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1233 Silas Deane Highway | Wethersfield, Connecticut 06109 | Telephone 860-665-1140 | Fax 860-665-9445 | www.ensafe.com

Via email to Jeffrey.dyber@dec.ny.gov

March 12, 2018

Mr. Jeffrey Dyber, P.E.
NYSDEC, Remedial Bureau A
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7015

Re: Progress Report: February 2018
Frost Street Sites: Site ID #s 1-30043 I, L, M
New Cassel Industrial Area, Westbury, New York

Dear Mr. Dyber:

EnSafe Inc. is pleased to submit this Progress Report for the Frost Street Sites (Site ID #s 1-30043 I, L, M) for work completed in February 2018.

Soil Vapor Extraction (SVE)/Air Sparge (AS) System Operation and Maintenance (O&M) (OU1)

- Operations continued this month, per the O&M Manual. During periodic O&M visits, system parameters were logged on dedicated O&M forms (**Appendix A**). In addition to standard O&M activities, the following was performed:
 - o The transfer pump was replaced and the semi-annual compressor and blower maintenances were completed on February 9, 2018.
 - o The air sparge portion of the system has been shutting down sporadically (once a week) for a high temperature alarm; ambient temperatures have been elevated and the cooling fan is not running continuously. Efforts will be made to ensure the cooling fan runs when the compressor does to eliminate this issue.
- Quantitative sampling of the SVE system granular activated carbon influent and effluent air flow was conducted on February 23, 2018, using Summa canisters. These samples were obtained by EnviroTrac, submitted to Phoenix Environmental Laboratories, and analyzed by Method TO-15. Results are included in **Appendix B**.
 - o Influent concentrations of Frost Street-related contaminants of concern (tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, and vinyl chloride) continue to indicate significant mass extraction.

Frost Street Sites Effluent Compliance			
System Flow Rate =		800	ft ³ /m
Compound	Annual Mass Emission Limit (lbs/year)	Allowable Continuous Annual Concentration (µg/m ³)	February 2018 Effluent Concentration (µg/m ³)
Trichloroethene	500	19,000	ND
Tetrachloroethene	1,000	38,000	ND
Vinyl Chloride	100	3,800	ND
Cis-1,2-Dichloroethene	100	3,800	ND

Notes:

Source of Mass Emission Limit: Part 212-2.2 Table 2 - High Toxicity Air Contaminant List

Cis-1,2-dichloroethene is not a listed HTAC, so the default is 100 lbs/year.

These limits were calculated based on Frost Street-specific system operations (i.e., flow rate) in order to remain below the annual HTAC emissions listed in Part 212-2.2 Table 2. Remaining below these concentrations ensures that annual emissions will not exceed the limit which demonstrates compliance with Part 212 without having to perform compound-specific analyses.

Groundwater Extraction/Hydraulic Containment System Installation (OU2)

- The deep extraction well pumps and temporary carbon treatment will be installed the week of March 12, 2018.
- The pressure transducers will be installed the week of March 12, 2018 and system startup activities will begin March 19, 2018. The pumping tests will be begin thereafter, pending successful system startup.

Quarterly/Annual Groundwater Monitoring

- The fourth quarter 2017 groundwater sampling event was completed the week of December 18, 2017, results will be submitted in a forthcoming report, when available.
- The first quarter 2018 groundwater sampling event will be completed the weeks of March 12 and 19, 2018. This event is the "annual", fifth quarter event which will include sampling from all active monitoring wells.

If you have any questions or require additional information, please do not hesitate to contact me at 860-665-1140 or astark@ensafe.com.

Sincerely,

EnSafe, Inc., by

Alexandra M. J. Stark

Alexandra Stark, P.E.

Copies: A. Tamuno, Esq., NYSDEC	<i>Via email to amtamuno@gw.dec.state.ny.us</i>
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P. Coop, EnSafe	<i>Via email to pcoop@ensafe.com</i>
J. Parillo, EnSafe	<i>Via email to jparillo@ensafe.com</i>
J. Wilkinson, Envirotrac	<i>Via email to jamesw@envirotrac.com</i>

Appendix A
SVE/AS System O&M Logs

Operation & Maintenance Data Sheet
 Ensae-Frost Street
 101 Frost Street
 Westbury, NY

EnviroTrac Environmental Services
 5 Old Dock Road, Yaphank, NY 11980
 (631)924-3001, Fax (631)924-5001

Date: 9-Feb
Weather / Temp: Clear / 40 DEG
Technician / Operator: JW, OL

Arrival Time: 9:00
Departure Time: 14:00

System Status									
	Arrival	Departure		Arrival	Departure				
SVE Blower 1 (ON/OFF)	OFF	ON	Sensaphone (ON/OFF)	ON	ON				
SVE Blower 2 (ON/OFF)	OFF	OFF	Surge Protection (ON/OFF)	ON	ON				
AS Compressor 1 (ON/OFF)	OFF	OFF	Lightning Protection (White/Black)	White	White				
AS Compressor 2 (ON/OFF)	OFF	ON							
Soil Vapor Extraction System									
Blower Air Velocity/Flow Rate (fpm)/(cfm)	4600	903	Blower 1 Total Runtime (hrs)	49,478.6					
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	49,286.6					
Blower 2 Fresh Air Valve Open (%)	0		Blower 1 Air Filter Differential Pressure ("H2O)	0					
Moisture Separator Vacuum ("Hg)	3.5		Blower 2 Air Filter Differential Pressure ("H2O)	0					
VGAC-1 Influent Vacuum ("H2O)	75		VGAC-1 Influent PID (ppm)	5.7					
VGAC-1 Effluent Vacuum ("H2O)	76		VGAC-1 Effluent PID (ppm)	0.0					
VGAC-2 Influent Vacuum ("H2O)	76		VGAC-2 Influent PID (ppm)	5.7					
VGAC-2 Effluent Vacuum ("H2O)	86		VGAC-2 Effluent PID (ppm)	0.0					
VGAC-3 Influent Pressure ("H2O)	10		VGAC-3 Influent PID (ppm)	0.0					
VGAC-3 Effluent Pressure ("H2O)	2.5		VGAC-3 Effluent PID (ppm)	0.0					
VGAC-2 Influent Temp (DegF)	130		Blower Effluent PID (ppm)	0.0					
Blower Effluent Pressure ("H2O)	20								
Transfer Pump Total Runtime (hrs)	25,029.3		Condensate Storage Tank Level (gal)	50					
SVE Manifold Legs - Vacuum/Flow Rate/PID									
	<u>Vacuum</u>	<u>Velocity</u>	<u>Flow Rate</u>	<u>PID</u>		<u>Vacuum</u>	<u>Velocity</u>	<u>Flow Rate</u>	<u>PID</u>
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	50	7500	164		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	42	4000	87	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	50	4500	98		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	43	2900	63	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	42	5000	109		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	40	6500	142	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	42	4200	92		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	42	2900	63	
Air Sparge System									
Compressor 1 Pressure (psi)	Off for repairs				Compressor 2 Pressure (psi)	80			
Compressor 1 Temperature (degF)	Off for repairs				Compressor 2 Temperature (degF)	167			
Compressor 1 Runtime (hrs)	27,317				Compressor 2 Runtime (hrs)	25,129			
Manifold Regulator Pressure (psi)	60								
AS Manifold Legs - Pressure/Flow Rate									
	<u>Pressure</u>		<u>Flow Rate</u>			<u>Pressure</u>		<u>Flow Rate</u>	
AS-1 (psi)/(cfm)	18		6		AS-11 (psi)/(cfm)	16		7	
AS-2 (psi)/(cfm)	16		6		AS-12B (psi)/(cfm)	16		7	
AS-3 (psi)/(cfm)	15		9		AS-13B (psi)/(cfm)	14		8	
AS-4 (psi)/(cfm)	14		5		AS-14 (psi)/(cfm)	15		11	
AS-5 (psi)/(cfm)	17		11		AS-15 (psi)/(cfm)	15		9	
AS-6 (psi)/(cfm)	16		7		AS-16B (psi)/(cfm)	14		8	
AS-7 (psi)/(cfm)	16		12		AS-17 (psi)/(cfm)	15		5	
AS-8 (psi)/(cfm)	16		9		AS-18 (psi)/(cfm)	14		5	
AS-9 (psi)/(cfm)	16		11		AS-19 (psi)/(cfm)	15		8	
AS-10B (psi)/(cfm)	14		9						

Notes, Comments & Observations:

System off upon arrival due to transfer pump failure.

Replaced transfer pump and performed semi-annual compressor maintenance.

Operation & Maintenance Data Sheet
 Ensafe-Frost Street
 101 Frost Street
 Westbury, NY

EnviroTrac Environmental Services
 5 Old Dock Road, Yaphank, NY 11980
 (631)924-3001, Fax (631)924-5001

Date: 16-Feb
Weather / Temp: Rain / 50 DEG
Technician / Operator: JW, OL

Arrival Time: 9:00
Departure Time: 12:00

System Status									
	Arrival	Departure		Arrival	Departure				
SVE Blower 1 (ON/OFF)	OFF	ON	Sensaphone (ON/OFF)	ON	ON				
SVE Blower 2 (ON/OFF)	ON	OFF	Surge Protection (ON/OFF)	ON	ON				
AS Compressor 1 (ON/OFF)	OFF	OFF	Lightning Protection (White/Black)	White	White				
AS Compressor 2 (ON/OFF)	OFF	ON							
Soil Vapor Extraction System									
Blower Air Velocity/Flow Rate (fpm)/cfm)	4500	884	Blower 1 Total Runtime (hrs)	49,555.4					
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	49,350.2					
Blower 2 Fresh Air Valve Open (%)	0		Blower 1 Air Filter Differential Pressure ("H2O)	0					
Moisture Separator Vacuum ("Hg)	4		Blower 2 Air Filter Differential Pressure ("H2O)	0					
VGAC-1 Influent Vacuum ("H2O)	75		VGAC-1 Influent PID (ppm)	6.1					
VGAC-1 Effluent Vacuum ("H2O)	75		VGAC-1 Effluent PID (ppm)	0.0					
VGAC-2 Influent Vacuum ("H2O)	75		VGAC-2 Influent PID (ppm)	6.1					
VGAC-2 Effluent Vacuum ("H2O)	85		VGAC-2 Effluent PID (ppm)	0.0					
VGAC-3 Influent Pressure ("H2O)	10		VGAC-3 Influent PID (ppm)	0.0					
VGAC-3 Effluent Pressure ("H2O)	3		VGAC-3 Effluent PID (ppm)	0.0					
VGAC-2 Influent Temp (DegF)	130		Blower Effluent PID (ppm)	0.0					
Blower Effluent Pressure ("H2O)	16								
Transfer Pump Total Runtime (hrs)	25,029.6		Condensate Storage Tank Level (gal)	250					
SVE Manifold Legs - Vacuum/Flow Rate/PID									
	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	50	7500	164		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	42	4000	87	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	52	4500	98		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	42	3000	65	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	44	5000	109		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	42	6500	142	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	42	4200	92		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	42	2900	63	
Air Sparge System									
Compressor 1 Pressure (psi)	Off for repairs				Compressor 2 Pressure (psi)	85			
Compressor 1 Temperature (degF)	Off for repairs				Compressor 2 Temperature (degF)	174			
Compressor 1 Runtime (hrs)	27,317				Compressor 2 Runtime (hrs)	25,214			
Manifold Regulator Pressure (psi)	60								
AS Manifold Legs - Pressure/Flow Rate									
	Pressure		Flow Rate			Pressure		Flow Rate	
AS-1 (psi)/(cfm)	18		5		AS-11 (psi)/(cfm)	15		8	
AS-2 (psi)/(cfm)	16		5		AS-12B (psi)/(cfm)	15		7	
AS-3 (psi)/(cfm)	15		10		AS-13B (psi)/(cfm)	14		7	
AS-4 (psi)/(cfm)	15		5		AS-14 (psi)/(cfm)	15		10	
AS-5 (psi)/(cfm)	17		10		AS-15 (psi)/(cfm)	15		9	
AS-6 (psi)/(cfm)	15		7		AS-16B (psi)/(cfm)	15		8	
AS-7 (psi)/(cfm)	15		10		AS-17 (psi)/(cfm)	15		5	
AS-8 (psi)/(cfm)	15		10		AS-18 (psi)/(cfm)	15		7	
AS-9 (psi)/(cfm)	15		10		AS-19 (psi)/(cfm)	15		7	
AS-10B (psi)/(cfm)	15		10						

Notes, Comments & Observations:

AS compressor off upon arrival due to high temp alarm, replaced motor contactor to internal cooling fan, restarted.

Performed semi-annual SVE blower maintenance.

Operation & Maintenance Data Sheet
 Ensafe-Frost Street
 101 Frost Street
 Westbury, NY

EnviroTrac Environmental Services
 5 Old Dock Road, Yaphank, NY 11980
 (631)924-3001, Fax (631)924-5001

Date: 23-Feb
 Weather / Temp: Rain / 40 DEG
 Technician / Operator: JW

Arrival Time: 9:00
 Departure Time: 12:00

System Status									
	Arrival	Departure			Arrival	Departure			
SVE Blower 1 (ON/OFF)	ON	ON		Sensaphone (ON/OFF)	ON	ON			
SVE Blower 2 (ON/OFF)	OFF	OFF		Surge Protection (ON/OFF)	ON	ON			
AS Compressor 1 (ON/OFF)	OFF	OFF		Lightning Protection (White/Black)	White	White			
AS Compressor 2 (ON/OFF)	OFF	ON							
Soil Vapor Extraction System									
Blower Air Velocity/Flow Rate (fpm)/cfm)	4400	864		Blower 1 Total Runtime (hrs)	49,650.5				
Blower 1 Fresh Air Valve Open (%)	0			Blower 2 Total Runtime (hrs)	49,438.0				
Blower 2 Fresh Air Valve Open (%)	0			Blower 1 Air Filter Differential Pressure ("H2O)	0				
Moisture Separator Vacuum ("Hg)	4			Blower 2 Air Filter Differential Pressure ("H2O)	0				
VGAC-1 Influent Vacuum ("H2O)	75			VGAC-1 Influent PID (ppm)	7.1				
VGAC-1 Effluent Vacuum ("H2O)	75			VGAC-1 Effluent PID (ppm)	0.0				
VGAC-2 Influent Vacuum ("H2O)	75			VGAC-2 Influent PID (ppm)	7.1				
VGAC-2 Effluent Vacuum ("H2O)	85			VGAC-2 Effluent PID (ppm)	0.0				
VGAC-3 Influent Pressure ("H2O)	10			VGAC-3 Influent PID (ppm)	0.0				
VGAC-3 Effluent Pressure ("H2O)	2.5			VGAC-3 Effluent PID (ppm)	0.0				
VGAC-2 Influent Temp (DegF)	132			Blower Effluent PID (ppm)	0.0				
Blower Effluent Pressure ("H2O)	17								
Transfer Pump Total Runtime (hrs)	25,029.8			Condensate Storage Tank Level (gal)	350				
SVE Manifold Legs - Vacuum/Flow Rate/PID									
	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	50	7500	164	28.0	SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	42	4000	87	0.0
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	52	4500	98	2.0	SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	44	3000	65	0.0
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	45	5000	109	0.0	SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	42	6500	142	36.3
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	42	4400	96	0.0	SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	44	2900	63	0.0
Air Sparge System									
Compressor 1 Pressure (psi)	Off for repairs			Compressor 2 Pressure (psi)	89				
Compressor 1 Temperature (degF)	Off for repairs			Compressor 2 Temperature (degF)	162				
Compressor 1 Runtime (hrs)	27,317			Compressor 2 Runtime (hrs)	25,364				
Manifold Regulator Pressure (psi)	65								
AS Manifold Legs - Pressure/Flow Rate									
	Pressure	Flow Rate			Pressure	Flow Rate			
AS-1 (psi)/(cfm)	17	6		AS-11 (psi)/(cfm)	16	4			
AS-2 (psi)/(cfm)	16	5		AS-12B (psi)/(cfm)	16	8			
AS-3 (psi)/(cfm)	15	9		AS-13B (psi)/(cfm)	14	8			
AS-4 (psi)/(cfm)	15	5		AS-14 (psi)/(cfm)	15	9			
AS-5 (psi)/(cfm)	16	12		AS-15 (psi)/(cfm)	15	10			
AS-6 (psi)/(cfm)	16	7		AS-16B (psi)/(cfm)	14	14			
AS-7 (psi)/(cfm)	16	8		AS-17 (psi)/(cfm)	14	5			
AS-8 (psi)/(cfm)	16	10		AS-18 (psi)/(cfm)	12	6			
AS-9 (psi)/(cfm)	16	10		AS-19 (psi)/(cfm)	15	9			
AS-10B (psi)/(cfm)	14	10							

Notes, Comments & Observations:

AS compressor off upon arrival due to high temp alarm, restarted.

Collected monthly air samples.

ALARM VISIT LOG
AS/SVE SYSTEM
101 FROST STREET, WESTBURY, NY

[illegible]

Appendix B
SVE System Influent/Effluent Sampling (TO-15)
Laboratory Analytical Results



Thursday, March 01, 2018

Attn: James Wilkinson
EnviroTrac
5 Old Dock Rd
Yaphank, NY 11980

Project ID: ENSAFE-WESTBURY
Sample ID#s: BZ94589 - BZ94590

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,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis/Shiller

Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



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



Analysis Report

March 01, 2018

FOR: Attn: James Wilkinson
EnviroTrac
5 Old Dock Rd
Yaphank, NY 11980

Sample Information

Matrix: AIR
Location Code: ENVIOTR
Rush Request: 72 Hour
P.O.#:
Canister Id: 778

Custody Information

Collected by: JW
Received by: SW
Analyzed by: see "By" below

Date

02/23/18 11:38
02/26/18 15:10

Time

Project ID: ENSAFE-WESTBURY
Client ID: SVE EFFLUENT

Laboratory Data

SDG ID: GBZ94589
Phoenix ID: BZ94589

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles (TO15)</u>							
1,1,1,2-Tetrachloroethane	ND	0.146	ND	1.00	02/27/18	KCA	1
1,1,1-Trichloroethane	ND	0.183	ND	1.00	02/27/18	KCA	1
1,1,2,2-Tetrachloroethane	ND	0.146	ND	1.00	02/27/18	KCA	1
1,1,2-Trichloroethane	ND	0.183	ND	1.00	02/27/18	KCA	1
1,1-Dichloroethane	ND	0.247	ND	1.00	02/27/18	KCA	1
1,1-Dichloroethene	ND	0.051	ND	0.20	02/27/18	KCA	1
1,2,4-Trichlorobenzene	ND	0.135	ND	1.00	02/27/18	KCA	1
1,2,4-Trimethylbenzene	ND	0.204	ND	1.00	02/27/18	KCA	1
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	02/27/18	KCA	1
1,2-Dichlorobenzene	ND	0.166	ND	1.00	02/27/18	KCA	1
1,2-Dichloroethane	ND	0.247	ND	1.00	02/27/18	KCA	1
1,2-dichloropropane	ND	0.217	ND	1.00	02/27/18	KCA	1
1,2-Dichlorotetrafluoroethane	ND	0.143	ND	1.00	02/27/18	KCA	1
1,3,5-Trimethylbenzene	ND	0.204	ND	1.00	02/27/18	KCA	1
1,3-Butadiene	ND	0.452	ND	1.00	02/27/18	KCA	1
1,3-Dichlorobenzene	ND	0.166	ND	1.00	02/27/18	KCA	1
1,4-Dichlorobenzene	ND	0.166	ND	1.00	02/27/18	KCA	1
1,4-Dioxane	ND	0.278	ND	1.00	02/27/18	KCA	1
2-Hexanone(MBK)	ND	0.244	ND	1.00	02/27/18	KCA	1
4-Ethyltoluene	ND	0.204	ND	1.00	02/27/18	KCA	1
4-Isopropyltoluene	ND	0.182	ND	1.00	02/27/18	KCA	1
4-Methyl-2-pentanone(MIBK)	ND	0.244	ND	1.00	02/27/18	KCA	1
Acetone	2.92	S 0.421	6.93	1.00	02/27/18	KCA	1
Acrylonitrile	ND	0.461	ND	1.00	02/27/18	KCA	1
Benzene	ND	0.313	ND	1.00	02/27/18	KCA	1
Benzyl chloride	ND	0.193	ND	1.00	02/27/18	KCA	1

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.149	ND	1.00	02/27/18	KCA	1
Bromoform	ND	0.097	ND	1.00	02/27/18	KCA	1
Bromomethane	ND	0.258	ND	1.00	02/27/18	KCA	1
Carbon Disulfide	ND	0.321	ND	1.00	02/27/18	KCA	1
Carbon Tetrachloride	ND	0.032	ND	0.20	02/27/18	KCA	1
Chlorobenzene	ND	0.217	ND	1.00	02/27/18	KCA	1
Chloroethane	ND	0.379	ND	1.00	02/27/18	KCA	1
Chloroform	ND	0.205	ND	1.00	02/27/18	KCA	1
Chloromethane	ND	0.485	ND	1.00	02/27/18	KCA	1
Cis-1,2-Dichloroethene	ND	0.051	ND	0.20	02/27/18	KCA	1
cis-1,3-Dichloropropene	ND	0.221	ND	1.00	02/27/18	KCA	1
Cyclohexane	ND	0.291	ND	1.00	02/27/18	KCA	1
Dibromochloromethane	ND	0.118	ND	1.00	02/27/18	KCA	1
Dichlorodifluoromethane	0.407	0.202	2.01	1.00	02/27/18	KCA	1
Ethanol	0.920	0.531	1.73	1.00	02/27/18	KCA	1 1
Ethyl acetate	ND	0.278	ND	1.00	02/27/18	KCA	1 1
Ethylbenzene	ND	0.230	ND	1.00	02/27/18	KCA	1
Heptane	ND	0.244	ND	1.00	02/27/18	KCA	1
Hexachlorobutadiene	ND	0.094	ND	1.00	02/27/18	KCA	1
Hexane	ND	0.284	ND	1.00	02/27/18	KCA	1
Isopropylalcohol	14.4	0.407	35.4	1.00	02/27/18	KCA	1
Isopropylbenzene	ND	0.204	ND	1.00	02/27/18	KCA	1
m,p-Xylene	ND	0.230	ND	1.00	02/27/18	KCA	1
Methyl Ethyl Ketone	0.540	0.339	1.59	1.00	02/27/18	KCA	1
Methyl tert-butyl ether(MTBE)	ND	0.278	ND	1.00	02/27/18	KCA	1
Methylene Chloride	ND	0.864	ND	3.00	02/27/18	KCA	1
n-Butylbenzene	ND	0.182	ND	1.00	02/27/18	KCA	1 1
o-Xylene	ND	0.230	ND	1.00	02/27/18	KCA	1
Propylene	2.55	0.581	4.39	1.00	02/27/18	KCA	1 1
sec-Butylbenzene	ND	0.182	ND	1.00	02/27/18	KCA	1 1
Styrene	ND	0.235	ND	1.00	02/27/18	KCA	1
Tetrachloroethene	ND	0.037	ND	0.25	02/27/18	KCA	1
Tetrahydrofuran	ND	0.339	ND	1.00	02/27/18	KCA	1 1
Toluene	ND	0.266	ND	1.00	02/27/18	KCA	1
Trans-1,2-Dichloroethene	ND	0.252	ND	1.00	02/27/18	KCA	1
trans-1,3-Dichloropropene	ND	0.221	ND	1.00	02/27/18	KCA	1
Trichloroethene	ND	0.037	ND	0.20	02/27/18	KCA	1
Trichlorofluoromethane	ND	0.178	ND	1.00	02/27/18	KCA	1
Trichlorotrifluoroethane	ND	0.131	ND	1.00	02/27/18	KCA	1
Vinyl Chloride	ND	0.078	ND	0.20	02/27/18	KCA	1
<u>QA/QC Surrogates</u>							
% Bromofluorobenzene	103	%	103	%	02/27/18	KCA	1

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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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:

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

March 01, 2018

Reviewed and Released by: Rashmi Makol, Project Manager



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



Analysis Report

March 01, 2018

FOR: Attn: James Wilkinson
EnviroTrac
5 Old Dock Rd
Yaphank, NY 11980

Sample Information

Matrix: AIR
Location Code: ENVIOTR
Rush Request: 72 Hour
P.O.#:
Canister Id: 844

Custody Information

Collected by: JW
Received by: SW
Analyzed by: see "By" below

Date

02/23/18 11:46
02/26/18 15:10

Time

Project ID: ENSAFE-WESTBURY
Client ID: SVE INFLUENT

Laboratory Data

SDG ID: GBZ94589
Phoenix ID: BZ94590

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles (TO15)</u>							
1,1,1,2-Tetrachloroethane	ND	0.146	ND	1.00	02/27/18	KCA	1
1,1,1-Trichloroethane	0.899	0.183	4.90	1.00	02/27/18	KCA	1
1,1,2,2-Tetrachloroethane	ND	0.146	ND	1.00	02/27/18	KCA	1
1,1,2-Trichloroethane	ND	0.183	ND	1.00	02/27/18	KCA	1
1,1-Dichloroethane	ND	0.247	ND	1.00	02/27/18	KCA	1
1,1-Dichloroethene	0.085	0.051	0.34	0.20	02/27/18	KCA	1
1,2,4-Trichlorobenzene	ND	0.135	ND	1.00	02/27/18	KCA	1
1,2,4-Trimethylbenzene	ND	0.204	ND	1.00	02/27/18	KCA	1
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	02/27/18	KCA	1
1,2-Dichlorobenzene	ND	0.166	ND	1.00	02/27/18	KCA	1
1,2-Dichloroethane	ND	0.247	ND	1.00	02/27/18	KCA	1
1,2-dichloropropane	ND	0.217	ND	1.00	02/27/18	KCA	1
1,2-Dichlorotetrafluoroethane	ND	0.143	ND	1.00	02/27/18	KCA	1
1,3,5-Trimethylbenzene	ND	0.204	ND	1.00	02/27/18	KCA	1
1,3-Butadiene	ND	0.452	ND	1.00	02/27/18	KCA	1
1,3-Dichlorobenzene	ND	0.166	ND	1.00	02/27/18	KCA	1
1,4-Dichlorobenzene	ND	0.166	ND	1.00	02/27/18	KCA	1
1,4-Dioxane	ND	0.278	ND	1.00	02/27/18	KCA	1
2-Hexanone(MBK)	ND	0.244	ND	1.00	02/27/18	KCA	1
4-Ethyltoluene	ND	0.204	ND	1.00	02/27/18	KCA	1
4-Isopropyltoluene	ND	0.182	ND	1.00	02/27/18	KCA	1
4-Methyl-2-pentanone(MIBK)	ND	0.244	ND	1.00	02/27/18	KCA	1
Acetone	ND	0.421	ND	1.00	02/27/18	KCA	1
Acrylonitrile	ND	0.461	ND	1.00	02/27/18	KCA	1
Benzene	ND	0.313	ND	1.00	02/27/18	KCA	1
Benzyl chloride	ND	0.193	ND	1.00	02/27/18	KCA	1

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.149	ND	1.00	02/27/18	KCA	1
Bromoform	ND	0.097	ND	1.00	02/27/18	KCA	1
Bromomethane	ND	0.258	ND	1.00	02/27/18	KCA	1
Carbon Disulfide	ND	0.321	ND	1.00	02/27/18	KCA	1
Carbon Tetrachloride	0.085	0.032	0.53	0.20	02/27/18	KCA	1
Chlorobenzene	0.417	0.217	1.92	1.00	02/27/18	KCA	1
Chloroethane	ND	0.379	ND	1.00	02/27/18	KCA	1
Chloroform	ND	0.205	ND	1.00	02/27/18	KCA	1
Chloromethane	ND	0.485	ND	1.00	02/27/18	KCA	1
Cis-1,2-Dichloroethene	252	3.79	999	15.0	02/28/18	KCA	75
cis-1,3-Dichloropropene	ND	0.221	ND	1.00	02/27/18	KCA	1
Cyclohexane	ND	0.291	ND	1.00	02/27/18	KCA	1
Dibromochloromethane	ND	0.118	ND	1.00	02/27/18	KCA	1
Dichlorodifluoromethane	0.569	0.202	2.81	1.00	02/27/18	KCA	1
Ethanol	0.669	0.531	1.26	1.00	02/27/18	KCA	1
Ethyl acetate	ND	0.278	ND	1.00	02/27/18	KCA	1
Ethylbenzene	ND	0.230	ND	1.00	02/27/18	KCA	1
Heptane	ND	0.244	ND	1.00	02/27/18	KCA	1
Hexachlorobutadiene	ND	0.094	ND	1.00	02/27/18	KCA	1
Hexane	ND	0.284	ND	1.00	02/27/18	KCA	1
Isopropylalcohol	2.94	0.407	7.22	1.00	02/27/18	KCA	1
Isopropylbenzene	ND	0.204	ND	1.00	02/27/18	KCA	1
m,p-Xylene	ND	0.230	ND	1.00	02/27/18	KCA	1
Methyl Ethyl Ketone	1.62	0.339	4.77	1.00	02/27/18	KCA	1
Methyl tert-butyl ether(MTBE)	ND	0.278	ND	1.00	02/27/18	KCA	1
Methylene Chloride	ND	0.864	ND	3.00	02/27/18	KCA	1
n-Butylbenzene	ND	0.182	ND	1.00	02/27/18	KCA	1
o-Xylene	ND	0.230	ND	1.00	02/27/18	KCA	1
Propylene	ND	0.581	ND	1.00	02/27/18	KCA	1
sec-Butylbenzene	ND	0.182	ND	1.00	02/27/18	KCA	1
Styrene	ND	0.235	ND	1.00	02/27/18	KCA	1
Tetrachloroethene	8560	13.8	58000	93.5	02/28/18	KCA	375
Tetrahydrofuran	6.87	0.339	20.2	1.00	02/27/18	KCA	1
Toluene	ND	0.266	ND	1.00	02/27/18	KCA	1
Trans-1,2-Dichloroethene	4.53	0.252	17.9	1.00	02/27/18	KCA	1
trans-1,3-Dichloropropene	ND	0.221	ND	1.00	02/27/18	KCA	1
Trichloroethene	378	2.79	2030	15.0	02/28/18	KCA	75
Trichlorofluoromethane	0.340	0.178	1.91	1.00	02/27/18	KCA	1
Trichlorotrifluoroethane	ND	0.131	ND	1.00	02/27/18	KCA	1
Vinyl Chloride	ND	0.078	ND	0.20	02/27/18	KCA	1
<u>QA/OC Surrogates</u>							
% Bromofluorobenzene	112	%	112	%	02/27/18	KCA	1

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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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.

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Phyllis Shiller, Laboratory Director

March 01, 2018

Reviewed and Released by: Rashmi Makol, Project Manager



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

March 01, 2018

QA/QC Data

SDG I.D.: GBZ94589

Parameter	Blk ppbv	Blk RL ppbv	Blk ug/m3	Blk RL ug/m3	LCS %	Sample Result ug/m3	Sample Dup ug/m3	Sample Result ppbv	Sample Dup ppbv	DUP RPD	% Rec Limits	% RPD Limits
QA/QC Batch 421281 (ppbv), QC Sample No: BZ94116 (BZ94589, BZ94590)												
Volatiles												
1,1,1,2-Tetrachloroethane	ND	0.150	ND	1.03	102	ND	ND	ND	ND	NC	70 - 130	25
1,1,1-Trichloroethane	ND	0.180	ND	0.98	107	ND	ND	ND	ND	NC	70 - 130	25
1,1,2,2-Tetrachloroethane	ND	0.150	ND	1.03	106	ND	ND	ND	ND	NC	70 - 130	25
1,1,2-Trichloroethane	ND	0.180	ND	0.98	108	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethane	ND	0.250	ND	1.01	107	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethene	ND	0.050	ND	0.20	103	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trichlorobenzene	ND	0.130	ND	0.96	95	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trimethylbenzene	ND	0.200	ND	0.98	113	6.04	6.29	1.23	1.28	4.0	70 - 130	25
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	116	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorobenzene	ND	0.170	ND	1.02	110	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichloroethane	ND	0.250	ND	1.01	108	ND	ND	ND	ND	NC	70 - 130	25
1,2-dichloropropane	ND	0.220	ND	1.02	110	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorotetrafluoroethane	ND	0.140	ND	0.98	103	ND	ND	ND	ND	NC	70 - 130	25
1,3,5-Trimethylbenzene	ND	0.200	ND	0.98	111	2.10	2.42	0.428	0.493	NC	70 - 130	25
1,3-Butadiene	ND	0.450	ND	0.99	103	ND	ND	ND	ND	NC	70 - 130	25
1,3-Dichlorobenzene	ND	0.170	ND	1.02	110	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dichlorobenzene	ND	0.170	ND	1.02	110	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dioxane	ND	0.280	ND	1.01	116	ND	ND	ND	ND	NC	70 - 130	25
2-Hexanone(MBK)	ND	0.240	ND	0.98	118	ND	ND	ND	ND	NC	70 - 130	25
4-Ethyltoluene	ND	0.200	ND	0.98	111	2.30	1.90	0.469	0.386	NC	70 - 130	25
4-Isopropyltoluene	ND	0.180	ND	0.99	106	ND	ND	ND	ND	NC	70 - 130	25
4-Methyl-2-pentanone(MIBK)	ND	0.240	ND	0.98	114	3.25	3.25	0.795	0.794	NC	70 - 130	25
Acetone	ND	0.420	ND	1.00	99	271	271	114	114	0.0	70 - 130	25
Acrylonitrile	ND	0.460	ND	1.00	89	ND	ND	ND	ND	NC	70 - 130	25
Benzene	ND	0.310	ND	0.99	108	11.0	11.0	3.43	3.44	0.3	70 - 130	25
Benzyl chloride	ND	0.190	ND	0.98	122	ND	ND	ND	ND	NC	70 - 130	25
Bromodichloromethane	ND	0.150	ND	1.00	111	ND	ND	ND	ND	NC	70 - 130	25
Bromoform	ND	0.097	ND	1.00	123	ND	ND	ND	ND	NC	70 - 130	25
Bromomethane	ND	0.260	ND	1.01	100	ND	ND	ND	ND	NC	70 - 130	25
Carbon Disulfide	ND	0.320	ND	1.00	134	5.97	5.94	1.92	1.91	0.5	70 - 130	25
Carbon Tetrachloride	ND	0.032	ND	0.20	105	0.22	0.19	0.035	0.031	NC	70 - 130	25
Chlorobenzene	ND	0.220	ND	1.01	101	ND	ND	ND	ND	NC	70 - 130	25
Chloroethane	ND	0.380	ND	1.00	100	ND	ND	ND	ND	NC	70 - 130	25
Chloroform	ND	0.200	ND	0.98	103	ND	ND	ND	ND	NC	70 - 130	25
Chloromethane	ND	0.480	ND	0.99	99	31.4	33.4	15.2	16.2	6.4	70 - 130	25
Cis-1,2-Dichloroethene	ND	0.050	ND	0.20	115	0.27	0.22	0.068	0.056	NC	70 - 130	25
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	116	ND	ND	ND	ND	NC	70 - 130	25
Cyclohexane	ND	0.290	ND	1.00	107	17.8	17.2	5.16	5.01	2.9	70 - 130	25
Dibromochloromethane	ND	0.120	ND	1.02	115	ND	ND	ND	ND	NC	70 - 130	25
Dichlorodifluoromethane	ND	0.200	ND	0.99	101	54.9	57.3	11.1	11.6	4.4	70 - 130	25
Ethanol	ND	0.530	ND	1.00	100	76.3	80.0	40.5	42.5	4.8	70 - 130	25

QA/QC Data

SDG I.D.: GBZ94589

Parameter	Blk ppbv	Blk RL ppbv	Blk ug/m3	Blk RL ug/m3	LCS %	Sample Result ug/m3	Sample Dup ug/m3	Sample Result ppbv	Sample Dup ppbv	DUP RPD	% Rec Limits	% RPD Limits
Ethyl acetate	ND	0.280	ND	1.01	119	ND	ND	ND	ND	NC	70 - 130	25
Ethylbenzene	ND	0.230	ND	1.00	117	9.9	10.2	2.29	2.35	2.6	70 - 130	25
Heptane	ND	0.240	ND	0.98	115	18.3	18.2	4.47	4.45	0.4	70 - 130	25
Hexachlorobutadiene	ND	0.094	ND	1.00	91	ND	ND	ND	ND	NC	70 - 130	25
Hexane	ND	0.280	ND	0.99	116	13.1	13.9	3.72	3.96	6.2	70 - 130	25
Isopropylalcohol	ND	0.410	ND	1.01	91	3.73	3.98	1.52	1.62	NC	70 - 130	25
Isopropylbenzene	ND	0.200	ND	0.98	103	ND	ND	ND	ND	NC	70 - 130	25
m,p-Xylene	ND	0.230	ND	1.00	119	29.2	29.6	6.73	6.83	1.5	70 - 130	25
Methyl Ethyl Ketone	ND	0.340	ND	1.00	107	28.9	29.5	9.8	10.0	2.0	70 - 130	25
Methyl tert-butyl ether(MTBE)	ND	0.280	ND	1.01	117	ND	ND	ND	ND	NC	70 - 130	25
Methylene Chloride	ND	0.860	ND	2.99	97	ND	ND	ND	ND	NC	70 - 130	25
n-Butylbenzene	ND	0.180	ND	0.99	102	ND	ND	ND	ND	NC	70 - 130	25
o-Xylene	ND	0.230	ND	1.00	112	11.2	11.6	2.59	2.68	3.4	70 - 130	25
Propylene	ND	0.580	ND	1.00	105	ND	ND	ND	ND	NC	70 - 130	25
sec-Butylbenzene	ND	0.180	ND	0.99	101	ND	ND	ND	ND	NC	70 - 130	25
Styrene	ND	0.230	ND	0.98	120	1.28	1.65	0.300	0.388	NC	70 - 130	25
Tetrachloroethene	ND	0.037	ND	0.25	106	5.78	5.22	0.852	0.770	10.1	70 - 130	25
Tetrahydrofuran	ND	0.340	ND	1.00	118	15.3	15.3	5.20	5.18	0.4	70 - 130	25
Toluene	ND	0.270	ND	1.02	121	64.4	64.0	17.1	17.0	0.6	70 - 130	25
Trans-1,2-Dichloroethene	ND	0.250	ND	0.99	113	ND	ND	ND	ND	NC	70 - 130	25
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	119	ND	ND	ND	ND	NC	70 - 130	25
Trichloroethene	ND	0.037	ND	0.20	113	0.25	0.26	0.047	0.049	NC	70 - 130	25
Trichlorofluoromethane	ND	0.180	ND	1.01	102	6.57	6.51	1.17	1.16	0.9	70 - 130	25
Trichlorotrifluoroethane	ND	0.130	ND	1.00	101	ND	ND	ND	ND	NC	70 - 130	25
Vinyl Chloride	ND	0.078	ND	0.20	101	ND	ND	ND	ND	NC	70 - 130	25
% Bromofluorobenzene	99		99		100	96	97	96	97	NC	70 - 130	25

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
March 01, 2018

Thursday, March 01, 2018

Criteria: None
State: NY

Sample Criteria Exceedances Report
GBZ94589 - ENVIROTR

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



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587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
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Analysis Comments

March 01, 2018

SDG I.D.: GBZ94589

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

AIRSIM

CHEM20 02/27/18-1: BZ94589, BZ94590

The following Initial Calibration compounds did not meet RSD% criteria: Propylene 40% (30%)

The following Initial Calibration compounds did not meet maximum RSD% criteria: Propylene 40% (30%)

