ENSAFE
a global professional services company
creative thinking. **custom solutions.®**

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

October 12, 2017

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

Re: Progress Report: September 2017 - REVISED
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 revised Progress Report for the Frost Street Sites (Site ID #s 1-30043 I, L, M) for work completed in September 2017.

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**).
- Quantitative sampling of the SVE system granular activated carbon influent and effluent air flow was conducted after the carbon exchange, on September 5, 2017, 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**.
    - Influent concentrations of Frost Street-related contaminants of concern (tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, and vinyl chloride) continue to indicate significant mass extraction. Photoionization detector readings between the lead and lag activated carbon media vessels and in the effluent air stream exhibit 0.0 parts per million total volatile organic compounds.
    - Effluent concentrations are well below the allowable limits, as shown in the table below.

Frost Street Sites Effluent Compliance			
System Flow Rate =		800	ft^3/m
Compound	**Annual Mass Emission Limit (lbs/year)**	**Allowable Continuous Annual Concentration ($\mu g/m^3$)**	**September 2017 Effluent Concentration ($\mu g/m^3$)**
Trichloroethene	500	19,000	2.04
Tetrachloroethene	1,000	38,000	1.88
Vinyl Chloride	100	3,800	ND
Cis-1,2-Dichloroethene	100	3,800	452

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)

- Construction continued on the groundwater extraction/hydraulic contaminant system. Activities this month included:
  - Monitoring well installation (FSMW-8C and 8D)
  - Extraction and monitoring well development
  - Subsurface completions for extraction and monitoring wells
  - Trenching to extraction wells for system piping and pitless adapter installation
  - Drilling equipment demobilization
- Additional details and photographs regarding these activities can be found in the previously submitted daily summary reports, included as Appendix C.

Quarterly/Annual Groundwater Monitoring

- The third quarter 2017 groundwater sampling event was completed the week of September 25, 2017. Results will be submitted in forthcoming report, when available.

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.

ENSAFE

Copies:	A. Tamuno, Esq., NYSDEC	*Via email to amtamuno@gw.dec.state.ny.us*
	G. Bobersky, NYSDEC	*Via email to gtbobers@gw.dec.state.ny.us*
	C. Bethoney, NYSDOH	*Via email to charlotte.bethoney@health.ny.gov*
	J. Nealon, NYSDOH	*Via email to jacquelyn.nealon@health.ny.gov*
	R. Putnam, NCDOH	*Via email to rputnam@nassaucountyny.gov*
	T. Pupilla, Sanders Equities	*Via email to tpupilla@sandersequities.com*
	K. Maldonado, Esq.	*Via email to kevinmaldonado64@yahoo.com*
	J. Privitera, Esq.	*Via email to privitera@mltw.com*
	J. LaPoma, U.S. EPA	*Via email to lapoma.jennifer@epa.gov*
	J. Heaney, Walden Associates	*Via email to jheaney@walden-associates.com*
	P. Coop, EnSafe	*Via email to pcoop@ensafe.com*
	J. Parillo, EnSafe	*Via email to jparillo@ensafe.com*
	J. Wilkinson, Envirotrac	*Via email to jamesw@envirotrac.com*

Appendix A

SVE/AS System O&M Logs

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: 1-Sep
Weather / Temp: Clear / 75 DEG
Technician / Operator: JW

Arrival Time: 16:00
Departure Time: 17:00

System Status					
	Arrival	Departure		Arrival	Departure
SVE Blower 1 (ON/OFF)	OFF	OFF	Sensaphone (ON/OFF)	ON	ON
SVE Blower 2 (ON/OFF)	ON	ON	Surge Protection (ON/OFF)	ON	ON
AS Compressor 1 (ON/OFF)	OFF	OFF	Lightning Protection (White/Black)	White	White
AS Compressor 2 (ON/OFF)	ON	ON			

Soil Vapor Extraction System				
Blower Air Velocity/Flow Rate (fpm)/(cfm)	4700	923	Blower 1 Total Runtime (hrs)	47,980.9
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	47,856.9
Blower 2 Fresh Air Valve Open (%)	0		Blower 1 Air Filter Differential Pressure ("H2O)	0
Moisture Separator Vacuum ("Hg)	2.5		Blower 2 Air Filter Differential Pressure ("H2O)	0
VGAC-1 Influent Vacuum ("H2O)	40		VGAC-1 Influent PID (ppm)	6.7
VGAC-1 Effluent Vacuum ("H2O)	48		VGAC-1 Effluent PID (ppm)	0.0
VGAC-2 Influent Vacuum ("H2O)	46		VGAC-2 Influent PID (ppm)	6.7
VGAC-2 Effluent Vacuum ("H2O)	48		VGAC-2 Effluent PID (ppm)	0.0
VGAC-3 Influent Vacuum ("H2O)	36		VGAC-3 Influent PID (ppm)	0.0
VGAC-3 Effluent Vacuum ("H2O)	40		VGAC-3 Effluent PID (ppm)	0.0
Blower Effluent Temp (DegF)	NA		Blower Effluent PID (ppm)	0.0
Blower Effluent Pressure ("H2O)	10			
Transfer Pump Total Runtime (hrs)	25,026.0		Condensate Storage Tank Level (gal)	100

SVE Manifold Legs - Vacuum/Flow Rate/PID									
	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	40	7000	153		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	32	3900	85	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	42	4000	87		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	32	2750	60	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	34	4500	98		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	32	5500	120	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	32	4000	87		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	34	2800	61	

Air Sparge System			
Compressor 1 Pressure (psi)	Off for repairs	Compressor 2 Pressure (psi)	87
Compressor 1 Temperature (degF)	Off for repairs	Compressor 2 Temperature (degF)	188
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	23,547
Manifold Regulator Pressure (psi)	80		

AS Manifold Legs - Pressure/Flow Rate					
	Pressure	Flow Rate		Pressure	Flow Rate
AS-1 (psi)/(cfm)	15	10	AS-11 (psi)/(cfm)	13	4
AS-2 (psi)/(cfm)	15	7	AS-12B (psi)/(cfm)	13	9
AS-3 (psi)/(cfm)	13	6	AS-13B (psi)/(cfm)	13	8
AS-4 (psi)/(cfm)	13	10	AS-14 (psi)/(cfm)	14	10
AS-5 (psi)/(cfm)	15	8	AS-15 (psi)/(cfm)	13.5	10
AS-6 (psi)/(cfm)	13	8	AS-16B (psi)/(cfm)	13	10
AS-7 (psi)/(cfm)	14	4	AS-17 (psi)/(cfm)	14	5
AS-8 (psi)/(cfm)	14.5	10	AS-18 (psi)/(cfm)	10.5	6
AS-9 (psi)/(cfm)	13	10	AS-19 (psi)/(cfm)	12	4
AS-10B (psi)/(cfm)	13	10			

Notes, Comments & Observations:

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: 5-Sep
Weather / Temp: Clear / 84 DEG
Technician / Operator: DW

Arrival Time: 12:00
Departure Time: 13:30

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)	4200	825	Blower 1 Total Runtime (hrs)	48,025.9
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	47,904.4
Blower 2 Fresh Air Valve Open (%)	0		Blower 1 Air Filter Differential Pressure ("H2O)	0
Moisture Separator Vacuum ("Hg)	2		Blower 2 Air Filter Differential Pressure ("H2O)	0
VGAC-1 Influent Vacuum ("H2O)	44		VGAC-1 Influent PID (ppm)	6.4
VGAC-1 Effluent Vacuum ("H2O)	60		VGAC-1 Effluent PID (ppm)	0.0
VGAC-2 Influent Vacuum ("H2O)	40		VGAC-2 Influent PID (ppm)	6.4
VGAC-2 Effluent Vacuum ("H2O)	40		VGAC-2 Effluent PID (ppm)	0.0
VGAC-3 Influent Vacuum ("H2O)	35		VGAC-3 Influent PID (ppm)	0.0
VGAC-3 Effluent Vacuum ("H2O)	40		VGAC-3 Effluent PID (ppm)	0.0
Blower Effluent Temp (DegF)	NA		Blower Effluent PID (ppm)	0.0
Blower Effluent Pressure ("H2O)	4			
Transfer Pump Total Runtime (hrs)	25,026.0		Condensate Storage Tank Level (gal)	100

SVE Manifold Legs - Vacuum/Flow Rate/PID

	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	34	5750	125	12.2	SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	28	3600	79	0.0
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	36	3500	76	1.7	SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	28	2500	55	0.0
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	28	4000	87	3.0	SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	26	5000	109	15.0
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	26	3600	79	0.0	SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	30	2600	57	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)	190
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	23,640
Manifold Regulator Pressure (psi)	85		

AS Manifold Legs - Pressure/Flow Rate

	Pressure	Flow Rate		Pressure	Flow Rate
AS-1 (psi)/(cfm)	15	10	AS-11 (psi)/(cfm)	13	4
AS-2 (psi)/(cfm)	15	7	AS-12B (psi)/(cfm)	13	8
AS-3 (psi)/(cfm)	13	7	AS-13B (psi)/(cfm)	13	8
AS-4 (psi)/(cfm)	13	10	AS-14 (psi)/(cfm)	14	10
AS-5 (psi)/(cfm)	14	8	AS-15 (psi)/(cfm)	14	11
AS-6 (psi)/(cfm)	15	8	AS-16B (psi)/(cfm)	14	10
AS-7 (psi)/(cfm)	15	4	AS-17 (psi)/(cfm)	14	5
AS-8 (psi)/(cfm)	15	10	AS-18 (psi)/(cfm)	10	6
AS-9 (psi)/(cfm)	14	10	AS-19 (psi)/(cfm)	12	4
AS-10B (psi)/(cfm)	14	10			

Notes, Comments & Observations:

Collected monthly samples.

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: 11-Sep
Weather / Temp: Clear / 70 DEG
Technician / Operator: DW

Arrival Time: 14:00
Departure Time: 15:00

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)	4100	805	Blower 1 Total Runtime (hrs)	48,101.8
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	47,971.4
Blower 2 Fresh Air Valve Open (%)	0		Blower 1 Air Filter Differential Pressure ("H2O)	0
Moisture Separator Vacuum ("Hg)	2.5		Blower 2 Air Filter Differential Pressure ("H2O)	0
VGAC-1 Influent Vacuum ("H2O)	58		VGAC-1 Influent PID (ppm)	6.0
VGAC-1 Effluent Vacuum ("H2O)	48		VGAC-1 Effluent PID (ppm)	0.0
VGAC-2 Influent Vacuum ("H2O)	44		VGAC-2 Influent PID (ppm)	6.0
VGAC-2 Effluent Vacuum ("H2O)	44		VGAC-2 Effluent PID (ppm)	0.0
VGAC-3 Influent Vacuum ("H2O)	42		VGAC-3 Influent PID (ppm)	0.0
VGAC-3 Effluent Vacuum ("H2O)	48		VGAC-3 Effluent PID (ppm)	0.0
Blower Effluent Temp (DegF)	NA		Blower Effluent PID (ppm)	0.0
Blower Effluent Pressure ("H2O)	4			
Transfer Pump Total Runtime (hrs)	25,026.0		Condensate Storage Tank Level (gal)	100

SVE Manifold Legs - Vacuum/Flow Rate/PID

	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	34	6000	131		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	28	3600	79	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	36	3500	76		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	28	2500	55	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	28	4100	89		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	28	5000	109	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	26	3600	79		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	30	2600	57	

Air Sparge System

Compressor 1 Pressure (psi)	Off for repairs	Compressor 2 Pressure (psi)	84
Compressor 1 Temperature (degF)	Off for repairs	Compressor 2 Temperature (degF)	188
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	23,704
Manifold Regulator Pressure (psi)	75		

AS Manifold Legs - Pressure/Flow Rate

	Pressure	Flow Rate		Pressure	Flow Rate
AS-1 (psi)/(cfm)	16	7	AS-11 (psi)/(cfm)	15	5
AS-2 (psi)/(cfm)	15	4	AS-12B (psi)/(cfm)	15	7
AS-3 (psi)/(cfm)	15	9	AS-13B (psi)/(cfm)	14	7
AS-4 (psi)/(cfm)	15	11	AS-14 (psi)/(cfm)	15	8
AS-5 (psi)/(cfm)	15	11	AS-15 (psi)/(cfm)	15	9
AS-6 (psi)/(cfm)	15	6	AS-16B (psi)/(cfm)	14	8
AS-7 (psi)/(cfm)	15	6	AS-17 (psi)/(cfm)	15	5
AS-8 (psi)/(cfm)	15	10	AS-18 (psi)/(cfm)	13	6
AS-9 (psi)/(cfm)	15	9	AS-19 (psi)/(cfm)	14	7
AS-10B (psi)/(cfm)	14	11			

Notes, Comments & Observations:

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: 18-Sep
Weather / Temp: Rain / 70 DEG
Technician / Operator: DW

Arrival Time: 11:00
Departure Time: 13:00

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)	4200	825	Blower 1 Total Runtime (hrs)	48,185.4
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	48,055.4
Blower 2 Fresh Air Valve Open (%)	0		Blower 1 Air Filter Differential Pressure ("H2O)	0
Moisture Separator Vacuum ("Hg)	2.5		Blower 2 Air Filter Differential Pressure ("H2O)	0
VGAC-1 Influent Vacuum ("H2O)	56		VGAC-1 Influent PID (ppm)	5.2
VGAC-1 Effluent Vacuum ("H2O)	48		VGAC-1 Effluent PID (ppm)	0.0
VGAC-2 Influent Vacuum ("H2O)	46		VGAC-2 Influent PID (ppm)	5.2
VGAC-2 Effluent Vacuum ("H2O)	44		VGAC-2 Effluent PID (ppm)	0.0
VGAC-3 Influent Vacuum ("H2O)	42		VGAC-3 Influent PID (ppm)	0.0
VGAC-3 Effluent Vacuum ("H2O)	48		VGAC-3 Effluent PID (ppm)	0.0
Blower Effluent Temp (DegF)	NA		Blower Effluent PID (ppm)	0.0
Blower Effluent Pressure ("H2O)	4			
Transfer Pump Total Runtime (hrs)	25,026.0		Condensate Storage Tank Level (gal)	100

SVE Manifold Legs - Vacuum/Flow Rate/PID									
	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	36	6000	131		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	28	3600	79	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	38	2500	55		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	28	2500	55	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	28	4100	89		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	28	5000	109	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	26	3600	79		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	30	2600	57	

Air Sparge System			
Compressor 1 Pressure (psi)	Off for repairs	Compressor 2 Pressure (psi)	97
Compressor 1 Temperature (degF)	Off for repairs	Compressor 2 Temperature (degF)	174
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	23,853
Manifold Regulator Pressure (psi)	90		

AS Manifold Legs - Pressure/Flow Rate					
	Pressure	Flow Rate		Pressure	Flow Rate
AS-1 (psi)/(cfm)	18	5	AS-11 (psi)/(cfm)	16	4
AS-2 (psi)/(cfm)	16	4	AS-12B (psi)/(cfm)	16	6
AS-3 (psi)/(cfm)	15	7	AS-13B (psi)/(cfm)	15	6
AS-4 (psi)/(cfm)	15	6	AS-14 (psi)/(cfm)	15	8
AS-5 (psi)/(cfm)	16	11	AS-15 (psi)/(cfm)	16	8
AS-6 (psi)/(cfm)	16	8	AS-16B (psi)/(cfm)	15	7
AS-7 (psi)/(cfm)	16	8	AS-17 (psi)/(cfm)	15	4
AS-8 (psi)/(cfm)	16	9	AS-18 (psi)/(cfm)	15	7
AS-9 (psi)/(cfm)	16	12	AS-19 (psi)/(cfm)	15	9
AS-10B (psi)/(cfm)	15	7			

Notes, Comments & Observations:

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: 26-Sep
Weather / Temp: Clear / 80 DEG
Technician / Operator: DW

Arrival Time: 12:30
Departure Time: 14:00

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)	4000	785	Blower 1 Total Runtime (hrs)	48,287.2
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	48,148.5
Blower 2 Fresh Air Valve Open (%)	0		Blower 1 Air Filter Differential Pressure ("H2O)	0
Moisture Separator Vacuum ("Hg)	2.5		Blower 2 Air Filter Differential Pressure ("H2O)	0
VGAC-1 Influent Vacuum ("H2O)	56		VGAC-1 Influent PID (ppm)	6.0
VGAC-1 Effluent Vacuum ("H2O)	48		VGAC-1 Effluent PID (ppm)	0.0
VGAC-2 Influent Vacuum ("H2O)	42		VGAC-2 Influent PID (ppm)	6.0
VGAC-2 Effluent Vacuum ("H2O)	40		VGAC-2 Effluent PID (ppm)	0.0
VGAC-3 Influent Vacuum ("H2O)	43		VGAC-3 Influent PID (ppm)	0.0
VGAC-3 Effluent Vacuum ("H2O)	48		VGAC-3 Effluent PID (ppm)	0.0
Blower Effluent Temp (DegF)	NA		Blower Effluent PID (ppm)	0.0
Blower Effluent Pressure ("H2O)	4			
Transfer Pump Total Runtime (hrs)	25,026.0		Condensate Storage Tank Level (gal)	100

SVE Manifold Legs - Vacuum/Flow Rate/PID

	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	36	6000	131		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	28	3600	79	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	38	2500	55		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	30	2500	55	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	30	4100	89		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	28	5000	109	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	26	3600	79		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	30	2600	57	

Air Sparge System

Compressor 1 Pressure (psi)	Off for repairs	Compressor 2 Pressure (psi)	83
Compressor 1 Temperature (degF)	Off for repairs	Compressor 2 Temperature (degF)	151
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	23,952
Manifold Regulator Pressure (psi)	80		

AS Manifold Legs - Pressure/Flow Rate

	Pressure	Flow Rate		Pressure	Flow Rate
AS-1 (psi)/(cfm)	17	5	AS-11 (psi)/(cfm)	16	9
AS-2 (psi)/(cfm)	15	4	AS-12B (psi)/(cfm)	16	7
AS-3 (psi)/(cfm)	15	9	AS-13B (psi)/(cfm)	15	8
AS-4 (psi)/(cfm)	15	5	AS-14 (psi)/(cfm)	16	8
AS-5 (psi)/(cfm)	16	11	AS-15 (psi)/(cfm)	16	8
AS-6 (psi)/(cfm)	16	8	AS-16B (psi)/(cfm)	16	7
AS-7 (psi)/(cfm)	16	8	AS-17 (psi)/(cfm)	16	4
AS-8 (psi)/(cfm)	16	9	AS-18 (psi)/(cfm)	14	7
AS-9 (psi)/(cfm)	16	12	AS-19 (psi)/(cfm)	16	9
AS-10B (psi)/(cfm)	16	6			

Notes, Comments & Observations:

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

Alarm Date	Site Visit Date	Personnel	ALARM DESCRIPTION	Corrective Action	SVE Status Upon Departure	AS Status Upon Departure
9/8/2017	9/8/2017	JW	AS Fault - compressor off due to tripped circuit breaker.	Reset breaker, checked compressor filters and oil, restarted.	ON	ON
9/10/2017	9/11/2017	DW	AS Fault - compressor off due to tripped circuit breaker.	Reset breaker, changed compressor filters and added oil, restarted.	ON	ON
9/17/2017	9/18/2017	DW	AS Fault - compressor off due to tripped circuit breaker.	Reset breaker, checked compressor filters and oil, restarted.	ON	ON
9/24/2017	9/26/2017	DW	AS Fault - compressor off due to tripped circuit breaker.	Reset breaker, checked compressor filters and oil, restarted.	ON	ON

Appendix B

SVE System Influent/Effluent Sampling (TO-15)

Laboratory Analytical Results

PHOENIX
Environmental Laboratories, Inc.

Thursday, September 14, 2017

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

Project ID: ENSAFE-WESTBURY
Sample ID#s: BY97918 - BY97919

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

September 14, 2017

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

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	DW	09/05/17	13:20
Location Code:	ENVIROTR	Received by:	LB	09/08/17	16:02
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	735				

Laboratory Data

SDG ID: GBY97918
Phoenix ID: BY97918

Project ID: ENSAFE-WESTBURY
Client ID: SVE INFLUENT

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Volatiles (TO15)								
1,1,1,2-Tetrachloroethane	ND	*1.46*	ND	*10.0*	09/12/17	KCA	10	1
1,1,1-Trichloroethane	ND	*1.83*	ND	*10.0*	09/12/17	KCA	10	
1,1,2,2-Tetrachloroethane	ND	*1.46*	ND	*10.0*	09/12/17	KCA	10	
1,1,2-Trichloroethane	ND	*1.83*	ND	*10.0*	09/12/17	KCA	10	
1,1-Dichloroethane	ND	*2.47*	ND	*10.0*	09/12/17	KCA	10	
1,1-Dichloroethene	ND	*0.505*	ND	*2.00*	09/12/17	KCA	10	
1,2,4-Trichlorobenzene	ND	*1.35*	ND	*10.0*	09/12/17	KCA	10	
1,2,4-Trimethylbenzene	ND	*2.04*	ND	*10.0*	09/12/17	KCA	10	
1,2-Dibromoethane(EDB)	ND	*1.30*	ND	*10.0*	09/12/17	KCA	10	
1,2-Dichlorobenzene	ND	*1.66*	ND	*10.0*	09/12/17	KCA	10	
1,2-Dichloroethane	ND	*2.47*	ND	*10.0*	09/12/17	KCA	10	
1,2-dichloropropane	ND	*2.17*	ND	*10.0*	09/12/17	KCA	10	
1,2-Dichlorotetrafluoroethane	ND	*1.43*	ND	*10.0*	09/12/17	KCA	10	
1,3,5-Trimethylbenzene	ND	*2.04*	ND	*10.0*	09/12/17	KCA	10	
1,3-Butadiene	ND	*4.52*	ND	*10.0*	09/12/17	KCA	10	
1,3-Dichlorobenzene	ND	*1.66*	ND	*10.0*	09/12/17	KCA	10	
1,4-Dichlorobenzene	ND	*1.66*	ND	*10.0*	09/12/17	KCA	10	
1,4-Dioxane	ND	*2.78*	ND	*10.0*	09/12/17	KCA	10	
2-Hexanone(MBK)	ND	*2.44*	ND	*10.0*	09/12/17	KCA	10	1
4-Ethyltoluene	ND	*2.04*	ND	*10.0*	09/12/17	KCA	10	1
4-Isopropyltoluene	ND	*1.82*	ND	*10.0*	09/12/17	KCA	10	1
4-Methyl-2-pentanone(MIBK)	ND	*2.44*	ND	*10.0*	09/12/17	KCA	10	
Acetone	ND	*4.21*	ND	*10.0*	09/12/17	KCA	10	
Acrylonitrile	ND	*4.61*	ND	*10.0*	09/12/17	KCA	10	
Benzene	ND	*3.13*	ND	*10.0*	09/12/17	KCA	10	
Benzyl chloride	ND	*1.93*	ND	*10.0*	09/12/17	KCA	10	

Project ID: ENSAFE-WESTBURY
Client ID: SVE INFLUENT

Phoenix I.D.: BY97918

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*1.49*	ND	*10.0*	09/12/17	KCA	10	
Bromoform	ND	*0.968*	ND	*10.0*	09/12/17	KCA	10	
Bromomethane	ND	*2.58*	ND	*10.0*	09/12/17	KCA	10	
Carbon Disulfide	ND	*3.21*	ND	*10.0*	09/12/17	KCA	10	
Carbon Tetrachloride	ND	*0.318*	ND	*2.00*	09/12/17	KCA	10	
Chlorobenzene	ND	*2.17*	ND	*10.0*	09/12/17	KCA	10	
Chloroethane	ND	*3.79*	ND	*10.0*	09/12/17	KCA	10	
Chloroform	ND	*2.05*	ND	*10.0*	09/12/17	KCA	10	
Chloromethane	ND	*4.85*	ND	*10.0*	09/12/17	KCA	10	
Cis-1,2-Dichloroethene	190	*0.505*	753	*2.00*	09/12/17	KCA	10	
cis-1,3-Dichloropropene	ND	*2.20*	ND	*10.0*	09/12/17	KCA	10	
Cyclohexane	ND	*2.91*	ND	*10.0*	09/12/17	KCA	10	
Dibromochloromethane	ND	*1.17*	ND	*10.0*	09/12/17	KCA	10	
Dichlorodifluoromethane	ND	*2.02*	ND	*10.0*	09/12/17	KCA	10	
Ethanol	ND	*5.31*	ND	*10.0*	09/12/17	KCA	10	1
Ethyl acetate	ND	*2.78*	ND	*10.0*	09/12/17	KCA	10	1
Ethylbenzene	ND	*2.30*	ND	*10.0*	09/12/17	KCA	10	
Heptane	ND	*2.44*	ND	*10.0*	09/12/17	KCA	10	
Hexachlorobutadiene	ND	*0.938*	ND	*10.0*	09/12/17	KCA	10	
Hexane	ND	*2.84*	ND	*10.0*	09/12/17	KCA	10	
Isopropylalcohol	ND	*4.07*	ND	*10.0*	09/12/17	KCA	10	
Isopropylbenzene	ND	*2.04*	ND	*10.0*	09/12/17	KCA	10	
m,p-Xylene	ND	*2.30*	ND	*10.0*	09/12/17	KCA	10	
Methyl Ethyl Ketone	ND	*3.39*	ND	*10.0*	09/12/17	KCA	10	
Methyl tert-butyl ether(MTBE)	ND	*2.78*	ND	*10.0*	09/12/17	KCA	10	
Methylene Chloride	ND	*8.64*	ND	*30.0*	09/12/17	KCA	10	
n-Butylbenzene	ND	*1.82*	ND	*10.0*	09/12/17	KCA	10	1
o-Xylene	ND	*2.30*	ND	*10.0*	09/12/17	KCA	10	
Propylene	ND	*5.81*	ND	*10.0*	09/12/17	KCA	10	1
sec-Butylbenzene	ND	*1.82*	ND	*10.0*	09/12/17	KCA	10	1
Styrene	ND	*2.35*	ND	*10.0*	09/12/17	KCA	10	
Tetrachloroethene	2950	*11.1*	20000	*75.2*	09/12/17	KCA	300	
Tetrahydrofuran	ND	*3.39*	ND	*10.0*	09/12/17	KCA	10	1
Toluene	ND	*2.66*	ND	*10.0*	09/12/17	KCA	10	
Trans-1,2-Dichloroethene	ND	*2.52*	ND	*10.0*	09/12/17	KCA	10	
trans-1,3-Dichloropropene	ND	*2.20*	ND	*10.0*	09/12/17	KCA	10	
Trichloroethene	254	*0.372*	1360	*2.00*	09/12/17	KCA	10	
Trichlorofluoromethane	ND	*1.78*	ND	*10.0*	09/12/17	KCA	10	
Trichlorotrifluoroethane	ND	*1.31*	ND	*10.0*	09/12/17	KCA	10	
Vinyl Chloride	ND	*0.783*	ND	*2.00*	09/12/17	KCA	10	
QA/QC Surrogates								
% Bromofluorobenzene	115	*%*	115	*%*	09/12/17	KCA	10	

Ver 1

Project ID: ENSAFE-WESTBURY
Client ID: SVE INFLUENT

Phoenix I.D.: BY97918

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

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

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

Comments:

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

Phyllis Shiller, Laboratory Director
September 14, 2017
Reviewed and Released by: Ethan Lee, Project Manager

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

September 14, 2017

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

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	DW	09/05/17	13:15
Location Code:	ENVIROTR	Received by:	LB	09/08/17	16:02
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	817				

Laboratory Data

SDG ID: GBY97918
Phoenix ID: BY97919

Project ID: ENSAFE-WESTBURY
Client ID: SVE EFFLUENT

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Volatiles (TO15)								
1,1,1,2-Tetrachloroethane	ND	*0.146*	ND	*1.00*	09/12/17	KCA	1	1
1,1,1-Trichloroethane	ND	*0.183*	ND	*1.00*	09/12/17	KCA	1	
1,1,2,2-Tetrachloroethane	ND	*0.146*	ND	*1.00*	09/12/17	KCA	1	
1,1,2-Trichloroethane	ND	*0.183*	ND	*1.00*	09/12/17	KCA	1	
1,1-Dichloroethane	ND	*0.247*	ND	*1.00*	09/12/17	KCA	1	
1,1-Dichloroethene	ND	*0.051*	ND	*0.20*	09/12/17	KCA	1	
1,2,4-Trichlorobenzene	ND	*0.135*	ND	*1.00*	09/12/17	KCA	1	
1,2,4-Trimethylbenzene	ND	*0.204*	ND	*1.00*	09/12/17	KCA	1	
1,2-Dibromoethane(EDB)	ND	*0.130*	ND	*1.00*	09/12/17	KCA	1	
1,2-Dichlorobenzene	ND	*0.166*	ND	*1.00*	09/12/17	KCA	1	
1,2-Dichloroethane	ND	*0.247*	ND	*1.00*	09/12/17	KCA	1	
1,2-dichloropropane	ND	*0.217*	ND	*1.00*	09/12/17	KCA	1	
1,2-Dichlorotetrafluoroethane	ND	*0.143*	ND	*1.00*	09/12/17	KCA	1	
1,3,5-Trimethylbenzene	ND	*0.204*	ND	*1.00*	09/12/17	KCA	1	
1,3-Butadiene	ND	*0.452*	ND	*1.00*	09/12/17	KCA	1	
1,3-Dichlorobenzene	ND	*0.166*	ND	*1.00*	09/12/17	KCA	1	
1,4-Dichlorobenzene	ND	*0.166*	ND	*1.00*	09/12/17	KCA	1	
1,4-Dioxane	ND	*0.278*	ND	*1.00*	09/12/17	KCA	1	
2-Hexanone(MBK)	0.543	*0.244*	2.22	*1.00*	09/12/17	KCA	1	1
4-Ethyltoluene	ND	*0.204*	ND	*1.00*	09/12/17	KCA	1	1
4-Isopropyltoluene	ND	*0.182*	ND	*1.00*	09/12/17	KCA	1	1
4-Methyl-2-pentanone(MIBK)	ND	*0.244*	ND	*1.00*	09/12/17	KCA	1	
Acetone	4.47	*0.421*	10.6	*1.00*	09/12/17	KCA	1	
Acrylonitrile	ND	*0.461*	ND	*1.00*	09/12/17	KCA	1	
Benzene	ND	*0.313*	ND	*1.00*	09/12/17	KCA	1	
Benzyl chloride	ND	*0.193*	ND	*1.00*	09/12/17	KCA	1	

Project ID: ENSAFE-WESTBURY
Client ID: SVE EFFLUENT

Phoenix I.D.: BY97919

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*0.149*	ND	*1.00*	09/12/17	KCA	1	
Bromoform	ND	*0.097*	ND	*1.00*	09/12/17	KCA	1	
Bromomethane	ND	*0.258*	ND	*1.00*	09/12/17	KCA	1	
Carbon Disulfide	ND	*0.321*	ND	*1.00*	09/12/17	KCA	1	
Carbon Tetrachloride	ND	*0.032*	ND	*0.20*	09/12/17	KCA	1	
Chlorobenzene	ND	*0.217*	ND	*1.00*	09/12/17	KCA	1	
Chloroethane	ND	*0.379*	ND	*1.00*	09/12/17	KCA	1	
Chloroform	ND	*0.205*	ND	*1.00*	09/12/17	KCA	1	
Chloromethane	ND	*0.485*	ND	*1.00*	09/12/17	KCA	1	
Cis-1,2-Dichloroethene	114	*0.505*	452	*2.00*	09/12/17	KCA	10	
cis-1,3-Dichloropropene	ND	*0.221*	ND	*1.00*	09/12/17	KCA	1	
Cyclohexane	ND	*0.291*	ND	*1.00*	09/12/17	KCA	1	
Dibromochloromethane	ND	*0.118*	ND	*1.00*	09/12/17	KCA	1	
Dichlorodifluoromethane	0.582	*0.202*	2.88	*1.00*	09/12/17	KCA	1	
Ethanol	1.62	*0.531*	3.05	*1.00*	09/12/17	KCA	1	1
Ethyl acetate	ND	*0.278*	ND	*1.00*	09/12/17	KCA	1	1
Ethylbenzene	ND	*0.230*	ND	*1.00*	09/12/17	KCA	1	
Heptane	0.418	*0.244*	1.71	*1.00*	09/12/17	KCA	1	
Hexachlorobutadiene	ND	*0.094*	ND	*1.00*	09/12/17	KCA	1	
Hexane	ND	*0.284*	ND	*1.00*	09/12/17	KCA	1	
Isopropylalcohol	0.539	*0.407*	1.32	*1.00*	09/12/17	KCA	1	
Isopropylbenzene	ND	*0.204*	ND	*1.00*	09/12/17	KCA	1	
m,p-Xylene	ND	*0.230*	ND	*1.00*	09/12/17	KCA	1	
Methyl Ethyl Ketone	1.12	*0.339*	3.30	*1.00*	09/12/17	KCA	1	
Methyl tert-butyl ether(MTBE)	ND	*0.278*	ND	*1.00*	09/12/17	KCA	1	
Methylene Chloride	ND	*0.864*	ND	*3.00*	09/12/17	KCA	1	
n-Butylbenzene	ND	*0.182*	ND	*1.00*	09/12/17	KCA	1	1
o-Xylene	ND	*0.230*	ND	*1.00*	09/12/17	KCA	1	
Propylene	ND	*0.581*	ND	*1.00*	09/12/17	KCA	1	1
sec-Butylbenzene	ND	*0.182*	ND	*1.00*	09/12/17	KCA	1	1
Styrene	ND	*0.235*	ND	*1.00*	09/12/17	KCA	1	
Tetrachloroethene	0.278	*0.037*	1.88	*0.25*	09/12/17	KCA	1	
Tetrahydrofuran	ND	*0.339*	ND	*1.00*	09/12/17	KCA	1	1
Toluene	ND	*0.266*	ND	*1.00*	09/12/17	KCA	1	
Trans-1,2-Dichloroethene	1.10	*0.252*	4.36	*1.00*	09/12/17	KCA	1	
trans-1,3-Dichloropropene	ND	*0.221*	ND	*1.00*	09/12/17	KCA	1	
Trichloroethene	0.380	*0.037*	2.04	*0.20*	09/12/17	KCA	1	
Trichlorofluoromethane	0.420	*0.178*	2.36	*1.00*	09/12/17	KCA	1	
Trichlorotrifluoroethane	ND	*0.131*	ND	*1.00*	09/12/17	KCA	1	
Vinyl Chloride	ND	*0.078*	ND	*0.20*	09/12/17	KCA	1	
QA/QC Surrogates								
% Bromofluorobenzene	103	*%*	103	*%*	09/12/17	KCA	1	

Project ID: ENSAFE-WESTBURY
Client ID: SVE EFFLUENT

Phoenix I.D.: BY97919

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

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

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

Comments:

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

Phyllis Shiller, Laboratory Director
September 14, 2017
Reviewed and Released by: Ethan Lee, Project Manager

PHOENIX

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

September 14, 2017

QA/QC Data

SDG I.D.: GBY97918

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 401136 (ppbv), QC Sample No: BY97919 (BY97918 (10X, 300X) , BY97919 (1X, 10X))													
Volatiles													
1,1,1,2-Tetrachloroethane	ND	0.146	ND	1.00	114	ND	ND	ND	ND	NC	70 - 130	25	
1,1,1-Trichloroethane	ND	0.183	ND	1.00	107	ND	ND	ND	ND	NC	70 - 130	25	
1,1,2,2-Tetrachloroethane	ND	0.146	ND	1.00	102	ND	ND	ND	ND	NC	70 - 130	25	
1,1,2-Trichloroethane	ND	0.183	ND	1.00	107	ND	ND	ND	ND	NC	70 - 130	25	
1,1-Dichloroethane	ND	0.247	ND	1.00	102	ND	ND	ND	ND	NC	70 - 130	25	
1,1-Dichloroethene	ND	0.252	ND	1.00	102	ND	ND	ND	ND	NC	70 - 130	25	
1,2,4-Trichlorobenzene	ND	0.135	ND	1.00	85	ND	ND	ND	ND	NC	70 - 130	25	
1,2,4-Trimethylbenzene	ND	0.204	ND	1.00	101	ND	ND	ND	ND	NC	70 - 130	25	
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	104	ND	ND	ND	ND	NC	70 - 130	25	
1,2-Dichlorobenzene	ND	0.166	ND	1.00	98	ND	ND	ND	ND	NC	70 - 130	25	
1,2-Dichloroethane	ND	0.247	ND	1.00	105	ND	ND	ND	ND	NC	70 - 130	25	
1,2-dichloropropane	ND	0.216	ND	1.00	105	ND	ND	ND	ND	NC	70 - 130	25	
1,2-Dichlorotetrafluoroethane	ND	0.143	ND	1.00	111	ND	ND	ND	ND	NC	70 - 130	25	
1,3,5-Trimethylbenzene	ND	0.204	ND	1.00	100	ND	ND	ND	ND	NC	70 - 130	25	
1,3-Butadiene	ND	0.452	ND	1.00	101	ND	ND	ND	ND	NC	70 - 130	25	
1,3-Dichlorobenzene	ND	0.166	ND	1.00	97	ND	ND	ND	ND	NC	70 - 130	25	
1,4-Dichlorobenzene	ND	0.166	ND	1.00	101	ND	ND	ND	ND	NC	70 - 130	25	
1,4-Dioxane	ND	0.278	ND	1.00	104	ND	ND	ND	ND	NC	70 - 130	25	
2-Hexanone(MBK)	ND	0.244	ND	1.00	107	2.22	2.04	0.543	0.498	NC	70 - 130	25	
4-Ethyltoluene	ND	0.204	ND	1.00	101	ND	ND	ND	ND	NC	70 - 130	25	
4-Isopropyltoluene	ND	0.182	ND	1.00	97	ND	ND	ND	ND	NC	70 - 130	25	
4-Methyl-2-pentanone(MIBK)	ND	0.244	ND	1.00	113	ND	ND	ND	ND	NC	70 - 130	25	
Acetone	ND	0.421	ND	1.00	95	10.6 S	6.77 S	4.47 S	2.85 S	44.3	70 - 130	25	r
Acrylonitrile	ND	0.461	ND	1.00	107	ND	ND	ND	ND	NC	70 - 130	25	
Benzene	ND	0.313	ND	1.00	100	ND	ND	ND	ND	NC	70 - 130	25	
Benzyl chloride	ND	0.193	ND	1.00	105	ND	ND	ND	ND	NC	70 - 130	25	
Bromodichloromethane	ND	0.149	ND	1.00	104	ND	ND	ND	ND	NC	70 - 130	25	
Bromoform	ND	0.097	ND	1.00	105	ND	ND	ND	ND	NC	70 - 130	25	
Bromomethane	ND	0.257	ND	1.00	101	ND	ND	ND	ND	NC	70 - 130	25	
Carbon Disulfide	ND	0.321	ND	1.00	105	ND	ND	ND	ND	NC	70 - 130	25	
Carbon Tetrachloride	ND	0.040	ND	0.25	107	ND	ND	ND	ND	NC	70 - 130	25	
Chlorobenzene	ND	0.217	ND	1.00	102	ND	ND	ND	ND	NC	70 - 130	25	
Chloroethane	ND	0.379	ND	1.00	101	ND	ND	ND	ND	NC	70 - 130	25	
Chloroform	ND	0.205	ND	1.00	102	ND	ND	ND	ND	NC	70 - 130	25	
Chloromethane	ND	0.484	ND	1.00	109	ND	ND	ND	ND	NC	70 - 130	25	
Cis-1,2-Dichloroethene	ND	0.256	ND	1.01	100	424	420	107	106	0.9	70 - 130	25	
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	107	ND	ND	ND	ND	NC	70 - 130	25	
Cyclohexane	ND	0.291	ND	1.00	102	ND	ND	ND	ND	NC	70 - 130	25	
Dibromochloromethane	ND	0.117	ND	1.00	107	ND	ND	ND	ND	NC	70 - 130	25	
Dichlorodifluoromethane	ND	0.202	ND	1.00	114	2.88	2.70	0.582	0.546	NC	70 - 130	25	
Ethanol	ND	0.531	ND	1.00	109	3.05	4.43	1.62	2.35	NC	70 - 130	25	

QA/QC Data

SDG I.D.: GBY97918

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	0.278	ND	1.00	166	ND	ND	ND	ND	NC	70 - 130	25	l
Ethylbenzene	ND	0.230	ND	1.00	109	ND	ND	ND	ND	NC	70 - 130	25	
Heptane	ND	0.244	ND	1.00	102	1.71	ND	0.418	ND	NC	70 - 130	25	
Hexachlorobutadiene	ND	0.094	ND	1.00	89	ND	ND	ND	ND	NC	70 - 130	25	
Hexane	ND	0.284	ND	1.00	101	ND	ND	ND	ND	NC	70 - 130	25	
Isopropylalcohol	ND	0.407	ND	1.00	102	1.32	1.41	0.539	0.575	NC	70 - 130	25	
Isopropylbenzene	ND	0.204	ND	1.00	114	ND	ND	ND	ND	NC	70 - 130	25	
m,p-Xylene	ND	0.230	ND	1.00	106	ND	ND	ND	ND	NC	70 - 130	25	
Methyl Ethyl Ketone	ND	0.339	ND	1.00	104	3.30	3.30	1.12	1.12	NC	70 - 130	25	
Methyl tert-butyl ether(MTBE)	ND	0.277	ND	1.00	110	ND	ND	ND	ND	NC	70 - 130	25	
Methylene Chloride	ND	0.288	ND	1.00	92	ND	ND	ND	ND	NC	70 - 130	25	
n-Butylbenzene	ND	0.182	ND	1.00	103	ND	ND	ND	ND	NC	70 - 130	25	
o-Xylene	ND	0.230	ND	1.00	106	ND	ND	ND	ND	NC	70 - 130	25	
Propylene	ND	0.581	ND	1.00	104	ND	ND	ND	ND	NC	70 - 130	25	
sec-Butylbenzene	ND	0.182	ND	1.00	103	ND	ND	ND	ND	NC	70 - 130	25	
Styrene	ND	0.235	ND	1.00	108	ND	ND	ND	ND	NC	70 - 130	25	
Tetrachloroethene	ND	0.037	ND	0.25	105	1.88	2.05	0.278	0.302	8.3	70 - 130	25	
Tetrahydrofuran	ND	0.339	ND	1.00	115	ND	ND	ND	ND	NC	70 - 130	25	
Toluene	ND	0.266	ND	1.00	102	ND	ND	ND	ND	NC	70 - 130	25	
Trans-1,2-Dichloroethene	ND	0.252	ND	1.00	72	4.36	4.36	1.10	1.10	NC	70 - 130	25	
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	115	ND	ND	ND	ND	NC	70 - 130	25	
Trichloroethene	ND	0.047	ND	0.25	101	2.04	2.05	0.380	0.381	0.3	70 - 130	25	
Trichlorofluoromethane	ND	0.178	ND	1.00	106	2.36	2.36	0.420	0.420	NC	70 - 130	25	
Trichlorotrifluoroethane	ND	0.131	ND	1.00	103	ND	ND	ND	ND	NC	70 - 130	25	
Vinyl Chloride	ND	0.098	ND	0.25	101	ND	ND	ND	ND	NC	70 - 130	25	
% Bromofluorobenzene	124	%	124	%	100	103	104	103	104	NC	70 - 130	25	

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

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

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

Phyllis Shiller, Laboratory Director
September 14, 2017

Thursday, September 14, 2017

Criteria: None

State: NY

Sample Criteria Exceedances Report

GBY97918 - ENVIROTR

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

*** No Data to Display ***

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

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

September 14, 2017 SDG I.D.: GBY97918

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

CHAIN OF CUSTODY RECORD
AIR ANALYSES

PHOENIX Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Telephone: 860.645.1102 • Fax: 860.645.0823
800-827-5426
email: greg@phoenixlabs.com

P.O. # | Page 1 of 1

Data Delivery:
☐ Fax #:
☑ Email: jamesw@envirotrac.com
☐ Phone #:

Report to: Jim Wilkinson
Customer: EnviroTrac Ltd
Address: 5 Old Dock Road
Yaphank NY 11980

Invoice to: EnviroTrac

Sampled by: DWEBER

Project Name: ENSAFE-WESTBURY

Requested Deliverable:
RCP ☐ ASP CAT B ☐
MCP ☐ NJ Deliverables ☐

State where samples collected: NY

Phoenix ID #	Client Sample ID	Canister ID #	Canister Size (L)	Outgoing Canister Pressure (" Hg)	Incoming Canister Pressure ("Hg)	Flow Regulator ID #	Flow Controller Setting (mL/min)	Sampling Start Time	Sampling End Time	Sample Start Date	Canister Pressure at Start (" Hg)	Canister Pressure at End ("Hg)	Ambient/Indoor Air	Soil Gas	Grab (G) Composite (C)	TO-14	TO-15
	THIS SECTION FOR LAB USE ONLY												MATRIX			ANALYSES	
97918	SVE INFLUENT	735	1.4	-30		N/A	N/A	1320	—	9/8/17	—						X
97919	SVE EFFLUENT	817	1.4	-30		N/A	N/A	1315	—	↓	—						X

Relinquished by:	Accepted by:	Date:	Time:
DWEBER		9/5/17	1325
		9-8-17	

Data Format:
Excel ☑ Equis ☐ GISKey ☐
PDF ☑ Other: ☐

SPECIAL INSTRUCTIONS, QC REQUIREMENTS, REGULATORY INFORMATION:
1.4L Grabs Canadite 9/8/17 1602

Requested Criteria 9-8-17

Quote Number:

I attest that all media released by Phoenix Environmental Laboratories, Inc. have been received in good working condition and agree to the terms and conditions as listed on the back of this document:

Signature: Date:

Appendix C

Groundwater Extraction/Hydraulic Containment System Installation

Daily Summary Reports

Frost Street Sites
Groundwater Extraction Hydraulic Containment
Daily Summary
Friday, September 1, 2017

Demobilized from FSMW-19. Cleanup and loadout of equipment from staging area. FSMW-8C and D installation will begin on Tuesday.

Frost Street Sites
Groundwater Extraction Hydraulic Containment
Daily Summary
Tuesday, September 5, 2017

Begin installation of FSMW-8D. Drilled to 235 feet bgs; encountered dark, hard clay at ~229 feet bgs. Due to the presence of clay, and following the same rationale as the FSMW-19D design modification, the well was set as follows:

- Sump – 235 to 233 feet bgs
- Screen – 233 to 223 feet bgs

Frost Street Sites
Groundwater Extraction Hydraulic Containment
Daily Summary
Wednesday, September 6, 2017

Finish well installation at FSMW-8D. Drill to well depth (182 feet bgs) at FSMW-8C.

Frost Street Sites
Groundwater Extraction Hydraulic Containment
Daily Summary
Thursday, September 7, 2017

Finish well installation at FSMW-8C, the well was installed as follows:

- Sump 182-180 feet bgs
- Screen Interval 180-170 feet bgs

Surface completion installation and partial demobilization activities also occurred.

Frost Street Sites
Groundwater Extraction Hydraulic Containment
Daily Summary
Friday, September 8, 2017

Summit loads out drilling equipment from staging area. Trenching in the vicinity of the extraction wells for below grade piping continues.

Frost Street Sites
Groundwater Extraction Hydraulic Containment
Daily Summary
Monday, September 11, 2017

Completed well pads at FSMW-19 monitoring wells. Cleaned out plastic tanks and hoppers that held drilling mud/soil.

Frost Street Sites
Groundwater Extraction Hydraulic Containment
Daily Summary
Tuesday, September 12, 2017

Well development activities began.

- Well development was completed at all six monitoring wells.
- Well development was completed at EX-1A, with partial development performed at EX-1D.

Frost Street Sites
Groundwater Extraction Hydraulic Containment
Daily Summary
Wednesday, September 13, 2017

Well development was completed at EX-1B, EX-1C, and EX-1D. Drillers demobilized from the site.

Frost Street Sites
Groundwater Extraction Hydraulic Containment
Daily Summary
Friday, September 15, 2017

EnviroTrac installed pitless adapters on extraction wells and then backfilling of the trenching began.

Frost Street Sites
Groundwater Extraction Hydraulic Containment
Daily Summary
Wednesday, September 20, 2017

The roll-off was removed from the site, the frac tank was sampled in order to obtain approval for discharge, and surface completions were installed for the extraction wells.