	200	ug/L	200	10/07/17	МН	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-Dibromo-3-chloropropane         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-Dichlorobenzene         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         500         ug/L         200	1,1,2,2-Tetrachloroethane	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-Dibromo-sthane         ND         200         ug/L         200         10/07/17         MH         SW8260C           1,2-Dichlorobenzene         ND         200         ug/L         200	1,1,2-Trichloroethane	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-Dichlorobenzene         ND         200         ug/L         200         10/07/17         MH         SW8260C           1,2-Dichloropenzene         ND         200         ug/L         200         10/07/17         MH         SW8260C           1,3-Dichlorobenzene         ND         200         ug/L         200         10/07/17         MH         SW8260C           2-Hexanone         ND         200         ug/L         200         10/07/17         MH         SW8260C           4-Methyl-2-pentanone         ND         500         ug/L         200 <td< td=""><td>1,1-Dichloroethane</td><td>ND</td><td>200</td><td>ug/L</td><td>200</td><td>10/07/17</td><td>HM</td><td>SW8260C</td></td<>	1,1-Dichloroethane	ND	200	ug/L	200	10/07/17	HM	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-Dichloroptopane         ND         120         ug/L         200         10/07/17         MH         SW8260C           1,2-Dichloroptopane         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	1,1-Dichloroethene	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-Dichloroptopane         ND         120         ug/L         200         10/07/17         MH         SW8260C           1,2-Dichloroptopane         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           Benzene         ND         140         ug/L         200         10/07/17	1,2,3-Trichlorobenzene	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           Bromochloromethane         ND         200         ug/L         200         10/07/17         M	1,2,4-Trichlorobenzene	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	1,2-Dibromo-3-chloropropane	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           Bromoform         ND         200         ug/L         200         10/07/17         MH         S	1,2-Dibromoethane	ND	200	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           Bromoform         ND         200         ug/L         200         10/07/17         MH         SW8260C           Bromomethane         ND         200         ug/L         200         10/07/17         MH         SW8260C	1,2-Dichlorobenzene	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           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 <td>1,2-Dichloroethane</td> <td>ND</td> <td>120</td> <td>ug/L</td> <td>200</td> <td>10/07/17</td> <td>MH</td> <td>SW8260C</td>	1,2-Dichloroethane	ND	120	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           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           Chlorobenzene         ND         200         ug/L         200         10/07/17         MH         SW8260C	1,2-Dichloropropane	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           Bromoform         ND         200         ug/L         200         10/07/17         MH         SW8260C           Bromomethane         ND         200         ug/L         200         10/07/17         MH         SW8260C           Bromomethane         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	1,3-Dichlorobenzene	ND	200	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           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	1,4-Dichlorobenzene	ND	200	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           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	2-Hexanone	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	4-Methyl-2-pentanone	ND	500	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	Acetone	ND	500	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	Benzene	ND	140	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	Bromochloromethane	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	Bromodichloromethane	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	Bromoform	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	Bromomethane	ND	200	ug/L	200	10/07/17	MH	SW8260C
Chlorobenzene         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	МН	SW8260C
Chloroethane ND 200 ug/L 200 10/07/17 MH SW8260C	Chlorobenzene	ND	200	ug/L	200	10/07/17	МН	SW8260C
	Chloroethane	ND	200	ug/L	200	10/07/17	МН	SW8260C

Project ID: JOLYN ENTERPRISES

Client ID: EW-7 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Chloroform	ND	200	ug/L	200	10/07/17	мн	SW8260C
Chloromethane	ND	200	ug/L	200	10/07/17	МН	SW8260C
cis-1,2-Dichloroethene	16000	2000	ug/L	2000	10/07/17	МН	SW8260C
cis-1,3-Dichloropropene	ND	80	ug/L	200	10/07/17	МН	SW8260C
Cyclohexane	ND	200	ug/L	200	10/07/17	МН	SW8260C
Dibromochloromethane	ND	200	ug/L	200	10/07/17	МН	SW8260C
Dichlorodifluoromethane	ND	200	ug/L	200	10/07/17	мн	SW8260C
Ethylbenzene	ND	200	ug/L	200	10/07/17	МН	SW8260C
Isopropylbenzene	ND	200	ug/L	200	10/07/17	мн	SW8260C
m&p-Xylene	ND	200	ug/L	200	10/07/17	мн	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	мн	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	МН	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 %
<u>1,4-dioxane</u>							
1,4-dioxane	ND	20000	ug/l	200	10/07/17	MH	SW8260C
Volatile Library Search Top 10	Completed				10/09/17	мн	1

Phoenix I.D.: BZ13303

Project ID: JOLYN ENTERPRISES

Client ID: EW-7 GW

Phoenix I.D.: BZ13303

Result

Units

Dilution Date/Time Ву

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:

Parameter

Volatile Comment:

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

RL/

PQL

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Phyllis Shiller, Laboratory Director

October 11, 2017

Reviewed and Released by: Maryam Taylor, Project Manager



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



# Analysis Report

October 11, 2017

FOR:

Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information

Matrix:

**GROUND WATER** 

Location Code:

**BIOTECH** 

Rush Request:

Standard

P.O.#:

100217

Custody Information

Collected by:

Received by:

<u>Date</u>

<u>Time</u> 9:40

10/02/17 10/03/17

10:49

Analyzed by: see "By" below

LB

**Laboratory Data** 

SDG ID: GBZ13303

Phoenix ID: BZ13304

Project ID:

**JOLYN ENTERPRISES** 

Client ID:

EW-9 GW

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
V-1-61 (TOL)							
Volatiles (TCL)							
1,1,1-Trichloroethane	ND	200	ug/L	200	10/08/17	МН	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	МН	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	МН	SW8260C
Carbon Disulfide	ND	200	ug/L	200	10/08/17	МН	SW8260C
Carbon tetrachloride	ND	200	ug/L	200	10/08/17	MH	SW8260C
Chlorobenzene	ND	200	ug/L	200	10/08/17	МН	SW8260C
Chloroethane	ND	200	ug/L	200	10/08/17	МН	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Chloroform	ND	200	ug/L	200	10/08/17	МН	SW8260C
Chloromethane	ND	200	ug/L	200	10/08/17	MH	SW8260C
cis-1,2-Dichloroethene	47000	2000	ug/L	2000	10/08/17	МН	SW8260C
cis-1,3-Dichloropropene	ND	80	ug/L	200	10/08/17	МН	SW8260C
Cyclohexane	ND	200	ug/L	200	10/08/17	МН	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	МН	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	HM	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	МН	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	20000	ug/l	200	10/08/17	МН	SW8260C
Volatile Library Search Top 10	Completed				10/09/17	мн	1

Project ID: JOLYN ENTERPRISES Phoenix I.D.: BZ13304

Client ID: EW-9 GW

RL/

Parameter Result 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 (preceded 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.

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Phyllis Shiller, Laboratory Director

October 11, 2017

Reviewed and Released by: Maryam Taylor, Project Manager



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

> FOR: Attn: Mr. Bert Richnatsky Bioremidal Technologies, Inc

> > 2700 Kirila Drive Hermitage, PA 16148

**Analysis Report** 

October 11, 2017

Sample Information Matrix: **GROUND WATER** Location Code: BIOTECH Rush Request: Standard P.O.#: 100217

**Custody Information** Date Collected by: 10/02/17 Received by: LB 10/03/17 Analyzed by: see "By" below

**Laboratory Data** 

SDG ID: GBZ13303 Phoenix ID: BZ13305

Time

9:50

10:49

Project ID: JOLYN ENTERPRISES

Client ID: **EW-20 GW** 

RL/ Parameter Result 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 МН SW8260C 2 SW8260C 1,1,2-Trichloroethane ND 2.0 10/08/17 MH ug/L ND 2 10/08/17 SW8260C 1.1-Dichloroethane 2.0 ug/L MH 2 ND 10/08/17 SW8260C 1,1-Dichloroethene 2.0 MH ug/L ND 2.0 2 10/08/17 MH SW8260C 1.2.3-Trichlorobenzene ug/L ND 2 SW8260C 1,2,4-Trichlorobenzene 2.0 ug/L 10/08/17 MH 1,2-Dibromo-3-chloropropane ND 2.0 ug/L 2 10/08/17 МН SW8260C 1,2-Dibromoethane ND 2.0 ug/L 2 10/08/17 МН SW8260C ND 2 SW8260C 1,2-Dichlorobenzene 2.0 ug/L 10/08/17 МН ND 2 10/08/17 МН SW8260C 1,2-Dichloroethane 1.2 ug/L 2 10/08/17 SW8260C 1,2-Dichloropropane ND 2.0 ug/L MH ND 2.0 ug/L 2 10/08/17 MH SW8260C 1,3-Dichlorobenzene 2 1,4-Dichlorobenzene ND 2.0 ug/L 10/08/17 MH SW8260C 2-Hexanone ND 5.0 ug/L 2 10/08/17 МН SW8260C ND 2 10/08/17 MH SW8260C 4-Methyl-2-pentanone 5.0 ug/L ND 5.0 2 10/08/17 SW8260C Acetone ug/L МН 2 SW8260C ND 10/08/17 MH Benzene 1.4 ug/L 2 SW8260C Bromochloromethane ND 2.0 ug/L 10/08/17 MH 2 10/08/17 Bromodichloromethane ND 2.0 ug/L MH SW8260C Bromoform ND 2.0 ug/L 2 10/08/17 MH SW8260C ND 2.0 2 10/08/17 MH SW8260C Bromomethane ug/L 2 10/08/17 SW8260C Carbon Disulfide ND 2.0 ug/L MH ND 2 10/08/17 SW8260C 2.0 MH Carbon tetrachloride ug/L ND 2 10/08/17 MH SW8260C Chlorobenzene 2.0 ug/L 2 SW8260C ND 10/08/17 MH Chloroethane 2.0 ug/L

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Chloroform	ND	2.0	ug/L	2	10/08/17	МН	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/08/17	мн	SW8260C
cis-1,2-Dichloroethene	84	10	ug/L	10	10/08/17	МН	SW8260C
cis-1,3-Dichloropropene	ND	0.80	ug/L	2	10/08/17	мн	SW8260C
Cyclohexane	ND	2.0	ug/L	2	10/08/17	МН	SW8260C
Dibromochloromethane	ND	2.0	ug/L	2	10/08/17	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/08/17	мН	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/08/17	мн	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	МН	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	МН	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	МН	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	МН	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	200	ug/l	2	10/08/17	МН	SW8260C
Volatile Library Search Top 10	Completed				10/09/17	МН	1

Project ID: JOLYN ENTERPRISES Phoenix I.D.: BZ13305

Client ID: EW-20 GW

RL/

Parameter Result 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.

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Phyllis Shiller, Laboratory Director

October 11, 2017



# Environmental Laboratories, Inc.

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



# Analysis Report

October 11, 2017

FOR:

Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

see "By" below

Sample Information

Matrix:

**GROUND WATER** 

Location Code:

BIOTECH

Rush Request:

Standard

P.O.#:

100217

**Custody Information** 

Received by:

Analyzed by:

Collected by:

LB

<u>Date</u> 10/02/17 <u>Time</u>

10:00

10/03/17

10:49

**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	Bv	Reference
- aameter	result	-	1 O(L	Onio	Dilation	Date/Time	Dy	T COLO COLO COLO COLO COLO COLO COLO COL
Volatiles (TCL)								
1,1,1-Trichloroethane	ND		10	ug/L	10	10/08/17	МН	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	МН	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	\$	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	\$W8260C
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	МН	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

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Chloroform	ND	10	ug/L	10	10/08/17	MH	SW8260C
Chloromethane	ND	10	ug/L	10	10/08/17	МН	SW8260C
cis-1,2-Dichloroethene	190	10	ug/L	10	10/08/17	мн	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	мн	SW8260C
Dibromochloromethane	ND	10	ug/L	10	10/08/17	МН	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	10/08/17	МН	SW8260C
Ethylbenzene	19	10	ug/L	10	10/08/17	МН	SW8260C
Isopropylbenzene	ND	10	ug/L	10	10/08/17	МН	SW8260C
m&p-Xylene	11	10	ug/L	10	10/08/17	МН	SW8260C
Methyl ethyl ketone	2500	500	ug/L	200	10/08/17	МН	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	10/08/17	МН	SW8260C
Methylacetate	ND	50	ug/L	10	10/08/17	МН	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	МН	SW8260C
Styrene	ND	10	ug/L	10	10/08/17	МН	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	МН	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	1000	ug/l	10	10/08/17	МН	SW8260C
Volatile Library Search Top 10	Completed				10/09/17	МН	1

Project ID: JOLYN ENTERPRISES

Client ID: SB-8 GW

RL/ PQL

Parameter Result

Units

Dilution

Date/Time

By Reference

Phoenix I.D.: BZ13306

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 (preceded 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.

This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director

October 11, 2017





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



# **Analysis Report**

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample InformationCustody InformationDateTimeMatrix:GROUND WATERCollected by:10/02/1710:10Location Code:BIOTECHReceived by:LB10/03/1710:49

Rush Request: Standard Analyzed by: see "By" below

Laboratory Data

SDG ID: GBZ13303

Phoenix ID: BZ13307

Project ID: JOLYN ENTERPRISES

Client ID: SB-11

P.O.#:

RL/ Parameter **PQL** Units Date/Time Result Dilution By Reference Volatiles (TCL) 1,1,1-Trichloroethane ND 1.0 ug/L 1 10/05/17 MH SW8260C ND 1.0 ug/L 1 10/05/17 МН SW8260C 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane ND 1.0 ug/L 1 10/05/17 MH SW8260C ND 1.0 10/05/17 МН SW8260C 1.1-Dichloroethane ug/L 1 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 1,2,4-Trichlorobenzene ND 1.0 ug/L 1 10/05/17 МН SW8260C 1,2-Dibromo-3-chloropropane ND 1.0 ug/L 1 10/05/17 МН SW8260C SW8260C ND 1 МН 1.0 ug/L 10/05/17 1,2-Dibromoethane ND 1.0 1 10/05/17 МН SW8260C 1,2-Dichlorobenzene ug/L ND 0.60 1 MH SW8260C ug/L 10/05/17 1.2-Dichloroethane ND 1.0 1 10/05/17 MH SW8260C 1,2-Dichloropropane ug/L МН SW8260C 1,3-Dichlorobenzene ND 1.0 ug/L 1 10/05/17 1.4-Dichlorobenzene ND 1.0 ug/L 1 10/05/17 МН SW8260C 430 50 20 10/08/17 МН SW8260C 2-Hexanone ug/L ND 2.5 ug/L 1 10/05/17 MH SW8260C 4-Methyl-2-pentanone ND 50 20 10/08/17 MH SW8260C ug/L Acetone ND 0.70 1 10/05/17 MH SW8260C Benzene ug/L ug/L 10/05/17 MH SW8260C Bromochloromethane ND 1.0 1 Bromodichloromethane ND 1.0 ug/L 1 10/05/17 МН SW8260C ND 1.0 ug/L 1 10/05/17 МН SW8260C Bromoform SW8260C ND 1.0 ug/L 1 10/05/17 MH Bromomethane ND 10/05/17 МН SW8260C 1.0 ug/L 1 Carbon Disulfide SW8260C Carbon tetrachloride ND 1.0 ug/L 1 10/05/17 MH ND 1.0 1 10/05/17 MH SW8260C Chlorobenzene ug/L Chloroethane ND 1.0 ug/L 1 10/05/17 MH SW8260C

Project ID: JOLYN ENTERPRISES

Client ID: SB-11

Cheff ID. 3B-11		D. /						
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference	
Chloroform	ND	1.0	ug/L	1	10/05/17	МН	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	МН	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	МН	SW8260C	
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/05/17	МН	SW8260C	
Vinyl chloride	12	1.0	ug/L	1	10/05/17	МН	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	МН	70 - 130 %	
% Toluene-d8	104		%	1	10/05/17	MH	70 - 130 %	
<u>1,4-dioxane</u>								
1,4-dioxane	ND	100	ug/l	1	10/05/17	НМ	SW8260C	
Volatile Library Search Top 10	Completed				10/06/17	НМ		1

Project ID: JOLYN ENTERPRISES Phoenix I.D.: BZ13307

Client ID: SB-11

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 (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

#### Comments:

Parameter

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.

Result

Phyllis Shiller, Laboratory Director

October 11, 2017



# Environmental Laboratories, Inc.

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



# Analysis Report

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Informat	<u>ion</u>	Custody Informa	<u>tion</u>	<u>Date</u> <u>Tim</u>			
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

**Laboratory Data** 

SDG ID: GBZ13303

Phoenix ID: BZ13308

Project ID: JOLYN ENTERPRISES

100217

Client ID: SB-12

P.O.#:

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	D.,	Reference
Farantetei	resuit	rul.	Office	ווטווטוו	Date/Time	Ву	Reference
Volatiles (TCL)							
1,1,1-Trichloroethane	ND	50	ug/L	50	10/09/17	МН	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-Dīchloroethene	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	МН	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	МН	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	МН	SW8260C
Carbon Disulfide	ND	50	ug/L	50	10/09/17	MH	SW8260C
Carbon tetrachloride	ND	50	ug/L	50	10/09/17	МН	SW8260C
Chlorobenzene	ND	50	ug/L	50	10/09/17	MH	SW8260C
Chloroethane	ND	50	ug/L	50	10/09/17	MH	SW8260C

Parameter	Result	RL/ PQL	Units	: Dilution	Date/Time	Ву	Reference
					and the second s		
Chloroform	ND	50 50	ug/L	50	10/09/17	MH	SW8260C
Chloromethane	ND	50	ug/L	50	10/09/17	МН	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	МН	SW8260C
Dibromochloromethane	ND	50	ug/L	50	10/09/17	MH	SW8260C
Dichlorodifluoromethane	ND	50	ug/L	50	10/09/17	МН	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	МН	SW8260C
Methyl ethyl ketone	ND	130	ug/L	50	10/09/17	МН	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	МН	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	мН	70 - 130 %
% Dibromofluoromethane	95		%	50	10/09/17	мн	70 - 130 %
% Toluene-d8	102		%	50	10/09/17	мн	70 - 130 %
<u>1,4-dioxane</u>							
1,4-dioxane	ND	5000	ug/l	50	10/09/17	МН	SW8260C
Volatile Library Search Top 10	Completed				10/10/17	МН	1

Project ID: JOLYN ENTERPRISES Phoenix I.D.: BZ13308

Client ID: SB-12

RL/

Parameter Result 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



# Environmental Laboratories, Inc.

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



# **Analysis Report**

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc.

2700 Kirila Drive Hermitage, PA 16148

Sample InformationCustody InformationDateTimeMatrix:GROUND WATERCollected by:10/02/1710:30Location Code:BIOTECHReceived by:LB10/03/1710:49

Rush Request: Standard Analyzed by: see "By" below

<u>Laboratory Data</u>

SDG ID: GBZ13303

Phoenix ID: BZ13309

Project ID: JOLYN ENTERPRISES

100217

Client ID: SB-13

P.O.#:

RL/ Parameter Result **PQL** Units Dilution Date/Time Ву Reference Volatiles (TCL) 1.1.1-Trichloroethane ND 5.0 5 10/08/17 SW8260C ug/L МН 5 SW8260C ND 10/08/17 МН 1,1,2,2-Tetrachloroethane 5.0 ug/L ND 5 10/08/17 MH SW8260C 1,1,2-Trichloroethane 5.0 ug/L SW8260C ND 5 10/08/17 1,1-Dichloroethane 5.0 ug/L MH 1.1-Dichloroethene ND 5.0 ug/L 5 10/08/17 МН SW8260C 1,2,3-Trichlorobenzene ND 5.0 ug/L 5 10/08/17 МН SW8260C ND 5.0 ug/L 5 10/08/17 МН SW8260C 1,2,4-Trichlorobenzene ND 5.0 5 10/08/17 МН SW8260C 1,2-Dibromo-3-chloropropane ug/L ND 5 10/08/17 SW8260C 1,2-Dibromoethane 5.0 ug/L MH 5 SW8260C ND 5.0 ug/L 10/08/17 МН 1,2-Dichlorobenzene 5 SW8260C ND 10/08/17 1,2-Dichloroethane 3.0 ug/L MH ND 5 10/08/17 SW8260C 1,2-Dichloropropane 5.0 ug/L MH 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 МН SW8260C ND 5 10/08/17 МН SW8260C 13 ug/L 2-Hexanone ND 13 5 10/08/17 МН SW8260C 4-Methyl-2-pentanone ug/L 5 SW8260C 67 10/08/17 Ş 13 ug/L MH Acetone 5 10/08/17 SW8260C Benzene ND 3.5 ug/L MH 5 Bromochloromethane ND 5.0 ug/L 10/08/17 MH SW8260C Bromodichloromethane ND 5.0 ug/L 5 10/08/17 МН SW8260C ND 5 10/08/17 МН SW8260C 5.0 ug/L Bromoform ND 5.0 5 10/08/17 МН SW8260C Bromomethane ug/L 5 ND 10/08/17 МН SW8260C 5.0 ug/L Carbon Disulfide ΝĎ 5.0 5 10/08/17 MH SW8260C Carbon tetrachloride ug/L 5 SW8260C Chlorobenzene ND 5.0 ug/L 10/08/17 MH Chloroethane ND 5.0 ug/L 5 10/08/17 MH SW8260C

Ver 1

Project ID: JOLYN ENTERPRISES

Client ID: SB-13

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Chloroform	ND	5.0	ug/L	5	10/08/17	МН	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/08/17	МН	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	МН	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	МН	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	МН	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	МН	1

Project ID: JOLYN ENTERPRISES

Client ID: SB-13

RL/

Parameter Result 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 (preceded 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.

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Phyllis Shiller, Laboratory Director

October 11, 2017

Reviewed and Released by: Maryam Taylor, Project Manager

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



# Environmental Laboratories, Inc.

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



Time

10:40

10:49

# **Analysis Report**

October 11, 2017

FOR:

Attn: Mr. Bert Richnatsky Bioremidal Technologies, Inc.

2700 Kirila Drive Hermitage, PA 16148

Sample Information Matrix:

**GROUND WATER** 

Location Code:

**BIOTECH** 

Rush Request:

Standard

P.O.#:

100217

\_aboratory Data

**Custody Information** 

LB

see "By" below

Collected by:

Received by:

Analyzed by:

SDG ID: GBZ13303

Phoenix ID: BZ13310

Date

10/02/17

10/03/17

Project ID: JOLYN ENTERPRISES SB-14

Client ID:

RL/ Parameter Result PQL Units Dilution Date/Time Ву Reference Volatiles (TCL) 1,1,1-Trichloroethane ND 20 20 10/05/17 МН SW8260C ug/L 1.1.2.2-Tetrachloroethane ND 20 20 10/05/17 МН SW8260C ug/L 10/05/17 1,1,2-Trichloroethane ND 20 ug/L 20 MH SW8260C 1.1-Dichloroethane ND 20 ug/L 20 10/05/17 MH SW8260C 28 20 20 10/05/17 MH SW8260C 1,1-Dichloroethene ug/L 1,2,3-Trichlorobenzene ND 20 ug/L 20 10/05/17 MH SW8260C ND 20 20 10/05/17 MH SW8260C 1,2,4-Trichlorobenzene ug/L ND 1,2-Dibromo-3-chloropropane 20 ug/L 20 10/05/17 МН SW8260C ND 20 20 10/05/17 МН SW8260C 1,2-Dibromoethane ug/L 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 ND 20 10/05/17 SW8260C 1,2-Dichloropropane ug/L 20 MH ND 10/05/17 SW8260C 1,3-Dichlorobenzene 20 ug/L 20 MH 20 МН ND 20 SW8260C 10/05/17 1,4-Dichlorobenzene ug/L ND 50 20 10/05/17 MH SW8260C 2-Hexanone ug/L ND SW8260C 50 20 10/05/17 MH 4-Methyl-2-pentanone ug/L Acetone 130 S 50 ug/L 20 10/05/17 MH SW8260C NΩ 20 10/05/17 MH SW8260C Benzene 14 ug/L ND 20 10/05/17 SW8260C Bromochloromethane 20 ug/L MH ND 10/05/17 SW8260C Bromodichloromethane 20 20 MH ug/L ND 20 20 10/05/17 МН SW8260C Bromoform ug/L ND 20 20 10/05/17 MH SW8260C Bromomethane ug/L Carbon Disulfide ND 20 ug/L 20 10/05/17 MH SW8260C Carbon tetrachloride ND 20 20 10/05/17 MH SW8260C ug/L ND 20 20 10/05/17 MH SW8260C Chlorobenzene ug/L 10/05/17 SW8260C ND 20 20 MH Chloroethane ug/L

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Chloroform	ND	20	ug/L	20	10/05/17	мн	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	МН	70 - 130 %
1,4-dioxane							
1,4-dioxane	ND	2000	ug/l	20	10/05/17	НМ	SW8260C
Volatile Library Search Top 10	Completed				10/06/17	НМ	1

Project ID: JOLYN ENTERPRISES Phoenix I.D.: BZ13310

Client ID: SB-14

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 (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

#### Comments:

Parameter

Volatile Comment:

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

S - Laboratory solvent, contamination is possible.

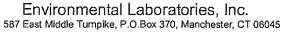
If there are any questions regarding this data, please call Phoenix Client Services. This report must not be reproduced except in full as defined by the attached chain of custody.

Result

Phyllis Shiller, Laboratory Director

October 11, 2017





Tel. (860) 645-1102 Fax (860) 645-0823



**Analysis Report** 

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information Custody Information <u>Time</u> <u>Date</u> Matrix: **GROUND WATER** Collected by: 10/02/17 10:50 Location Code: Received by: **BIOTECH** LB 10/03/17 10:49

Rush Request: Standard Analyzed by: see "By" below

> **Laboratory Data** SDG ID: GBZ13303

Phoenix ID: BZ13311

Project ID: **JOLYN ENTERPRISES** 

100217

Client ID: SB-22

P.O.#:

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
<u>Volatiles (TCL)</u>							
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	МН	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	HM	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	МН	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
			•				

_		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	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	МН	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	МН	1

Project ID: JOLYN ENTERPRISES

Client ID: SB-22

RL/

Phoenix I.D.: BZ13311

Parameter Result 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 (preceded 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.

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Phyllis Shiller, Laboratory Director

October 11, 2017



# Environmental Laboratories, Inc.

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



# Analysis Report

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Informat	<u>tion</u>	Custody Inform	ation	<u>Date</u>	<u>Time</u>
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

Laboratory Data

SDG ID: GBZ13303
Phoenix ID: BZ13312

Project ID: JOLYN ENTERPRISES

100217

Client ID: SB-28

P.O.#:

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Volatiles (TCL)							
1,1,1-Trichloroethane	ND	200	ug/L	200	10/08/17	МН	SW8260C
1,1,2,2-Tetrachloroethane	ND	200	ug/L	200	10/08/17	МН	SW8260C
1,1,2-Trichloroethane	ND	200	ug/L	200	10/08/17	МН	SW8260C
1,1-Dichloroethane	ND	200	ug/L	200	10/08/17	мн	SW8260C
1,1-Dichloroethene	240	200	ug/L	200	10/08/17	МН	SW8260C
1,2,3-Trichlorobenzene	ND	200	ug/L	200	10/08/17	МН	SW8260C
1,2,4-Trichlorobenzene	ND	200	ug/L	200	10/08/17	МН	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	МН	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/ <b>1</b> 7	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

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Chloroform	ND	200	ug/L	200	10/08/17	мн	SW8260C
Chloromethane	ND	200	ug/L	200	10/08/17	мн	SW8260C
cis-1,2-Dichloroethene	120000	E 2000	ug/L	2000	10/08/17	МН	SW8260C
cis-1,3-Dichloropropene	ND	80	ug/L	200	10/08/17	мн	SW8260C
Cyclohexane	ND	200	ug/L	200	10/08/17	МН	SW8260C
Dibromochloromethane	ND	200	ug/L	200	10/08/17	МН	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	МН	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	МН	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	МН	SW8260C
Methylcyclohexane	ND	200	ug/L	200	10/08/17	МН	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	МН	70 - 130 %
<u>1,4-dioxane</u>							
1,4-dioxane	ND	20000	ug/l	200	10/08/17	MH	SW8260C
Volatile Library Search Top 10	Completed				10/09/17	МН	1

Project ID: JOLYN ENTERPRISES Phoenix I.D.: BZ13312

Client ID: SB-28

RL/

Parameter Result 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 (preceded 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.

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Phyllis Shiller, Laboratory Director

October 11, 2017



# Environmental Laboratories, Inc.

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



# **Analysis Report**

October 11, 2017

FOR: Attn: Mr. Bert Richnatsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information	<u>tion</u>	Custody Informa	ation	<u>Date</u>	<u>Time</u>
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

Laboratory Data SDG ID: GBZ13303
Phoenix ID: BZ13313

Project ID: JOLYN ENTERPRISES

100217

Client ID: SB-14D

P.O.#:

RL/ Parameter Result **PQL** Units Dilution Date/Time Reference Вy Volatiles (TCL) ND 20 ug/L 20 10/08/17 МН SW8260C 1,1,1-Trichloroethane 1.1.2.2-Tetrachloroethane ND 20 ug/L 20 10/08/17 MH SW8260C ND 20 20 10/08/17 МН SW8260C 1,1,2-Trichloroethane ug/L 1.1-Dichloroethane ND 20 ug/L 20 10/08/17 MH SW8260C 30 20 ug/L 20 10/08/17 MH SW8260C 1,1-Dichloroethene ND 20 10/08/17 SW8260C 1,2,3-Trichlorobenzene 20 ug/L MH SW8260C ND 20 ug/L 20 10/08/17 МН 1,2,4-Trichlorobenzene SW8260C ND 20 20 10/08/17 MH 1,2-Dibromo-3-chloropropane ug/L 20 10/08/17 SW8260C ND 20 ug/L MH 1,2-Dibromoethane ND 10/08/17 SW8260C 1,2-Dichlorobenzene 20 ug/L 20 MH 1,2-Dichloroethane ND 12 ug/L 20 10/08/17 MH SW8260C ND 20 20 10/08/17 MH SW8260C 1,2-Dichloropropane ug/L ND 20 20 10/08/17 МН SW8260C 1,3-Dichlorobenzene ug/L 20 SW8260C ND 20 10/08/17 МН 1,4-Dichlorobenzene ug/L ND 50 20 10/08/17 МН SW8260C 2-Hexanone ug/L ND 20 10/08/17 МН SW8260C 50 4-Methyl-2-pentanone ug/L Acetone 60 S 50 ug/L 20 10/08/17 MH SW8260C ND 14 ug/L 20 10/08/17 MH SW8260C Benzene ND 20 20 10/08/17 MH SW8260C Bromochloromethane ug/L ND 20 10/08/17 МН SW8260C 20 ug/L Bromodichloromethane SW8260C ND 20 ug/L 20 10/08/17 MH Bromoform ND 20 20 10/08/17 MH SW8260C ug/L Bromomethane Carbon Disulfide ND 20 ug/L 20 10/08/17 MH SW8260C SW8260C Carbon tetrachloride ND 20 ug/L 20 10/08/17 MH Chlorobenzene ND 20 ug/L 20 10/08/17 MH SW8260C ND 20 20 10/08/17 ΜН SW8260C Chloroethane ug/L

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference	
Chloroform	ND	20	ug/L	20	10/08/17	мн	SW8260C	-
Chloromethane	ND	20	ug/L	20	10/08/17	МН	SW8260C	
cis-1,2-Dichloroethene	3400	200	ug/L	200	10/08/17	МН	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	МН	SW8260C	
Dibromochloromethane	ND	20	ug/L	20	10/08/17	МН	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	МН	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	МН	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	мн	1	1

Project ID: JOLYN ENTERPRISES Phoenix I.D.: BZ13313

Client ID: SB-14D

RL/

Parameter Result 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 (preceded 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

CLIENT ID

EW-7 GW

Lab Name: Phoenix Er	vironmental l	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)	<u>mL</u>	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	cc	OMPOUND NA	ME	RT	EST. CONC.	Q
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CLIENT ID
EW-9 GW

Lab Name: Phoenix Er	vironmental l	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)	<u>mL</u>	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	co	OMPOUND NA	ME	RT	EST. CONC.	Q
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CLIENT ID EW-20 GW

Lab Name: Phoenix Er	vironmental Labs	_ Client:	BIOTECH		
Lab Code: Phoenix	Case No.:	_ SAS No.:		SDG No.:	GBZ1330
Matrix:(soil/water)	WATER		Lab Sample ID:	BZ13305	
Sample wt/vol:	25(g/mL)	<u>mL</u>	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-vmsID:	<u>0.18 (mm)</u>	Dilution Factor:	_	2
Purge Volume	(uL)		Soil Aliquot Vol (uL	.):	n.a.
Number TICs found:	0	CONCENTRATION UNITS: (ug/L or ug/KG)	ug/L		
CAS NUMBER	COMPOUND NA	ME	RT	EST. CONC.	Q
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CLIENT ID	
SB-8 GW	•

Lab Name: Phoenix E	nvironmental Labs	Client	: BIOTECH	_	
Lab Code: Phoenix	Case No.:	SAS No.	•	SDG No.:	GBZ1330
Matrix:(soil/water)	WATER		Lab Sample ID:	BZ13306	
Sample wt/vol:	25(g/mL)	<u>mL</u>	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	(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
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BZ13307 BLK

Lab Name: Phoenix En	vironmental 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)	<u>mL</u>	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	(uL)		Soil Aliquot Vol (ul	_):	n.a.
Number TICs found:	0	CONCENTRATION UNITS: (ug/L or ug/KG)	ug/L	•	
CAS NUMBER	COMPOUND NA	ME	RT	EST. CONC.	Q
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SB-11	

Lab Name: Phoenix I	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)	<u>mL</u>	Lab File ID:	1005P33.D	
Level: (low/med)			Date Received:	10/03/17	
% Moisture: not dec.	100		Date Analyzed:	10/05/17	
GC Column:	<u>rtx-vms</u> ID:	0.18 (mm)	Dilution Factor:	-	1
Purge Volume	(uL)		Soil Aliquot Vol (ul	-):	n.a.
Number TICs found:	10	CONCENTRATION UNITS: (ug/L or ug/KG)	ug/L	-	
CAS NUMBER	COMPOUND NA	ME	RT	EST. CONC.	Q
000109-66-0	Pentane		1.717	15	JN
000107-87-9	2-Pentanone		4.703	64	JN
000101-01-0	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	· · · · · · · · · · · · · · · · · · ·	JN
				29	
000124-13-0	Octanal		7.925		JN
200404404	unknown		8.532	5.5	J
000124-19-6	Nonanal		8.558	13	JN
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CLIENT II	)
SB-12	

Lab Name: Phoenix Er	nvironmental 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)	<u>mL</u>	Lab File ID:	1009P08.D	
Level: (low/med)			Date Received:	10/03/17	
% Moisture: not dec.	100		Date Analyzed:	10/09/17	
GC Column:	<u>rtx-vms</u> ID:	0.18 (mm)	Dilution Factor:	_	50
Purge Volume	(uL)		Soil Aliquot Vol (uL	.):	n.a.
Number TICs found:	1	CONCENTRATION UNITS: (ug/L or ug/KG)	ug/L		
CAS NUMBER	COMPOUND NA	ME	RT	EST. CONC.	Q
000075-18-3	Dimethyl sulfide		2.140	220	JN
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CLIENT ID	
SB-13	

Lab Name: Phoenix E	nvironmental Labs		Client	: BIOTECH	_	J
Lab Code: Phoenix	Case No.:		SAS No.:		SDG No.:	GBZ13303
Matrix:(soil/water)	WATER			Lab Sample ID:	BZ13309	
Sample wt/vol:	25(g/m	L) <u>mL</u>		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-vmsID	0.18 (mm)		Dilution Factor:	_	5
Purge Volume	(uL)			Soil Aliquot Vol (uL	_):	n.a.
Number TICs found:	3		ATION UNITS: or ug/KG)	ug/L		
CAS NUMBER	COMPOUN	D 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
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CLIENT ID	
SB-14	

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Lab Name: Phoenix E	nvironmental 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)	<u>mL</u>	Lab File ID:	1005P36.D	
Level: (low/med)	MANAGEMENT AND		Date Received:	10/03/17	
% Moisture: not dec.	100		Date Analyzed:	10/05/17	
GC Column:	rtx-vms ID:	<u>0.18 (mm)</u>	Dilution Factor:	_	20
Purge Volume	(uL)		Soil Aliquot Vol (uL	_):	n.a.
Number TICs found:	2	CONCENTRATION UNITS: (ug/L or ug/KG)	ug/L	-	
CAS NUMBER	COMPOUND NA	ME	RT	EST. CONC.	Q
007446-09-5	Sulfur dioxide		1.335	39	JN
000074-93-1	Methanethiol		1.518	170	JN
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CLIENT ID	
SB-22	
SB-22	

Lab Name: Phoenix Er	nvironmental La	abs	Client	: BIOTECH	<u></u>	
Lab Code: Phoenix	_ Case No.:_		SAS No.:	:	SDG No.:	GBZ13303
Matrix:(soil/water)	WATER			Lab Sample ID:	BZ13311	
Sample wt/vol:	25	(g/mL)	<u>mL</u>	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	<del>.</del>	
CAS NUMBER	COI	MPOUND NA	ME	RT	EST. CONC.	Q
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CLIENT ID	
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Lab Name: Phoenix Er	vironmental l	Labs	Client	: BIOTECH	<del></del>	
Lab Code: Phoenix	Case No.:		SAS No.		SDG No.:	GBZ1330
Matrix:(soil/water)	WATER			Lab Sample ID:	BZ13312	
Sample wt/vol:	25	(g/mL)	<u>mL</u>	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	cc	OMPOUND NA	ME	RT	EST. CONC.	Q
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 CLIENT ID	
SB-14D	

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Lab Name: Phoenix E	nvironmental 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)	<u>mL</u>	Lab File ID:	1008P28.D	
Level: (low/med)	Management of the second second second		Date Received:	10/03/17	
% Moisture: not dec.	100		Date Analyzed:	10/08/17	
GC Column:	<u>rtx-vms</u> ID:	<u>0.18 (mm)</u>	Dilution Factor:	•	20
Purge Volume	(uL)		Soil Aliquot Vol (uL	.):	n.a.
Number TICs found:	2	CONCENTRATION UNITS: (ug/L or ug/KG)	ug/L	-	
CAS NUMBER	COMPOUND NA	ME	RT	EST. CONC.	Q
000075-18-3	Dimethyl sulfide	<u> </u>	2.140	30	JN
000624-92-0	Disulfide, dimethyl		4.933	22	JN
500021020	Disance, anneny		7.000		
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Environmental Laboratories, Inc. 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045 Tel. (860) 645-1102 Fax (860) 645-0823



## 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-Díchloroethane	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	1
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	8.0				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	

SDG I.D.: GBZ13303

Blk LCSD LCS MSD MS Rec **RPD** LCS MS Blank RL RPD Parameter % % RPD % % Limits Limits Methylcyclohexane ND 1.0 90 90 70 - 130 0.0 30 Methylene chloride ND 1.0 105 103 1.9 70 - 130 30 o-Xylene ND 1.0 110 109 70 - 130 30 0.9 Styrene ND 1.0 111 110 0.9 70 - 130 30 Tetrachloroethene ND 1.0 109 109 0.0 70 - 13030 Toluene ND 104 106 70 - 130 1.0 1.9 30 trans-1,2-Dichloroethene ND 1.0 108 108 0.0 70 - 130 30 trans-1,3-Dichloropropene ND 0.40 114 112 70 - 130 1.8 30 Trichloroethene ND 1.0 109 109 0.0 70 - 130 30 Trichlorofluoromethane ND 1.0 88 88 0.0 70 - 13030 Trichlorotrifluoroethane ND 90 1.0 90 0.0 70 - 13030 Vinyl chloride ND 1.0 102 101 1.0 70 - 130 30 % 1,2-dichlorobenzene-d4 100 % 101 101 0.0 70 - 130 30 102 % Bromofluorobenzene % 101 101 0.0 70 - 130 30 % Dibromofluoromethane 96 % 103 101 70 - 130 2.0 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 88 89 1.1 70 - 130 1.0 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 ND 86 94 8.9 70 - 130 1,2-Dibromo-3-chloropropane 1.0 30 70 - 130 1,2-Dibromoethane ND 1.0 90 94 4.3 30 1,2-Dichlorobenzene ND 1.0 84 87 3.5 70 - 130 30 1,2-Dichloroethane ND 86 88 2.3 70 - 130 1.0 30 1,2-Dichloropropane ND 1.0 88 89 1.1 70 - 130 30 ND 89 70 - 130 1,3-Dichlorobenzene 1.0 88 1.1 30 1,4-Dichlorobenzene 70 - 130 ND 85 87 2.3 30 1.0 70 - 130 1,4-dioxane ND 100 81 81 0.0 30 2-Hexanone ND 5.0 85 92 7.9 70 - 130 30 70 - 130 4-Methyl-2-pentanone ND 5.0 84 88 4.7 30 ND 93 70 - 130 86 7.8 30 Acetone 5.0 70 - 130 ND 86 88 2.3 Benzene 0.70 30 Bromochloromethane ND 1.0 88 91 3.4 70 - 130 30 70 - 130 Bromodichloromethane ND 0.50 87 89 2.3 30 88 94 6.6 70 - 130 30 Bromoform ND 1.0 90 Bromomethane ND 1.0 87 3.4 70 - 13030 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 70 - 130 Chloroethane ND 1.0 90 89 11 30 91 2.2 70 - 130 Chloroform ND 1.0 89 30 ND 79 77 2.6 70 - 130 30 Chloromethane 1.0 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

SDG I.D.: GBZ13303

Blk LCS MSD MS RPD LCS LCSD MS Rec Blank RL % % RPD % % RPD Limits Limits Parameter ND Cyclohexane 5.0 93 93 0.0 70 - 130 30 ND Dibromochloromethane 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 ND Isopropylbenzene 88 70 - 130 1.0 89 1.1 30 m&p-Xylene ND 91 2.2 1.0 93 70 - 130 30 Methyl ethyl ketone ND 5.0 89 94 5.5 70 - 130 30 Methyl t-butyl ether (MTBE) ND 91 1.0 95 4.3 70 - 130 30 Methylacetate ND 2.5 85 91 6.8 70 - 130 30 Methylcyclohexane ND 85 70 - 130 1.0 85 0.0 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 ND Toluene 1.0 85 87 2.3 70 - 130 30 ND trans-1,2-Dichloroethene 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 86 87 1.0 1.2 70 - 13030 Trichlorofluoromethane ND 1.0 87 85 2.3 70 - 130 30 Trichlorotrifluoroethane ND 91 90 10 1 1 70 - 13030 ND Vinyl chloride 1.0 79 81 2.5 70 - 13030 % 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

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) )

Comment:

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

Parameter	Blank	Bik 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%.

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

SDG I.D.: GBZ13303

I = This parameter is outside laboratory LCS/LCSD specified recovery limits.  $m \approx This$  parameter is outside laboratory MS/MSD specified recovery limits.

Wednesday, October 11, 2017

### Sample Criteria Exceedances Report

GBZ13303 - BIOTECH

Criteria: None State: NY

SampNo Acode Phoenix Analyte

Criteria

Result

Criteria

RL.

RL Ana Criteria Ur

Analysis Units

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.

<sup>\*\*\*</sup> No Data to Display \*\*\*



### Environmental Laboratories, Inc.

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### **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



### Environmental Laboratories, Inc.

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SDG I.D.: GBZ13303

### **Analysis Comments**

October 11, 2017

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%.



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## **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)

		Coolant:	IPK ICE No
NY/NJ CHAIN OF CUST	ODY RECORD		O°C Pg of
87 Fact Middle Turnsike D A Row 276	Manchester CT 06040		987-90.30
• .	•	Phone: 731/-	242-1790
Client Services (860)	645-8726		Atskveces-envice
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Report to: Ber	t Richnatsky		section MUST be
Invoice to: ひょい	Mozzocio	co	mpleted with
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	razaund: N1		Data Format
10/2/17 2121	1 Day* Res Criteria		Phoenix Std Report
1.9277 0700	2 Days* Non-Res. Criter	_ 1	Excel
100 T	5 Days   Impact to GW St	oil Use Soil	☐ GIS/Key
#NOOLT		NY375 Residential	☐ EQuIS
10/3/17/1049	10 Days Cleanup Criteria Other GW Criteria	Soil	
110/3/17/1049 = 10/3/17/1049 = 10/3/17/1049	Other GW Criteria	Soil  Restricted/Residential	NJ Hazsite EDD NY EZ EDD (ASP)
110/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/17/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/1049 = 10/3/	Other GW Criteria	Soil  Restricted/Residential  Commercial	NJ Hazsite EDD
110/3/17/1049 E ine; 2-Butanox; 1,2-Dichloroethene; to Chloroethane;	Other GW Criteria	Soil  Restricted/Residential	☐ NJ Hazsite EDD ☐ NY EZ EDD (ASP)
ine; 2 Butanox; 1,2-Dichloroethene; Trachloroethane; Thene; Viny/Chloride	Other GW Criteria  GURCHARGE APPLIES  Gatate where samples were collect	Soil  Restricted/Residential  Commercial  Industrial	NJ Hazsite EDD NY EZ EDD (ASP) Other
	Analysis Request  Time ampled  Analysis Request  Analysis Request	Client Services (860) 645-8726  Project:	NY/NJ CHAIN OF CUSTODY RECORD  Temp  To East Middle Tumpike, P.O. Box 370, Manchester, CT 06040  Email: info@phoenixlabs.com

Page 56 of 56



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

**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



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



## **Analysis Report**

December 15, 2017

FOR: Attn: Mr. Bert Richnafsky

Bioremidal Technologies, Inc.

2700 Kirila Drive Hermitage, PA 16148

Sample Informa	<u>tion</u>	Custody Inform	<u>ation</u>	<u>Date</u>	<u>Time</u>
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)

EW-7 GW Client ID:

		RL/						
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	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	МН	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	МН	SW8260C	
Methylcyclohexane	ND	2.0	ug/L	2	12/12/17	МН	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	МН	SW8260C	
Volatile Library Search Top 10	Completed				12/12/17	МН		1

Project ID: JO-LYN (FMR STANDARD PORTABLE)

Client ID: EW-7 GW

**RL**/

Result PQL

Units

Dilution

Date/Time

By Reference

Phoenix I.D.: BZ52831

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 (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

#### Comments:

Parameter

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





### Environmental Laboratories, Inc.

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

## **Analysis Report**

December 15, 2017

FOR: Attn: Mr. Bert Richnafsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information **Custody Information** <u>Time</u> <u>Date</u> 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	Du	Deference
raiametei	Result	ruc.	Office	Dilution	Date/Time	Ву	Reference
Volatiles (TCL)							
1,1-Dichloroethane	ND	1.0	ug/L	1	12/12/17	МН	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	МН	SW8260C
Volatile Library Search Top 10	Completed				12/12/17	МН	1

Project ID: JO-LYN (FMR STANDARD PORTABLE) Phoenix I.D.: BZ52832

Client ID: EW-20 GW

RL/

Parameter Result 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 (preceded 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





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



## Analysis Report

December 15, 2017

FOR: Attn: Mr. Bert Richnafsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Informa	<u>ition</u>	Custody Inforn	<u>nation</u>	<u>Date</u>	<u>Time</u>
Matrix:	GROUND WATER	Collected by:	AR	12/05/17	10:40
Location Code:	BIOTECH	Received by:	LB	12/07/17	11:17
Duch Degreests	Ctandard	Amolumed bus	no ma alam		

Rush Request: Standard Analyzed by: see "By" below

Laboratory Data SDG ID: GBZ52831 Phoenix ID: BZ52833

Project ID: JO-LYN (FMR STANDARD PORTABLE)

120517

Client ID: SB-12 GW

P.O.#:

	<b>.</b>	RL/		PPG 13	pa ( mm*	_	,	
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference	
Volatiles (TCL)								
1,1-Dichloroethane	ND	20	ug/L	20	12/09/17	МН	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/i	20	12/09/17	МН	SW8260C	
Volatile Library Search Top 10	Completed				12/11/17	МН		1

Ver 1

Project ID: JO-LYN (FMR STANDARD PORTABLE)

Client ID: SB-12 GW

RL/

Parameter Result 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 (preceded 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.

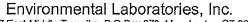
Phyllis Shiller, Laboratory Director

December 15, 2017

Reviewed and Released by: Ethan Lee, Project Manager

Phoenix I.D.: BZ52833





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



## **Analysis Report**

December 15, 2017

FOR: Attn: Mr. Bert Richnafsky

Bioremidal Technologies, Inc.

2700 Kirila Drive Hermitage, PA 16148

Sample Information		Custody Inform	<u>iation</u>	<u>Date</u>	<u>Time</u>
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.#:

SDG ID: GBZ52831 **Laboratory Data** Phoenix ID: BZ52834

Project ID: JO-LYN (FMR STANDARD PORTABLE)

120517

**SB-14 GW** Client ID:

		RL/						
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference	
Volatiles (TCL)								
1,1-Dichloroethane	ND	1.0	ug/L	1	12/12/17	МН	SW8260C	
2-Hexanone	ND	2.5	ug/L	1	12/12/17	МН	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	МН	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	МН	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	100	ug/l	1	12/12/17	МН	SW8260C	
Volatile Library Search Top 10	Completed				12/12/17	мн		1

Project ID: JO-LYN (FMR STANDARD PORTABLE) Phoenix I.D.: BZ52834

Client ID: SB-14 GW

RL/

Parameter Result 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 (preceded 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

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





### Environmental Laboratories, Inc.

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

## Analysis Report

December 15, 2017

FOR: Attn: Mr. Bert Richnafsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Informa	<u>ation</u>	Custody Inforn	<u>nation</u>	<u>Date</u>	<u>Time</u>
Matrix:	GROUND WATER	Collected by:	AR	12/05/17	11:10
Location Code:	BIOTECH	Received by:	LB	12/07/17	11:17
Duch Desugati	Otamaland	A	NE 97. 1		

Rush Request: Standard Analyzed by: see "By" below

P.O.#: 120517 SDG ID: GBZ52831 Phoenix ID: BZ52835

Project ID: JO-LYN (FMR STANDARD PORTABLE)

Client ID: SB-22 GW

		RL/				_		
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	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	мн		1

Ver 1

Project ID: JO-LYN (FMR STANDARD PORTABLE)

Phoenix I.D.: BZ52835

Client ID: SB-22 GW

RL/

Parameter Result 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 (preceded 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





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



## **Analysis Report**

December 15, 2017

FOR: Attn: Mr. Bert Richnafsky

Bioremidal Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information		Custody Inforn	<u>nation</u>	<u>Date</u>	<u>Time</u>
Matrix:	<b>GROUND WATER</b>	Collected by:	AR	12/05/17	11:25
Location Code:	BIOTECH	Received by:	LB	12/07/17	11:17
December December 1	0: 1 1				

Analyzed by: Rush Request: Standard see "By" below P.O.#:

Laboratory Data

SDG ID: GBZ52831 Phoenix ID: BZ52836

Project ID: JO-LYN (FMR STANDARD PORTABLE)

120517

Client ID: SB-28 GW

		RL/						
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference	
\/_l_4:  (TO! \								
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	МН	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	102		%	100	12/12/17	МН	70 - 130 %	
% Bromofluorobenzene	100		%	100	12/12/17	МН	70 - 130 %	
% Dibromofluoromethane	108		%	100	12/12/17	MH	70 - 130 %	
% Toluene-d8	118		%	100	12/12/17	МН	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	10000	ug/l	100	12/12/17	мн	SW8260C	
•			v					
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

RL/
Result 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 (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### Comments:

Parameter

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

CLIENT ID EW-7 GW

Lab Name: Phoenix Er	vironmental L	abs	_ Client:	BIOTECH	-	
Lab Code: Phoenix	Case No.:		SAS No.:		SDG No.:	GBZ5283
Matrix:(soil/water)	WATER			Lab Sample ID:	BZ52831	
Sample wt/vol:	25	(g/mL)	<u>mL</u>	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	CC	MPOUND NA	ME	RT	EST. CONC.	Ŋ
000075-18-3	Dimethyl sulfid	e		2.140	4.2	JN
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CLIENT ID	
EW-20 GW	

Lab Name: Phoenix Er	ıvironmental L	.abs	_ Client:	BIOTECH	-	
Lab Code: Phoenix	Case No.:		SAS No.:		SDG No.:	GBZ5283
Matrix:(soil/water)	WATER			Lab Sample ID:	BZ52832	
Sample wt/vol:	25	(g/mL)	<u>mL</u>	Lab File ID:	1211P48.D	
Level: (low/med)	•			Date Received:	12/07/17	
% Moisture; поt dec.	100			Date Analyzed:	12/12/17	
GC Column:	rtx-vms	ID:	<u>0.18 (mm)</u>	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	co	MPOUND NA	ME	RT	EST. CONC.	Q
			N			
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		W44-14	A A A A A A A A A A A A A A A A A A A			
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CLIENT ID SB-12 GW

Lab Name: Phoenix Er	nvironmental Labs	Client:	BIOTECH		
Lab Code: Phoenix	Case No.:	SAS No.:		SDG No.:	GBZ52831
				•	<u>Jozoffoo</u> ,
Matrix:(soil/water)	WATER		Lab Sample ID:	BZ52833	
Sample wt/vol:	25 (g/mL)	<u>mL</u>	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	(uL)		Soil Aliquot Vol (uL	.):	n.a.
Number TICs found:	2	CONCENTRATION UNITS: (ug/L or ug/KG)	ug/L		
CAS NUMBER	COMPOUND NA	ME	RT	EST. CONC.	Q
000074-93-1	Methanethiol		1.518	32	JN
000075-18-3	Dimethyl sulfide		2.140	97	JN
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CLIENT ID SB-14 GW

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Lab Name:	Phoenix Er	nvironmental L	.abs	Clie	ent: BIOTECH		
Lab Code:	Phoenix	Case No.:		_ SAS N	lo.:	SDG No.:	GBZ52831
Matrix:(soil/	water)	WATER			Lab Sample ID:	BZ52834	
Sample wt/v	ol:	25	(g/mL)	<u>mL</u>	Lab File ID:	1211P52.D	
Level: (low/r	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 Volun	ne	25000	(uL)		Soil Aliquot Vol (ul	L):	n.a.
Number TIC	s found:	0		CONCENTRATION UNIT (ug/L or ug/KG)	S: ug/L	-	
CAS NI	JMBER	cc	MPOUND NA	AME	RT	EST. CONC.	Q
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 CLIENT ID	
SB-22 GW	

Ţ	ENTATIVELY IDE	NTIFIED	COMPOUNDS		SB-22 0	ew
Lab Name: Phoenix En	vironmental Labs		Client:	BIOTECH	<u> </u>	
Lab Code: Phoenix	Case No.:		SAS No.:		SDG No.:	GBZ52831
Matrix:(soil/water)	WATER			Lab Sample ID:	BZ52835	
Sample wt/vol:	25(	g/mL)	<u>mL</u>	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	COMPO	OUND NA	ME	RT	EST. CONC.	Q
			***************************************			
					<u> </u>	

 CLIENT ID
SB-28 GW

Lab Name:	Phoenix Er	nvironmental L	Labs	_ Clier	nt: BIOTECH	_	)
Lab Code:	Phoenix	_ Case No.:		_ SAS No	).;	SDG No.:	GBZ52831
Matrix:(soil/	water)	WATER			Lab Sample ID:	BZ52836	
Sample wt/v	rol:	25	(g/mL)	<u>mL</u>	Lab File ID:	1211P56.D	
Level: (low/r	med)				Date Received:	12/07/17	
% Moisture:	not dec.	100			Date Analyzed:	12/12/17	
GC Column:	:	rtx-vms	ID:	<u>0.18 (mm)</u>	Dilution Factor:		100
Purge Volun	ne	25000	(uL)		Soil Aliquot Vol (ul	_):	n.a.
Number TIC	s found:	0		CONCENTRATION UNITS (ug/L or ug/KG)	: _ug/L	-	
CAS NU	JMBER	cc	OMPOUND NA	ME	RT	EST. CONC.	Q
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	***************************************		· · · · · · · · · · · · · · · · · · ·				
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### Environmental Laboratories, Inc.

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



SDG I.D.: GBZ52831

## QA/QC Report

Parameter

December 15, 2017

### QA/QC Data

						%	%	
LCS	LCSD	LCS	MS	MSD	MS	Rec	RPD	
%	%	RPD	%	%	RPD	Limits	Limits	

QA/QC Batch 412771 (ug/L) (4000X), BZ52836 (100X, 1		le No: BZ510	38 (BZ52831 (2X) , BZ528	332, BZ5	52833 (400X)	, BZ52834 (1X, 20X) , B	Z52835
Volatiles - Ground Wat	ter						
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.

Blk Blank RL

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

QA/QC Batch 412615 (ug/L), QC Sample No: BZ53225 (BZ52831 (20X), BZ52832 (20X), BZ52833 (20X), BZ52835 (400X))

			 	•	•		
Volatiles - Ground Water	<u>er</u>						
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

SDG I.D.: GBZ52831

									%	%	
		Blk	LCS	LCSD	LCS	MS	MSD	MS	Rec	RPD	
Parameter		RL	%	%	RPD	%	%	RPD	Limits	Limits	
	The state of the s		 								

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

### **Sample Criteria Exceedances Report**

GBZ52831 - BIOTECH

Criteria: None State: NY

RL Analysis SampNo Acode Phoenix Analyte Criteria Result RL Criteria Units

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.

<sup>\*\*\*</sup> No Data to Display \*\*\*



### Environmental Laboratories, Inc.

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SDG I.D.: GBZ52831

## **Analysis Comments**

December 15, 2017

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



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## **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)

				Coolant:	Cooler: Yes No
NY/NJ	CHAIN OF CUS	STODY RE	CORD	Тетр	)°C Pg of
PH/ IH/ X 587 East Mid	idle Tumpike, P.O. Box	370. Manchester	r CT 06040	i	act Options:
Email: i	info@phoenixlabs.com	Fax (860) 645		Fax:	
<b>7</b>	Client Services (86			Email: brich	nafsky@ces-env.com
	∠Project: த்	-Lyn (F	mr Standard F	Project P.	O: /&Ó5/フ
2700 11113 13700		* Richnof		Thi	s section MUST be
Hermitage, PA 16148	Invoice to:	MOZZOC	6		ompleted with
<del>-</del>				<u> </u>	ottle Quantities. ↓ ↓ ↓ ↓
Client Sample - Information - Identification	/	4///		//////	
Sampler's Olbert m. Richarkhy Date: 12-5-17	Analysis Request	Ž///	////	///////	
Matrix Code:	Request	W///	////		
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water RW≖Raw Water SE=Sediment SL=Sludge S=Soit SD=Solid W=Wipe	200		////		
O(L=O)  B=Bulk L=Liquid	10/04/				\\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
PHOENIX USE ONLY Customer Sample Sample Date Time	199//			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
SAMPLE# Identification Matrix Sampled Sampled	<del>"</del>	$\overline{}$		/ 4 / 4 / 4 / 4 / 4 / 4 / 4 / 4	·/ ·/ ·/ ·/ ·/ ·/ ·/
5a831 EW-7 GW GW 12-5-1710:10					
50832 EW-20 GW GW 11 0:25 X					
528338B-12 GW " 10:40 X				2	
528345B-14 GW GW " 10:55 X				೩	
59885158-22 FW FW 17 11:10 X	7.			2	
528368B-28 GW GW " 11:25 X				2	
7"					
Relinguished by: Accepted by: Date:	Time;	Turnaround:	<u>NJ</u>	NY	Data Format
OrSichepha mozanio 12461	17 3:150	☐ 1 Day* ☐ 2 Days*	Res. Criteria	☐ NY 375 GWP	Phoenix Std Report
ARALY Mandike 1217	17/11:17	☐ 3 Days*	Non-Res. Criter	ia NY375 Unrestricted	Excel PDF
		5 Days	Impact to GW St Cleanup Criteria	Dil Use Soil NY375 Residential	GIS/Key
Comments, Special Requirements or Regulations: Report: 1,1-Dichoroethane; 2-Butanox; 2-Hexa Acetone; Benzene; cis-lid-Dichloroethene; Cyc methy/Cyclohexane; TetraChloroethane; Trans-1,2- Trichloroethene; Viny/Chloroethene; At SR=	1,	Other	GW Criteria	Soil	☐ EQuIS ☐ NJ Hazsite EDD
Report 1,1-Dichoroethane a Duranox a texa	rnone,	*SURCHARGE APPLIES		Restricted/Residentia	
Acetone; Benzene; cis-lat-Dichloroethene; Cyc	vonexane,	01		Industrial	L Other
THETRY CYCLONEXAME; leirachioroeiname; 17493-1,00	-WICHOUGH 9011	<del>'</del>			Data Package
It ichioroetiene, Viny/Chiorioc	33	State where n	amalae wara sallas	tadi A/V	NJ Reduced Deliv.*
Note - Vigorous fermentation occurring At SB- Text sample as is.		Oraca Attala 2	amples were collec	.eu. ///	

--- Page 25 of 25



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,

Phvilis/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 Tumpike, P.O.Box 370, Manchester, CT 06045 Tel. (860) 645-1102 Fax (860) 645-0823

## **Analysis Report**

May 04, 2018

FOR: Attn: Bert Richnafsky

BioRemedial Technologies, Inc.

2700 Kirila Drive Hermitage, PA 16148

Sample Informa	<u>ation</u>	Custody Inforn	<u>nation</u>	<u>Date</u>	<u>Time</u>
Matrix:	GROUND WATER	Collected by:	AR	04/24/18	10:50
Location Code:	BIOTECH	Received by:	CP	04/26/18	10:39
Push Poguest	Ctandard	Analyzad by	and III of the Land		

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

RL/ Parameter Result PQL Units Dilution Date/Time Reference Ву **Volatiles** 1,1-Dichloroethane ND 100 ug/L 100 05/01/18 НМ SW8260C 2-Hexanone ND 500 ug/L 100 05/01/18 НМ SW8260C Acetone ND 2500 ug/L 100 05/01/18 НМ SW8260C ND 70 SW8260C Benzene 100 05/01/18 НМ ug/L cis-1,2-Dichloroethene 21000 10000 ug/L 10000 05/01/18 НМ SW8260C ND 100 ug/L SW8260C 100 05/01/18 НМ Cyclohexane ND 500 SW8260C Methyl ethyl ketone ug/L 100 05/01/18 HM ND 100 SW8260C Methylcyclohexane ug/L 100 05/01/18 НМ 220 100 100 05/01/18 НМ SW8260C Tetrachloroethene ug/L trans-1.2-Dichloroethene 110 100 ug/L 100 05/01/18 НМ SW8260C 98000 10000 10000 05/01/18 SW8260C Trichloroethene НМ ug/L 190 100 100 05/01/18 SW8260C Vinyl chloride ug/L QA/QC Surrogates % 1,2-dichlorobenzene-d4 98 % 100 05/01/18 НМ 70 - 130 % % Bromofluorobenzene 96 % 100 05/01/18 70 - 130 % НМ % Dibromofluoromethane 97 % 100 05/01/18 НМ 70 - 130 % % Toluene-d8 141 % 100 05/01/18 НМ 70 - 130 % 3

Project ID: JO-LYN FMR STANDARD PORTABLE Phoenix I.D.: CA36451

Client ID: SB-22 GW

RL/

Parameter Result 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 (preceded 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.

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Phyllis Shiller, Laboratory Director

May 04, 2018





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## Analysis Report

May 04, 2018

FOR: Attn: Bert Richnafsky

BioRemedial Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Informat	<u>ion</u>	Custody Information	<u>tion</u>	<u>Date</u>	<u>Time</u>
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

RL/

Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
V. L. Cl.							
<u>Volatiles</u>							
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	МН	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	МН	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 %

Ver 1

Client ID: SB-28 GW

Phoenix I.D.: CA36452

RL/

Result PQL

Units Dilution

Date/Time

By Reference

RUPQL=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 (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

#### **Comments:**

Parameter

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.

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Phyllis Shiller, Laboratory Director

May 04, 2018





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



<u>Time</u>

11:20

10:39

## Analysis Report

May 04, 2018

FOR: Attn: Bert Richnafsky

AR

CP

see "By" below

BioRemedial Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information

Matrix:

**GROUND WATER** 

Location Code:

**BIOTECH** 

Rush Request:

Standard

**Laboratory Data** 

**Custody Information** 

Collected by:

Received by:

Analyzed by:

SDG ID: GCA36451 Phoenix ID: CA36453

<u>Date</u>

04/24/18

04/26/18

Project ID:

P.O.#:

JO-LYN FMR STANDARD PORTABLE

Client ID:

SB-14 GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	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	МН	SW8260C
Acetone	ND	500	ug/L	20	05/01/18	МН	SW8260C
Benzene	ND	14	ug/L	20	05/01/18	МН	SW8260C
cis-1,2-Dichloroethene	1100	50	ug/L	50	05/01/18	МН	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 %

Client ID: SB-14 GW

RL/

Parameter Result 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 (preceded 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.

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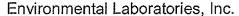
Phyllis Shiller, Laboratory Director

May 04, 2018

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Phoenix I.D.: CA36453





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## **Analysis Report**

May 04, 2018

FOR: Attn: Bert Richnafsky

BioRemedial Technologies, Inc.

2700 Kirila Drive Hermitage, PA 16148

Sample Information **Custody Information** Date Time 04/24/18 11:40 Matrix: **GROUND WATER** Collected by: AR Location Code: **BIOTECH** Received by: CP 04/26/18 10:39

Rush Request: Standard Analyzed by: see "By" below

P.O.#: Laboratory Data

aboratory Data SDG ID: GCA36451
Phoenix ID: CA36454

Project ID: JO-LYN FMR STANDARD PORTABLE

Client ID: SB-12 GW

RL/ PQL Units Dilution Date/Time Parameter Result By Reference **Volatiles** 1 ND 1.0 04/28/18 MH SW8260C 1,1-Dichloroethane ug/L SW8260C 2-Hexanone ND 5.0 ug/L 1 04/28/18 MH ug/L SW8260C ND 25 1 04/28/18 МН Acetone 04/28/18 МН SW8260C Benzene ND 0.70 ug/L 1 10 SW8260C 68 10 ug/L 05/01/18 МН cis-1,2-Dichloroethene МН SW8260C 05/01/18 ND ug/L 1 Cyclohexane 1 04/28/18 МН SW8260C ND 5.0 ug/L 1 Methyl ethyl ketone SW8260C Methylcyclohexane ND 1 ug/L 1 05/01/18 MH ND 1.0 04/28/18 МН SW8260C Tetrachloroethene ug/L 1 SW8260C 2.0 1.0 ug/L 1 04/28/18 MH trans-1,2-Dichloroethene 1 04/28/18 МH SW8260C Trichloroethene 2.9 1.0 ug/L SW8260C 10 05/01/18 MH 48 10 ug/L Vinyl chloride **QA/QC Surrogates** 04/28/18 МН 70 - 130 % 97 % 1 % 1,2-dichlorobenzene-d4 70 - 130 % % Bromofluorobenzene 99 % 1 04/28/18 MH % 04/28/18 МН 70 - 130 % % Dibromofluoromethane 89 1 94 % 1 04/28/18 MH 70 - 130 % % Toluene-d8

Ver 1

Project ID: JO-LYN FMR STANDARD PORTABLE Phoenix I.D.: CA36454

Client ID: SB-12 GW

RL/

Parameter Result PQL Units Dilution Date/Time By Reference

RUPQL=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 (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

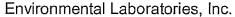
#### **Comments:**

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





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## Analysis Report

May 04, 2018

FOR: Attn: Bert Richnafsky

BioRemedial Technologies, Inc

2700 Kirila Drive Hermitage, PA 16148

Sample InformationCustody InformationDateTimeMatrix:GROUND WATERCollected by:AR04/24/1812:00Location Code:BIOTECHReceived by:CP04/26/1810:39

Rush Request: Standard Analyzed by: see "By" below

P.O.#:

<u>Laboratory Data</u> SDG ID: GCA36451

Phoenix ID: CA36455

Project ID: JO-LYN FMR STANDARD PORTABLE

Client ID: EW-9 GW

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Volatiles							
1,1-Dichloroethane	ND	1.0	ug/L	1	04/28/18	МН	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	МН	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	МН	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 %

Client ID: EW-9 GW

RL/

Parameter Result 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 (preceded 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.

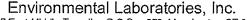
Phyllis Shiller, Laboratory Director

May 04, 2018

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Phoenix I.D.: CA36455





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**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 Received by: Location Code: **BIOTECH** 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

RL/ Parameter Result 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 МН SW8260C SW8260C cis-1,2-Dichloroethene 1.1 1.0 ug/L 1 05/01/18 MH Cyclohexane ND 1 ug/L 1 05/01/18 мН SW8260C ND 1 05/01/18 SW8260C 5.0 MH Methyl ethyl ketone ug/L ND 05/01/18 MH SW8260C Methylcyclohexane 1 ug/L ND 1 05/01/18 MH SW8260C Tetrachloroethene 1.0 ug/L trans-1.2-Dichloroethene ND 1.0 ug/L 1 05/01/18 MH SW8260C 1 05/01/18 МН SW8260C Trichloroethene 3.0 1.0 ug/L 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 МН 70 - 130 % 05/01/18 70 - 130 % % Dibromofluoromethane 97 % 1 MH 05/01/18 70 - 130 % % Toluene-d8 98 %

Project ID: JO-LYN FMR STANDARD PORTABLE Phoenix I.D.: CA36456

Client ID: EW-20 GW

RL/

Parameter Result 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 (preceded 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 Directo

May 04, 2018



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## 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 Samp	le No: CA358	846 (CA36454, CA3	6455)					,,			
Volatiles - Ground Wat	<u>er</u>											
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	1
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%.

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 Wat	<u>ter</u>	ŕ					
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%.

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

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

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

#### Sample Criteria Exceedances Report

GCA36451 - BIOTECH

State: NY

SampNo Acode Phoenix Analyte Criteria Result

Criteria Criteria

RL

Analysis Units

RL

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.

<sup>\*\*\*</sup> No Data to Display \*\*\*



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



## **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.



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

## **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)

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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

**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 06045 Tel. (860) 645-1102 Fax (860) 645-0823

## **Analysis Report**

October 02, 2018

FOR: Attn: Bert Richnafsky

Compliance Env Services Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information	<u>tion</u>	Custody Informa	<u>ition</u>	<u>Date</u>			
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				

Rush Request: Standard

P.O.#: JO-LYN

SDG ID: GCB35211 **Laboratory Data** Phoenix ID: CB35211

JO-LYN (FMR STANDARD PORTABLE) Project ID:

Client ID: EW-7

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	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	МН	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	МН	70 - 130 %
% Dibromofluoromethane	99		·%	1	09/26/18	MH	70 - 130 %
% Toluene-d8	99		%	1	09/26/18	МН	70 - 130 %

Ver 1

Client ID: EW-7

RL/

Parameter Result 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 (preceded 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 I.D.: CB35211





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

## **Analysis Report**

October 02, 2018

FOR: Attn: Bert Richnafsky

CP

Compliance Env Services Inc

2700 Kirila Drive Hermitage, PA 16148

see "By" below

Sample Information	<u>tion</u>	Custody Informa	<u>tion</u>	<u>Date</u>	<u>Time</u>
Matrix:	GROUND WATER	Collected by:	AR	09/18/18	11:25

Received by:

Analyzed by:

Location Code:

COMPENV-PA

Rush Request:

Standard

P.O.#:

JO-LYN

.aboratory Data

SDG ID: GCB35211

10:37,

Phoenix ID: CB35212

09/20/18

Project ID:

JO-LYN (FMR STANDARD PORTABLE)

Client ID:

EW-9

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Volatiles							
1,1-Dichloroethane	ND	1.0	ug/L	1	09/27/18	НМ	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/27/18	НМ	SW8260C
Acetone	25	S 25	ug/L	1	09/27/18	НМ	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	НМ	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	НМ	SW8260C
trans-1,2-Dichloroethene	1.1	1.0	ug/L	1	09/27/18	НМ	SW8260C
Trichloroethene	1.8	1.0	ug/L	1	09/27/18	НМ	SW8260C
Vinyl chloride	600	20	ug/L	20	09/24/18	НМ	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	НМ	70 - 130 %
% Toluene-d8	98		%	1	09/27/18	MH	70 - 130 %

Client ID: EW-9

RL/

Parameter Result 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 (preceded 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 I.D.: CB35212





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## **Analysis Report**

October 02, 2018

FOR: Attn: Bert Richnafsky

Compliance Env Services Inc

2700 Kirila Drive Hermitage, PA 16148

Samp	le In	forma	ation

Matrix:

**GROUND WATER** 

Location Code:

COMPENV-PA

Rush Request:

Standard

P.O.#:

JO-LYN

**Custody Information** Collected by:

AR

CP

09/18/18 09/20/18

Date

11:35 10:37

Time

Analyzed by:

Received by:

see "By" below

**Laboratory Data** 

SDG ID: GCB35211

Phoenix ID: CB35213

Project ID:

JO-LYN (FMR STANDARD PORTABLE)

Client ID:

EW-20

DL/

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	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 %

Ver 1

Project ID: JO-LYN (FMR STANDARD PORTABLE)

Phoenix I.D.: CB35213

Client ID: EW-20

RL/

Parameter Result 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 (preceded 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





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

## **Analysis Report**

October 02, 2018

FOR: Attn: Bert Richnafsky

Compliance Env Services Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information		Custody Inform	<u>nation</u>	<u>Date</u>		
Matrix:	<b>GROUND WATER</b>	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			

**Laboratory Data** 

SDG ID: GCB35211 Phoenix ID: CB35214

Project ID: JO-LYN (FMR STANDARD PORTABLE)

JO-LYN

Client ID: SB-8

P.O.#:

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	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 %

Result

Client ID: SB-8

RL/

Units

Dilution

Date/Time

Phoenix I.D.: CB35214

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:**

Parameter

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.

**PQL** 

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





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

## **Analysis Report**

October 02, 2018

FOR: Attn: Bert Richnafsky

Compliance Env Services Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information		Custody Inform	<u>ation</u>	<u>Date</u> <u>Time</u>		
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			

**Laboratory Data** 

SDG ID: GCB35211

Phoenix ID: CB35215

Project ID: JO-LYN (FMR STANDARD PORTABLE)

JO-LYN

Client ID: SB-11

P.O.#:

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Volatiles							
1,1-Dichloroethane	ND	1.0	ug/L	1	09/25/18	МН	SW8260C
2-Hexanone	ND	5.0	ug/L	1	09/25/18	МН	SW8260C
Acetone	ND	25	ug/L	1	09/25/18	МН	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	МН	SW8260C
Cyclohexane	ND	1	ug/L	1	09/25/18	МН	SW8260C
Methyl ethyl ketone	15	5.0	ug/L	1	09/25/18	МН	SW8260C
Methylcyclohexane	ND	1	ug/L	1	09/25/18	МН	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	09/25/18	МН	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	09/25/18	МН	SW8260C
Trichloroethene	ND	1.0	ug/L	1	09/25/18	МН	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	МН	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	МН	70 - 130 %

Ver 1

Client ID: SB-11

Phoenix I.D.: CB35215

RL/

Parameter Result 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





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

## **Analysis Report**

October 02, 2018

FOR:

Attn: Bert Richnafsky

Compliance Env Services Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Ir	<u>nformation</u>
Matrix:	GROUND WATER

Location Code:

**GROUND WATER** 

Rush Request:

COMPENV-PA Standard

P.O.#:

JO-LYN

**Custody Information** 

Collected by:

Received by:

Analyzed by:

AR

CP

see "By" below

09/18/18

<u>Date</u>

<u>Time</u> 12:05

09/20/18

10:37

## \_aboratory Data

SDG ID: GCB35211 Phoenix ID: CB35216

Project ID:

JO-LYN (FMR STANDARD PORTABLE)

Client ID:

SB-12

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	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	МН	SW8260C
Cyclohexane	ND	5	ug/L	5	09/24/18	МН	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	МН	70 - 130 %

Client ID: SB-12

RL/

Parameter Result 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 (preceded 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.

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 I.D.: CB35216





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

## **Analysis Report**

October 02, 2018

FOR: Attn: Bert Richnafsky

Compliance Env Services Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information		Custody Inform	<u>nation</u>	<u>Date</u> <u>Time</u>		
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			

**Laboratory Data** 

SDG ID: GCB35211 Phoenix ID: CB35217

Project ID: JO-LYN (FMR STANDARD PORTABLE)

JO-LYN

Client ID: SB-13

P.O.#:

<b>D</b>		RL/		<b></b>		_	
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
<u>Volatiles</u>							
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	МН	SW8260C
Benzene	ND	3.5	ug/L	5	09/24/18	МН	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	МН	70 - 130 %

Ver 1

Client ID: SB-13

RL/

Parameter Result 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 (preceded 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 I.D.: CB35217





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

## **Analysis Report**

October 02, 2018

Attn: Bert Richnafsky FOR:

Compliance Env Services Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information

Matrix:

**GROUND WATER** 

**Location Code:** 

COMPENV-PA

Rush Request:

Standard

P.O.#:

JO-LYN

**Custody Information** 

AR CP <u>Date</u> 09/18/18 <u>Time</u> 12:25

09/20/18

10:37

Analyzed by: see "By" below

**Laboratory Data** 

SDG ID: GCB35211

Phoenix ID: CB35218

Collected by:

Received by:

Project ID: Client ID:

JO-LYN (FMR STANDARD PORTABLE)

SB-14

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
- Control - Cont	rtocare	. QL	Office	Dilation	Date, Time		11010101100
<u>Volatiles</u>							
1,1-Dichloroethane	ND	1.0	ug/L	1	09/26/18	МН	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	МН	SW8260C
cis-1,2-Dichloroethene	150	10	ug/L	10	09/25/18	МН	SW8260C
Cyclohexane	ND	1	ug/L	1	09/25/18	МН	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	МН	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	МН	70 - 130 %
% Dibromofluoromethane	99		%	1	09/26/18	МН	70 - 130 %
% Toluene-d8	102		%	1	09/26/18	МН	70 - 130 %

Client ID: SB-14

RL/

Result PQL

Units

Dilution

Date/Time

By R

Reference

Phoenix I.D.: CB35218

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 (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

#### **Comments:**

Parameter

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





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

## **Analysis Report**

October 02, 2018

FOR: Attn: Bert Richnafsky

Compliance Env Services Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Information		Custody Informa	<u>tion</u>	<u>Date</u>	<u>Time</u>
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

**Laboratory Data** 

SDG ID: GCB35211

Phoenix ID: CB35219

Project ID: JO-LYN (FMR STANDARD PORTABLE)

JO-LYN

Client ID: SB-22

P.O.#:

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	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	МН	SW8260C
cis-1,2-Dichloroethene	70000	5000	ug/L	5000	09/26/18	МН	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	МН	70 - 130 %
% Toluene-d8	112		%	500	09/26/18	МН	70 - 130 %

Ver 1

Client ID: SB-22

RL/

Parameter Result 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 (preceded 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 I.D.: CB35219





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

## **Analysis Report**

October 02, 2018

FOR: Attn: Bert Richnafsky

Compliance Env Services Inc

2700 Kirila Drive Hermitage, PA 16148

Sample Informa	<u>tion</u>	Custody Inform	<u>nation</u>	<u>Date</u>	<u>Time</u>
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

**Laboratory Data** 

SDG ID: GCB35211

Phoenix ID: CB35220

Project ID: JO-LYN (FMR STANDARD PORTABLE)

JO-LYN

Client ID: SB-28

P.O.#:

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Volatiles							
1.1-Dichloroethane	ND	500	ug/L	500	09/26/18	МН	SW8260C
2-Hexanone	ND	2500	ug/L	500	09/26/18	МН	SW8260C
Acetone	ND	13000	ug/L	500	09/26/18	МН	SW8260C
Benzene	ND	350	ug/L	500	09/26/18	МН	SW8260C
cis-1,2-Dichloroethene	81000	5000	ug/L	5000	09/26/18	МН	SW8260C
Cyclohexane	ND	500	ug/L	500	09/26/18	МН	SW8260C
Methyl ethyl ketone	ND	2500	ug/L	500	09/26/18	МН	SW8260C
Methylcyclohexane	ND	500	ug/L	500	09/26/18	MH	SW8260C
Tetrachloroethene	ND	500	ug/L	500	09/26/18	МН	SW8260C
trans-1,2-Dichloroethene	600	500	ug/L	500	09/26/18	МН	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	МН	70 - 130 %

Client ID: SB-28

RL/

Result PQL

Units

Dilution

Date/Time

By Reference

Phoenix I.D.: CB35220

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 (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

#### **Comments:**

Parameter

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.

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Phyllis Shiller, Laboratory Director

October 02, 2018





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## **Analysis Report**

October 02, 2018

FOR: Attn: Bert Richnafsky

Compliance Env Services Inc

2700 Kirila Drive Hermitage, PA 16148

see "By" below

Sample Information

Matrix:

**GROUND WATER** 

Location Code: Rush Request:

COMPENV-PA Standard

P.O.#:

JO-LYN

Custody Information

Collected by:

Received by:

Analyzed by:

AR CP

<u>Time</u> 12:46

09/20/18

Date

09/18/18

10:37

Laboratory Data

SDG ID: GCB35211 Phoenix ID: CB35221

Project ID:

JO-LYN (FMR STANDARD PORTABLE)

Client ID:

SB-28 DUP

RL/

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Voletilos				-			
<u>Volatiles</u>							
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	МН	SW8260C
cis-1,2-Dichloroethene	83000	5000	ug/L	5000	09/26/18	МН	SW8260C
Cyclohexane	ND	500	ug/L	500	09/26/18	MH	SW8260C
Methyl ethyl ketone	ND	2500	ug/L	500	09/26/18	МН	SW8260C
Methylcyclohexane	ND	500	ug/L	500	09/26/18	МН	SW8260C
Tetrachloroethene	ND	500	ug/L	500	09/26/18	МН	SW8260C
trans-1,2-Dichloroethene	560	500	ug/L	500	09/26/18	МН	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	МН	70 - 130 %
% Toluene-d8	111		%	500	09/26/18	МН	70 - 130 %

Project ID: JO-LYN (FMR STANDARD PORTABLE)

Phoenix I.D.: CB35221

Client ID: SB-28 DUP

RL/

Parameter Result 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 (preceded 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.

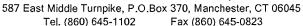
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Phyllis Shiller, Laboratory Director

October 02, 2018









SDG I.D.: GCB35211

## QA/QC Report

Comment:

October 02, 2018

#### QA/QC Data

						%	%
LCS	LCSD	LCS	MS	MSD	MS	Rec	RPD

Parameter	Blank	RL	%	%	RPD	%	%	RPD	Limits	Limits	
QA/QC Batch 449128 (ug/l 10X) , CB35219 (500X, 500					335216	(5X) , (	CB3521	7 (50X)	, CB35	218 (1)	Χ,
Volatiles - Ground Wa	<u>ater</u>										
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 Trichloroethene ND 1.0 Vinyl chloride ND 1.0 % 1,2-dichlorobenzene-d4 99 % % Bromofluorobenzene 98 % % Dibromofluoromethane 105 % % Toluene-d8 93

70 - 130

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

% % Blk LCS LCSD LCS MS MSD MS Rec RPD Blank RL RPD RPD Limits % % % % Limits Parameter 0.70 90 Benzene ND 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 ND 95 97 2.1 Trichloroethene 1.0 70 - 130 30 Vinyl chloride ND 1.0 111 108 2.7 70 - 130 30 % 1,2-dichlorobenzene-d4 99 100 102 2.0 30 % 70 - 130 % 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

ND	1.0	88	100	12.8	70 - 130	30	
ND	5.0	85	102	18.2	70 - 130	30	
ND	5.0	78	111	34.9	70 - 130	30	
ND	0.70	85	98	14.2	70 - 130	30	
ND	5.0	93	95	2.1	70 - 130	30	
ND	1.0	89	102	13.6	70 - 130	30	
ND	1.0	90	103	13.5	70 - 130	30	
ND	1.0	90	101	11.5	70 - 130	30	
97	%	101	99	2.0	70 - 130	30	
95	%	99	98	1.0	70 - 130	30	
100	%	94	101	7.2	70 - 130	30	
93	%	102	101	1.0	70 - 130	30	
	ND ND ND ND ND ND ND 97 95	ND 5.0 ND 5.0 ND 0.70 ND 5.0 ND 1.0 ND 1.0 ND 1.0 97 % 95 % 100 %	ND       5.0       85         ND       5.0       78         ND       0.70       85         ND       5.0       93         ND       1.0       89         ND       1.0       90         ND       1.0       90         ND       1.0       90         97       %       101         95       %       99         100       %       94	ND       5.0       85       102         ND       5.0       78       111         ND       0.70       85       98         ND       5.0       93       95         ND       1.0       89       102         ND       1.0       90       103         ND       1.0       90       101         97       %       101       99         95       %       99       98         100       %       94       101	ND       5.0       85       102       18.2         ND       5.0       78       111       34.9         ND       0.70       85       98       14.2         ND       5.0       93       95       2.1         ND       1.0       89       102       13.6         ND       1.0       90       103       13.5         ND       1.0       90       101       11.5         97       %       101       99       2.0         95       %       99       98       1.0         100       %       94       101       7.2	ND       5.0       85       102       18.2       70-130         ND       5.0       78       111       34.9       70-130         ND       0.70       85       98       14.2       70-130         ND       5.0       93       95       2.1       70-130         ND       1.0       89       102       13.6       70-130         ND       1.0       90       103       13.5       70-130         ND       1.0       90       101       11.5       70-130         97       %       101       99       2.0       70-130         95       %       99       98       1.0       70-130         100       %       94       101       7.2       70-130	ND       5.0       85       102       18.2       70-130       30         ND       5.0       78       111       34.9       70-130       30         ND       0.70       85       98       14.2       70-130       30         ND       5.0       93       95       2.1       70-130       30         ND       1.0       89       102       13.6       70-130       30         ND       1.0       90       103       13.5       70-130       30         ND       1.0       90       101       11.5       70-130       30         97       %       101       99       2.0       70-130       30         95       %       99       98       1.0       70-130       30         100       %       94       101       7.2       70-130       30

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

SDG I.D.: GCB35211

October 02, 2018

r =This parameter is outside laboratory RPD specified recovery limits.

Tuesday, October 02, 2018

# Sample Criteria Exceedances Report GCB35211 - COMPENV-PA

Criteria: None State: NY

SampNo

RL Analysis
Phoenix Analyte Criteria Result RL Criteria Units

\*\*\* No Data to Display \*\*\*

Acode

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.



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## **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%



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# 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 No
1		NY/N	J CHA	IN OF C	USTO	DY RI	COF	RD				Temp	,0•c		of
DLICENTY		507.5			D 070		O.T.	00040			_	Conta	ct Optio	ns:	
I PHOLIVIA S		587 East N		npike, P.O. oenixlabs.o		Manches ax (860) 6					ax: none:				
Environmental Laboratories,	Inc.			Services		٠,		. <del>-</del>				ichna	PSKIP	ces-	enycon
Customer: Compliance En	viron. S	vcs.	Proj	ect: 🗦	6-Ly	b (Fr	<u> 17.5</u>	tanda	d Por	TAPK	Pro	ject P.C	1	2-LY1	7
Address: 2700 Kirila F	alvd.		Rep	ort to:	えヒトヤ	Kich	MAK	sKV				This s	ection	MUST	be
Hermitage, PA	9 16148		Invo	oice to:	Jan_	/no:	220	cío					leted		
ľ												Bottle	Quan	uues. ↓	, ,
Client Sample - Information -	Identification	_			1	5/	77	77	///	77	7	7//	1/	/_/xi	
Sampler's Signature Www mr Kichang	Date	9/18/18	Analys Reque	,	Xo	<b>y</b> //	//	//,		//	/\x <sup>3</sup> /	//,	1/8	201,100	//
Matrix Code:	/		Reque	2000	<b>XX</b>	//		//	//			/s/A		MI SOUTH	///
DW=Drinking Water GW=Ground Water SW=Su RW=Raw Water SE=Sediment SL=Sludge S=Sc				/ //	<b>y</b> //	//		//	//	Tre			12/12	priligori	
OIL=Oil B=Bulk L=Liquid	On 3D-Oond W	-vviþe	$\mathcal{A}$	X	//	///	//		///	Tight Tight	E Tidite	100/		250km 250km	THE WILL BE !
PHOENIX USE ONLY Customer Sample SAMPLE # Identification	Sample Da Matrix Sam		$\sqrt{3}$	3		///	//		\$ 10 K	Sign Chai	ACOUNT CO	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Source of the state of the stat	2 18 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	A LE
		8-18 11:15	X								3				
35212 EW-9	GW 1		×								3				
35213 EW-10	GW 1										3				
35214 58-8	GW 1	911-	X							3	3				
35215 SB-11	G-N 1		X								3				
35216 58-12	CN "	12:05	X								3				
35217 5B-13	CW "	12:15	X								3				
35218 58-14	GW 1	' 12:25	ダ								3				
35219 <b>58-22</b>	0-10	1 A:35	X								2				
35220 <b>58-28</b>	GW '	12,70	X							3					
35221 SB-28 Dup	GW "	13.76	X								<u>,                                    </u>				
Relinquished by: Accepted by	0 70	Date:		Time:		around: 1 Dav*	  NJ	D.: 0.11		MY TO	GS GW		Data For	<u>mat</u> enix Std Re	enort
C. Mr Richapty Jany	meer		7-18	10100A		2 Days*		Res. Crit		☐ CF	-51 SOI	L	Exce	el	Броп
The state of the s		612	2-18	3:35	7 🛭	3 Days* 5 Days		Impact to	GW Soil		'5SCO restricte	d Soil	PDF		
Comments, Special Requirements or Regulations	3:	710	וציוט	101/3		10 Days Other		Cleanup		□ 37			EQU N.I.	IS Hazsite ED	חר
Comments, Special Requirements or Regulations Report: 11-DichloroethAne; 2 Benzene; cis-la-Dichloroeth Tetrackloroethene; trans- Trichloroethene; Viny/C	-Bitanox;	2-Henaron	Acet	one;	·su	RCHARGE		soil scree		37	5SCO	- <del>-</del>	l <u></u>	EZ EDD (A	
Benzene Cis-Int-Vichloroeth	encj cycl	onexane;///	ethy/Ly	Llohex	<b>R</b> ej '	PPLIES		GW Criteri	а	1	sidential		Othe	er	
Tracklangethene Would	"104" Wich! 11-11-11	oro ethene	ز-ّ		Wha	t State we	re samn	les collec	ted?	C	'5SCO ommercia	al Soil	Data Pac		
- Ling Cine	NIOTIQE.	۸					ŽΫ́				75SCO dustrial S	Soil		Reduced De Enhanced (	
Note: There may be a small	Amount o	fair in the	SAMP	le 607	Hes_						ıbpart 5 l		Othe		nor b)