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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

December 11, 2017

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

Re: Progress Report: November 2017
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 November 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** [revised]).
  - The system was off for approximately 10 days for groundwater sampling activities.
  - The system was turned back on November 16, but went down on November 30 due to an electrical issue with the wiring to the compressor. Repairs are scheduled for December 11.
- Quantitative sampling of the SVE system granular activated carbon influent and effluent air flow was conducted on November 16, 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. Ph
  - Effluent concentrations of both PID and analytical readings exhibit breakthrough has occurred. A carbon exchange is being scheduled.

Frost Street Sites Effluent Compliance			
System Flow Rate =		800	ft^3/m
Compound	**Annual Mass Emission Limit (lbs/year)**	**Allowable Continuous Annual Concentration ($\mu g/m^3$)**	**November 2017 Effluent Concentration ($\mu g/m^3$)**
Trichloroethene	500	19,000	1,390
Tetrachloroethene	1,000	38,000	2,960
Vinyl Chloride	100	3,800	ND
Cis-1,2-Dichloroethene	100	3,800	**6,930**

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:
  - System vault and electrical service installation
  - Extraction Well Inspection
- Additional details and photographs regarding these activities can be found in the previously submitted daily summary reports, included as **Appendix C**.
- As mentioned previously via email, removal of sediment from the extraction wells and select monitoring wells will occur the week of January 2, 2018.

Quarterly/Annual Groundwater Monitoring

- The third quarter 2017 groundwater monitoring report was submitted to NYSDEC on November 22, 2017.
- The fourth quarter 2017 groundwater sampling event will be completed in December 2017.

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

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	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: 2-Nov
Weather / Temp: Clear / 70 DEG
Technician / Operator: JW, DW

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

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)	4300	844	Blower 1 Total Runtime (hrs)	48,701.3
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	48,553.3
Blower 2 Fresh Air Valve Open (%)	0		Blower 1 Air Filter Differential Pressure ("H2O)	0
Moisture Separator Vacuum ("Hg)	3		Blower 2 Air Filter Differential Pressure ("H2O)	0
VGAC-1 Influent Vacuum ("H2O)	58		VGAC-1 Influent PID (ppm)	6.2
VGAC-1 Effluent Vacuum ("H2O)	48		VGAC-1 Effluent PID (ppm)	1.8
VGAC-2 Influent Vacuum ("H2O)	44		VGAC-2 Influent PID (ppm)	6.2
VGAC-2 Effluent Vacuum ("H2O)	44		VGAC-2 Effluent PID (ppm)	1.8
VGAC-3 Influent Vacuum ("H2O)	36		VGAC-3 Influent PID (ppm)	6.1
VGAC-3 Effluent Vacuum ("H2O)	40		VGAC-3 Effluent PID (ppm)	0
Blower Effluent Temp (DegF)	NA		Blower Effluent PID (ppm)	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	3700	81	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	38	3500	76		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	28	2500	55	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	28	4200	92		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	28	5250	115	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	30	3700	81		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	30	2600	57	

Air Sparge System			
Compressor 1 Pressure (psi)	Off for repairs	Compressor 2 Pressure (psi)	93
Compressor 1 Temperature (degF)	Off for repairs	Compressor 2 Temperature (degF)	188
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	24,697
Manifold Regulator Pressure (psi)	90		

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	9
AS-4 (psi)/(cfm)	13	8	AS-14 (psi)/(cfm)	14	10
AS-5 (psi)/(cfm)	14	8	AS-15 (psi)/(cfm)	14	11
AS-6 (psi)/(cfm)	14	9	AS-16B (psi)/(cfm)	13	10
AS-7 (psi)/(cfm)	14	10	AS-17 (psi)/(cfm)	14	4
AS-8 (psi)/(cfm)	13	4	AS-18 (psi)/(cfm)	14	5
AS-9 (psi)/(cfm)	15	11	AS-19 (psi)/(cfm)	14	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: 6-Nov
Weather / Temp: Cloudy / 55 DEG
Technician / Operator: JW

Arrival Time: 7:30
Departure Time: 8:00

System Status					
	Arrival	Departure		Arrival	Departure
SVE Blower 1 (ON/OFF)	ON	OFF	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)	ON	OFF			

Soil Vapor Extraction System				
Blower Air Velocity/Flow Rate (fpm)/(cfm)	4300	844	Blower 1 Total Runtime (hrs)	48,743.3
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	48,591.1
Blower 2 Fresh Air Valve Open (%)	0		Blower 1 Air Filter Differential Pressure ("H2O)	0
Moisture Separator Vacuum ("Hg)	3		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)	45		VGAC-1 Effluent PID (ppm)	1.8
VGAC-2 Influent Vacuum ("H2O)	45		VGAC-2 Influent PID (ppm)	6.0
VGAC-2 Effluent Vacuum ("H2O)	45		VGAC-2 Effluent PID (ppm)	2.4
VGAC-3 Influent Vacuum ("H2O)	36		VGAC-3 Influent PID (ppm)	2.1
VGAC-3 Effluent Vacuum ("H2O)	40		VGAC-3 Effluent PID (ppm)	0
Blower Effluent Temp (DegF)	NA		Blower Effluent PID (ppm)	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	3700	81	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	38	3500	76		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	28	2500	55	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	28	4200	92		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	28	5000	109	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	30	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)	85
Compressor 1 Temperature (degF)	Off for repairs	Compressor 2 Temperature (degF)	180
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	24,777
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)	14	4
AS-2 (psi)/(cfm)	15	7	AS-12B (psi)/(cfm)	13	8
AS-3 (psi)/(cfm)	13	6	AS-13B (psi)/(cfm)	13	8
AS-4 (psi)/(cfm)	13	8	AS-14 (psi)/(cfm)	14	10
AS-5 (psi)/(cfm)	14	8	AS-15 (psi)/(cfm)	14	11
AS-6 (psi)/(cfm)	14	9	AS-16B (psi)/(cfm)	13	10
AS-7 (psi)/(cfm)	14	10	AS-17 (psi)/(cfm)	14	4
AS-8 (psi)/(cfm)	13	4	AS-18 (psi)/(cfm)	14	6
AS-9 (psi)/(cfm)	16	11	AS-19 (psi)/(cfm)	14	5
AS-10B (psi)/(cfm)	13	10			

Notes, Comments & Observations:

Shut down system for GW sampling event.

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-Nov
Weather / Temp: Clear / 45 DEG
Technician / Operator: JW, DW

Arrival Time: 8:00
Departure Time: 15:00

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)	3700	726	Blower 1 Total Runtime (hrs)	48,746.2
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	48,591.1
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)	44		VGAC-1 Influent PID (ppm)	5.1
VGAC-1 Effluent Vacuum ("H2O)	55		VGAC-1 Effluent PID (ppm)	0.0
VGAC-2 Influent Vacuum ("H2O)	40		VGAC-2 Influent PID (ppm)	5.1
VGAC-2 Effluent Vacuum ("H2O)	42		VGAC-2 Effluent PID (ppm)	6.1
VGAC-3 Influent Vacuum ("H2O)	33		VGAC-3 Influent PID (ppm)	3.1
VGAC-3 Effluent Vacuum ("H2O)	43		VGAC-3 Effluent PID (ppm)	0
Blower Effluent Temp (DegF)	NA		Blower Effluent PID (ppm)	0
Blower Effluent Pressure ("H2O)	7			
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	5500	120	11.6	SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	25	3400	74	0.0
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	36	3000	65	2.3	SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	27	2700	59	0.0
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	28	3800	83	1.6	SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	27	4500	98	10.0
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	26	3300	72	0.0	SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	29	2400	52	0.0

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)	171
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	24,780
Manifold Regulator Pressure (psi)	75		

AS Manifold Legs - Pressure/Flow Rate

	Pressure	Flow Rate		Pressure	Flow Rate
AS-1 (psi)/(cfm)	15	8	AS-11 (psi)/(cfm)	14.5	4
AS-2 (psi)/(cfm)	14	5	AS-12B (psi)/(cfm)	15	8
AS-3 (psi)/(cfm)	14	7	AS-13B (psi)/(cfm)	13	8
AS-4 (psi)/(cfm)	13.5	7	AS-14 (psi)/(cfm)	14.5	8
AS-5 (psi)/(cfm)	15	10	AS-15 (psi)/(cfm)	14.5	11
AS-6 (psi)/(cfm)	15	7	AS-16B (psi)/(cfm)	13.5	9
AS-7 (psi)/(cfm)	14	6	AS-17 (psi)/(cfm)	14.5	5
AS-8 (psi)/(cfm)	15	10	AS-18 (psi)/(cfm)	12.5	7
AS-9 (psi)/(cfm)	16	11	AS-19 (psi)/(cfm)	14	5
AS-10B (psi)/(cfm)	13	10			

Notes, Comments & Observations:

Restarted system after GW sampling event.

Collected monthly samples.

Switched GAC-3 to pressure side of blowers after recording O&M readings.

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: 20-Nov
Weather / Temp: Clear / 40 DEG
Technician / Operator: DW

Arrival Time: 10:00
Departure Time: 11:00

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)	ON	ON			

Soil Vapor Extraction System

Blower Air Velocity/Flow Rate (fpm)/(cfm)	3600	707	Blower 1 Total Runtime (hrs)	48,797.8
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	48,635.8
Blower 2 Fresh Air Valve Open (%)	0		Blower 1 Air Filter Differential Pressure ("H2O)	0
Moisture Separator Vacuum ("Hg)	3		Blower 2 Air Filter Differential Pressure ("H2O)	0
VGAC-1 Influent Vacuum ("H2O)	50		VGAC-1 Influent PID (ppm)	5.6
VGAC-1 Effluent Vacuum ("H2O)	60		VGAC-1 Effluent PID (ppm)	0.0
VGAC-2 Influent Vacuum ("H2O)	40		VGAC-2 Influent PID (ppm)	5.6
VGAC-2 Effluent Vacuum ("H2O)	44		VGAC-2 Effluent PID (ppm)	2.0
VGAC-3 Influent Pressure ("H2O)	3		VGAC-3 Influent PID (ppm)	2.0
VGAC-3 Effluent Pressure ("H2O)	5.5		VGAC-3 Effluent PID (ppm)	0.0
VGAC-2 Influent Temp (DegF)	100		Blower Effluent PID (ppm)	0.0
Blower Effluent Pressure ("H2O)	15			
Transfer Pump Total Runtime (hrs)	25,026.0		Condensate Storage Tank Level (gal)	200

SVE Manifold Legs - Vacuum/Flow Rate/PID

	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	40	6500	142		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	34	3600	79	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	42	3500	76		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	34	2400	52	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	34	4200	92		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	34	5500	120	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	32	3500	76		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	36	2400	52	

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)	174
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	24,876
Manifold Regulator Pressure (psi)	75		

AS Manifold Legs - Pressure/Flow Rate

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

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: 27-Nov
Weather / Temp: Clear / 50 DEG
Technician / Operator: JW

Arrival Time: 13:00
Departure Time: 15:30

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)	ON	ON			

Soil Vapor Extraction System

Blower Air Velocity/Flow Rate (fpm)/(cfm)	3400	668	Blower 1 Total Runtime (hrs)	48,882.2
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	48,719.7
Blower 2 Fresh Air Valve Open (%)	0		Blower 1 Air Filter Differential Pressure ("H2O)	0
Moisture Separator Vacuum ("Hg)	3		Blower 2 Air Filter Differential Pressure ("H2O)	0
VGAC-1 Influent Vacuum ("H2O)	50		VGAC-1 Influent PID (ppm)	5.0
VGAC-1 Effluent Vacuum ("H2O)	60		VGAC-1 Effluent PID (ppm)	0.0
VGAC-2 Influent Vacuum ("H2O)	40		VGAC-2 Influent PID (ppm)	5.0
VGAC-2 Effluent Vacuum ("H2O)	44		VGAC-2 Effluent PID (ppm)	6.0
VGAC-3 Influent Pressure ("H2O)	3		VGAC-3 Influent PID (ppm)	2.0
VGAC-3 Effluent Pressure ("H2O)	5.5		VGAC-3 Effluent PID (ppm)	0.0
VGAC-2 Influent Temp (DegF)	100		Blower Effluent PID (ppm)	0.0
Blower Effluent Pressure ("H2O)	15			
Transfer Pump Total Runtime (hrs)	25,026.1		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)	38	4800	105		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	30	3150	69	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	40	3000	65		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	30	2700	59	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	32	4200	92		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	30	5500	120	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	30	3500	76		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	30	2500	55	

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)	173
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	25,044
Manifold Regulator Pressure (psi)	80		

AS Manifold Legs - Pressure/Flow Rate

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

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
11/30/2017	12/1/2017	JW	Compressor Failure	Replace wiring, install thermal overload. (To be completed in early December).	ON	OFF

Appendix B

SVE System Influent/Effluent Sampling (TO-15)

Laboratory Analytical Results

PHOENIX
Environmental Laboratories, Inc.

Wednesday, November 22, 2017

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

Project ID: ENSAFE WESTBURY
Sample ID#s: BZ44720 - BZ44721

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

November 22, 2017

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

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:		11/16/17	
Location Code:	ENVIROTR	Received by:	LB	11/20/17	16:40
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	750				

Laboratory Data

SDG ID: GBZ44720
Phoenix ID: BZ44720

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		*0.146*	ND	*1.00*	11/20/17	KCA	1	1
1,1,1-Trichloroethane	0.624		*0.183*	3.40	*1.00*	11/20/17	KCA	1	
1,1,2,2-Tetrachloroethane	ND		*0.146*	ND	*1.00*	11/20/17	KCA	1	
1,1,2-Trichloroethane	ND		*0.183*	ND	*1.00*	11/20/17	KCA	1	
1,1-Dichloroethane	ND		*0.247*	ND	*1.00*	11/20/17	KCA	1	
1,1-Dichloroethene	ND		*0.051*	ND	*0.20*	11/20/17	KCA	1	
1,2,4-Trichlorobenzene	ND		*0.135*	ND	*1.00*	11/20/17	KCA	1	
1,2,4-Trimethylbenzene	ND		*0.204*	ND	*1.00*	11/20/17	KCA	1	
1,2-Dibromoethane(EDB)	ND		*0.130*	ND	*1.00*	11/20/17	KCA	1	
1,2-Dichlorobenzene	ND		*0.166*	ND	*1.00*	11/20/17	KCA	1	
1,2-Dichloroethane	ND		*0.247*	ND	*1.00*	11/20/17	KCA	1	
1,2-dichloropropane	ND		*0.217*	ND	*1.00*	11/20/17	KCA	1	
1,2-Dichlorotetrafluoroethane	ND		*0.143*	ND	*1.00*	11/20/17	KCA	1	
1,3,5-Trimethylbenzene	ND		*0.204*	ND	*1.00*	11/20/17	KCA	1	
1,3-Butadiene	ND		*0.452*	ND	*1.00*	11/20/17	KCA	1	
1,3-Dichlorobenzene	ND		*0.166*	ND	*1.00*	11/20/17	KCA	1	
1,4-Dichlorobenzene	ND		*0.166*	ND	*1.00*	11/20/17	KCA	1	
1,4-Dioxane	ND		*0.278*	ND	*1.00*	11/20/17	KCA	1	
2-Hexanone(MBK)	ND		*0.244*	ND	*1.00*	11/20/17	KCA	1	1
4-Ethyltoluene	ND		*0.204*	ND	*1.00*	11/20/17	KCA	1	1
4-Isopropyltoluene	ND		*0.182*	ND	*1.00*	11/20/17	KCA	1	1
4-Methyl-2-pentanone(MIBK)	ND		*0.244*	ND	*1.00*	11/20/17	KCA	1	
Acetone	2.96	S	*0.421*	7.03	*1.00*	11/20/17	KCA	1	
Acrylonitrile	ND		*0.461*	ND	*1.00*	11/20/17	KCA	1	
Benzene	ND		*0.313*	ND	*1.00*	11/20/17	KCA	1	
Benzyl chloride	ND		*0.193*	ND	*1.00*	11/20/17	KCA	1	

Project ID: ENSAFE WESTBURY
Client ID: SVE INFLUENT

Phoenix I.D.: BZ44720

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*0.149*	ND	*1.00*	11/20/17	KCA	1	
Bromoform	ND	*0.097*	ND	*1.00*	11/20/17	KCA	1	
Bromomethane	ND	*0.258*	ND	*1.00*	11/20/17	KCA	1	
Carbon Disulfide	ND	*0.321*	ND	*1.00*	11/20/17	KCA	1	
Carbon Tetrachloride	0.072	*0.032*	0.45	*0.20*	11/20/17	KCA	1	
Chlorobenzene	0.292	*0.217*	1.34	*1.00*	11/20/17	KCA	1	
Chloroethane	ND	*0.379*	ND	*1.00*	11/20/17	KCA	1	
Chloroform	0.207	*0.205*	1.01	*1.00*	11/20/17	KCA	1	
Chloromethane	ND	*0.485*	ND	*1.00*	11/20/17	KCA	1	
Cis-1,2-Dichloroethene	112	*15.1*	444	*59.8*	11/20/17	KCA	300	
cis-1,3-Dichloropropene	ND	*0.221*	ND	*1.00*	11/20/17	KCA	1	
Cyclohexane	ND	*0.291*	ND	*1.00*	11/20/17	KCA	1	
Dibromochloromethane	ND	*0.118*	ND	*1.00*	11/20/17	KCA	1	
Dichlorodifluoromethane	0.552	*0.202*	2.73	*1.00*	11/20/17	KCA	1	
Ethanol	1.85	*0.531*	3.48	*1.00*	11/20/17	KCA	1	1
Ethyl acetate	ND	*0.278*	ND	*1.00*	11/20/17	KCA	1	1
Ethylbenzene	ND	*0.230*	ND	*1.00*	11/20/17	KCA	1	
Heptane	ND	*0.244*	ND	*1.00*	11/20/17	KCA	1	
Hexachlorobutadiene	ND	*0.094*	ND	*1.00*	11/20/17	KCA	1	
Hexane	ND	*0.284*	ND	*1.00*	11/20/17	KCA	1	
Isopropylalcohol	ND	*0.407*	ND	*1.00*	11/20/17	KCA	1	
Isopropylbenzene	ND	*0.204*	ND	*1.00*	11/20/17	KCA	1	
m,p-Xylene	0.259	*0.230*	1.12	*1.00*	11/20/17	KCA	1	
Methyl Ethyl Ketone	0.631	*0.339*	1.86	*1.00*	11/20/17	KCA	1	
Methyl tert-butyl ether(MTBE)	ND	*0.278*	ND	*1.00*	11/20/17	KCA	1	
Methylene Chloride	ND	*0.864*	ND	*3.00*	11/20/17	KCA	1	
n-Butylbenzene	ND	*0.182*	ND	*1.00*	11/20/17	KCA	1	1
o-Xylene	ND	*0.230*	ND	*1.00*	11/20/17	KCA	1	
Propylene	1.00	*0.581*	1.72	*1.00*	11/20/17	KCA	1	1
sec-Butylbenzene	ND	*0.182*	ND	*1.00*	11/20/17	KCA	1	1
Styrene	ND	*0.235*	ND	*1.00*	11/20/17	KCA	1	
Tetrachloroethene	3210	*11.1*	21800	*75.2*	11/20/17	KCA	300	
Tetrahydrofuran	ND	*0.339*	ND	*1.00*	11/20/17	KCA	1	1
Toluene	0.308	*0.266*	1.16	*1.00*	11/20/17	KCA	1	
Trans-1,2-Dichloroethene	1.73	*0.252*	6.85	*1.00*	11/20/17	KCA	1	
trans-1,3-Dichloropropene	ND	*0.221*	ND	*1.00*	11/20/17	KCA	1	
Trichloroethene	213	*11.2*	1140	*60.1*	11/20/17	KCA	300	
Trichlorofluoromethane	0.293	*0.178*	1.65	*1.00*	11/20/17	KCA	1	
Trichlorotrifluoroethane	ND	*0.131*	ND	*1.00*	11/20/17	KCA	1	
Vinyl Chloride	ND	*0.078*	ND	*0.20*	11/20/17	KCA	1	
QA/QC Surrogates								
% Bromofluorobenzene	100	*%*	100	*%*	11/20/17	KCA	1	

Ver 1

Project ID: ENSAFE WESTBURY
Client ID: SVE INFLUENT

Phoenix I.D.: BZ44720

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:

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
November 22, 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

November 22, 2017

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

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:		11/16/17	
Location Code:	ENVIROTR	Received by:	LB	11/20/17	16:40
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	744				

Laboratory Data

SDG ID: GBZ44720
Phoenix ID: BZ44721

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*	11/20/17	KCA	1	1
1,1,1-Trichloroethane	5.79		*0.183*	31.6	*1.00*	11/20/17	KCA	1	
1,1,2,2-Tetrachloroethane	ND		*0.146*	ND	*1.00*	11/20/17	KCA	1	
1,1,2-Trichloroethane	ND		*0.183*	ND	*1.00*	11/20/17	KCA	1	
1,1-Dichloroethane	ND		*0.247*	ND	*1.00*	11/20/17	KCA	1	
1,1-Dichloroethene	0.329		*0.051*	1.30	*0.20*	11/20/17	KCA	1	
1,2,4-Trichlorobenzene	ND		*0.135*	ND	*1.00*	11/20/17	KCA	1	
1,2,4-Trimethylbenzene	ND		*0.204*	ND	*1.00*	11/20/17	KCA	1	
1,2-Dibromoethane(EDB)	ND		*0.130*	ND	*1.00*	11/20/17	KCA	1	
1,2-Dichlorobenzene	ND		*0.166*	ND	*1.00*	11/20/17	KCA	1	
1,2-Dichloroethane	ND		*0.247*	ND	*1.00*	11/20/17	KCA	1	
1,2-dichloropropane	ND		*0.217*	ND	*1.00*	11/20/17	KCA	1	
1,2-Dichlorotetrafluoroethane	ND		*0.143*	ND	*1.00*	11/20/17	KCA	1	
1,3,5-Trimethylbenzene	ND		*0.204*	ND	*1.00*	11/20/17	KCA	1	
1,3-Butadiene	ND		*0.452*	ND	*1.00*	11/20/17	KCA	1	
1,3-Dichlorobenzene	ND		*0.166*	ND	*1.00*	11/20/17	KCA	1	
1,4-Dichlorobenzene	ND		*0.166*	ND	*1.00*	11/20/17	KCA	1	
1,4-Dioxane	ND		*0.278*	ND	*1.00*	11/20/17	KCA	1	
2-Hexanone(MBK)	ND		*0.244*	ND	*1.00*	11/20/17	KCA	1	1
4-Ethyltoluene	ND		*0.204*	ND	*1.00*	11/20/17	KCA	1	1
4-Isopropyltoluene	ND		*0.182*	ND	*1.00*	11/20/17	KCA	1	1
4-Methyl-2-pentanone(MIBK)	ND		*0.244*	ND	*1.00*	11/20/17	KCA	1	
Acetone	1.67	S	*0.421*	3.96	*1.00*	11/20/17	KCA	1	
Acrylonitrile	ND		*0.461*	ND	*1.00*	11/20/17	KCA	1	
Benzene	ND		*0.313*	ND	*1.00*	11/20/17	KCA	1	
Benzyl chloride	ND		*0.193*	ND	*1.00*	11/20/17	KCA	1	

Project ID: ENSAFE WESTBURY
Client ID: SVE EFFLUENT

Phoenix I.D.: BZ44721

Parameter	ppbv Result		ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Bromodichloromethane	ND		*0.149*	ND	*1.00*	11/20/17	KCA	1	
Bromoform	ND		*0.097*	ND	*1.00*	11/20/17	KCA	1	
Bromomethane	ND		*0.258*	ND	*1.00*	11/20/17	KCA	1	
Carbon Disulfide	ND		*0.321*	ND	*1.00*	11/20/17	KCA	1	
Carbon Tetrachloride	0.226		*0.032*	1.42	*0.20*	11/20/17	KCA	1	
Chlorobenzene	ND		*0.217*	ND	*1.00*	11/20/17	KCA	1	
Chloroethane	ND		*0.379*	ND	*1.00*	11/20/17	KCA	1	
Chloroform	2.73		*0.205*	13.3	*1.00*	11/20/17	KCA	1	
Chloromethane	ND		*0.485*	ND	*1.00*	11/20/17	KCA	1	
Cis-1,2-Dichloroethene	1750		*7.57*	6930	*30.0*	11/21/17	KCA	150	
cis-1,3-Dichloropropene	ND		*0.221*	ND	*1.00*	11/20/17	KCA	1	
Cyclohexane	2.00		*0.291*	6.88	*1.00*	11/20/17	KCA	1	
Dibromochloromethane	ND		*0.118*	ND	*1.00*	11/20/17	KCA	1	
Dichlorodifluoromethane	0.306		*0.202*	1.51	*1.00*	11/20/17	KCA	1	
Ethanol	1.28		*0.531*	2.41	*1.00*	11/20/17	KCA	1	1
Ethyl acetate	ND		*0.278*	ND	*1.00*	11/20/17	KCA	1	1
Ethylbenzene	ND		*0.230*	ND	*1.00*	11/20/17	KCA	1	
Heptane	ND		*0.244*	ND	*1.00*	11/20/17	KCA	1	
Hexachlorobutadiene	ND		*0.094*	ND	*1.00*	11/20/17	KCA	1	
Hexane	1.95	S	*0.284*	6.87	*1.00*	11/20/17	KCA	1	
Isopropylalcohol	1.13		*0.407*	2.78	*1.00*	11/20/17	KCA	1	
Isopropylbenzene	ND		*0.204*	ND	*1.00*	11/20/17	KCA	1	
m,p-Xylene	ND		*0.230*	ND	*1.00*	11/20/17	KCA	1	
Methyl Ethyl Ketone	0.432		*0.339*	1.27	*1.00*	11/20/17	KCA	1	
Methyl tert-butyl ether(MTBE)	ND		*0.278*	ND	*1.00*	11/20/17	KCA	1	
Methylene Chloride	ND		*0.864*	ND	*3.00*	11/20/17	KCA	1	
n-Butylbenzene	ND		*0.182*	ND	*1.00*	11/20/17	KCA	1	1
o-Xylene	ND		*0.230*	ND	*1.00*	11/20/17	KCA	1	
Propylene	0.868		*0.581*	1.49	*1.00*	11/20/17	KCA	1	1
sec-Butylbenzene	ND		*0.182*	ND	*1.00*	11/20/17	KCA	1	1
Styrene	ND		*0.235*	ND	*1.00*	11/20/17	KCA	1	
Tetrachloroethene	436		*1.11*	2960	*7.52*	11/20/17	KCA	30	
Tetrahydrofuran	1.07		*0.339*	3.15	*1.00*	11/20/17	KCA	1	1
Toluene	ND		*0.266*	ND	*1.00*	11/20/17	KCA	1	
Trans-1,2-Dichloroethene	15.5		*0.252*	61.4	*1.00*	11/20/17	KCA	1	
trans-1,3-Dichloropropene	ND		*0.221*	ND	*1.00*	11/20/17	KCA	1	
Trichloroethene	258		*1.12*	1390	*6.01*	11/20/17	KCA	30	
Trichlorofluoromethane	0.754		*0.178*	4.23	*1.00*	11/20/17	KCA	1	
Trichlorotrifluoroethane	2.51		*0.131*	19.2	*1.00*	11/20/17	KCA	1	
Vinyl Chloride	ND		*0.078*	ND	*0.20*	11/20/17	KCA	1	
QA/QC Surrogates									
% Bromofluorobenzene	100		*%*	100	*%*	11/20/17	KCA	1	

Ver 1

Project ID: ENSAFE WESTBURY
Client ID: SVE EFFLUENT

Phoenix I.D.: BZ44721

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:

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
November 22, 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

November 22, 2017

QA/QC Data

SDG I.D.: GBZ44720

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 410450 (ppbv), QC Sample No: BZ44721 (BZ44720 (1X, 300X) , BZ44721 (1X, 30X, 150X))												
Volatiles												
1,1,1,2-Tetrachloroethane	ND	0.150	ND	1.03	108	ND	ND	ND	ND	NC	70 - 130	25
1,1,1-Trichloroethane	ND	0.180	ND	0.98	103	31.6	30.7	5.79	5.63	2.8	70 - 130	25
1,1,2,2-Tetrachloroethane	ND	0.150	ND	1.03	115	ND	ND	ND	ND	NC	70 - 130	25
1,1,2-Trichloroethane	ND	0.180	ND	0.98	112	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethane	ND	0.250	ND	1.01	101	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethene	ND	0.050	ND	0.20	102	1.30	1.20	0.329	0.302	8.6	70 - 130	25
1,2,4-Trichlorobenzene	ND	0.130	ND	0.96	87	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trimethylbenzene	ND	0.200	ND	0.98	111	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	109	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorobenzene	ND	0.170	ND	1.02	116	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichloroethane	ND	0.250	ND	1.01	99	ND	ND	ND	ND	NC	70 - 130	25
1,2-dichloropropane	ND	0.220	ND	1.02	109	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorotetrafluoroethane	ND	0.140	ND	0.98	115	ND	ND	ND	ND	NC	70 - 130	25
1,3,5-Trimethylbenzene	ND	0.200	ND	0.98	109	ND	ND	ND	ND	NC	70 - 130	25
1,3-Butadiene	ND	0.450	ND	0.99	96	ND	ND	ND	ND	NC	70 - 130	25
1,3-Dichlorobenzene	ND	0.170	ND	1.02	114	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dichlorobenzene	ND	0.170	ND	1.02	117	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dioxane	ND	0.280	ND	1.01	113	ND	ND	ND	ND	NC	70 - 130	25
2-Hexanone(MBK)	ND	0.240	ND	0.98	113	ND	ND	ND	ND	NC	70 - 130	25
4-Ethyltoluene	ND	0.200	ND	0.98	113	ND	ND	ND	ND	NC	70 - 130	25
4-Isopropyltoluene	ND	0.180	ND	0.99	103	ND	ND	ND	ND	NC	70 - 130	25
4-Methyl-2-pentanone(MIBK)	ND	0.240	ND	0.98	112	ND	ND	ND	ND	NC	70 - 130	25
Acetone	ND	0.420	ND	1.00	91	3.96 S	4.01 S	1.67 S	1.69 S	NC	70 - 130	25
Acrylonitrile	ND	0.460	ND	1.00	97	ND	ND	ND	ND	NC	70 - 130	25
Benzene	ND	0.310	ND	0.99	99	ND	ND	ND	ND	NC	70 - 130	25
Benzyl chloride	ND	0.190	ND	0.98	107	ND	ND	ND	ND	NC	70 - 130	25
Bromodichloromethane	ND	0.150	ND	1.00	108	ND	ND	ND	ND	NC	70 - 130	25
Bromoform	ND	0.097	ND	1.00	125	ND	ND	ND	ND	NC	70 - 130	25
Bromomethane	ND	0.260	ND	1.01	104	ND	ND	ND	ND	NC	70 - 130	25
Carbon Disulfide	ND	0.320	ND	1.00	104	ND	ND	ND	ND	NC	70 - 130	25
Carbon Tetrachloride	ND	0.032	ND	0.20	105	1.42	1.41	0.226	0.225	0.4	70 - 130	25
Chlorobenzene	ND	0.220	ND	1.01	108	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	102	13.3	12.7	2.73	2.61	4.5	70 - 130	25
Chloromethane	ND	0.480	ND	0.99	105	ND	ND	ND	ND	NC	70 - 130	25
Cis-1,2-Dichloroethene	ND	0.050	ND	0.20	102	1920	1930	485	486	0.2	70 - 130	25
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	107	ND	ND	ND	ND	NC	70 - 130	25
Cyclohexane	ND	0.290	ND	1.00	105	6.88	6.88	2.00	2.00	0.0	70 - 130	25
Dibromochloromethane	ND	0.120	ND	1.02	118	ND	ND	ND	ND	NC	70 - 130	25
Dichlorodifluoromethane	ND	0.200	ND	0.99	113	1.51	1.50	0.306	0.304	NC	70 - 130	25
Ethanol	ND	0.530	ND	1.00	131	2.41	2.32	1.28	1.23	NC	70 - 130	25

QA/QC Data

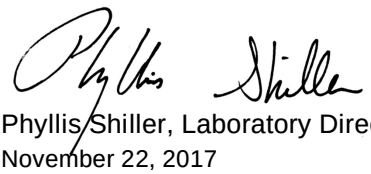
SDG I.D.: GBZ44720

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	100	ND	ND	ND	ND	NC	70 - 130	25
Ethylbenzene	ND	0.230	ND	1.00	109	ND	ND	ND	ND	NC	70 - 130	25
Heptane	ND	0.240	ND	0.98	103	ND	ND	ND	ND	NC	70 - 130	25
Hexachlorobutadiene	ND	0.094	ND	1.00	83	ND	ND	ND	ND	NC	70 - 130	25
Hexane	ND	0.280	ND	0.99	98	6.87 S	6.97 S	1.95 S	1.98 S	1.5	70 - 130	25
Isopropylalcohol	ND	0.410	ND	1.01	96	2.78	2.83	1.13	1.15	NC	70 - 130	25
Isopropylbenzene	ND	0.200	ND	0.98	114	ND	ND	ND	ND	NC	70 - 130	25
m,p-Xylene	ND	0.230	ND	1.00	114	ND	ND	ND	ND	NC	70 - 130	25
Methyl Ethyl Ketone	ND	0.340	ND	1.00	109	1.27	1.18	0.432	0.399	NC	70 - 130	25
Methyl tert-butyl ether(MTBE)	ND	0.280	ND	1.01	107	ND	ND	ND	ND	NC	70 - 130	25
Methylene Chloride	ND	0.860	ND	2.99	95	ND	ND	ND	ND	NC	70 - 130	25
n-Butylbenzene	ND	0.180	ND	0.99	105	ND	ND	ND	ND	NC	70 - 130	25
o-Xylene	ND	0.230	ND	1.00	109	ND	ND	ND	ND	NC	70 - 130	25
Propylene	ND	0.580	ND	1.00	110	1.49	1.43	0.868	0.830	NC	70 - 130	25
sec-Butylbenzene	ND	0.180	ND	0.99	108	ND	ND	ND	ND	NC	70 - 130	25
Styrene	ND	0.230	ND	0.98	113	ND	ND	ND	ND	NC	70 - 130	25
Tetrachloroethene	ND	0.037	ND	0.25	108	1380	1420	204	209	2.4	70 - 130	25
Tetrahydrofuran	ND	0.340	ND	1.00	101	3.15	3.07	1.07	1.04	NC	70 - 130	25
Toluene	ND	0.270	ND	1.02	111	ND	ND	ND	ND	NC	70 - 130	25
Trans-1,2-Dichloroethene	ND	0.250	ND	0.99	97	61.4	61.0	15.5	15.4	0.6	70 - 130	25
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	108	ND	ND	ND	ND	NC	70 - 130	25
Trichloroethene	ND	0.037	ND	0.20	107	865	870	161	162	0.6	70 - 130	25
Trichlorofluoromethane	ND	0.180	ND	1.01	106	4.23	4.32	0.754	0.769	NC	70 - 130	25
Trichlorotrifluoroethane	ND	0.130	ND	1.00	110	19.2	19.1	2.51	2.49	0.8	70 - 130	25
Vinyl Chloride	ND	0.078	ND	0.20	101	ND	ND	ND	ND	NC	70 - 130	25
% Bromofluorobenzene	110		110		96	100	100	100	100	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
November 22, 2017

Wednesday, November 22, 2017

Criteria: None

State: NJ

Sample Criteria Exceedances Report

GBZ44720 - 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

November 22, 2017 SDG I.D.: GBZ44720

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: Jim Wilkinson

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	
44720	SVE INFLUENT	750	1.4	-30		NA	NA	16:40	16:41	11/16							✓
44721	SVE EFFLUENT	744	↓	↓		↓	↓	16:35	16:36	11/16							✓

Relinquished by:	Accepted by:	Date:	Time:
		11-20-17	12:15
	TRUCK	11-20-17	1640

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

SPECIAL INSTRUCTIONS, QC REQUIREMENTS, REGULATORY INFORMATION:

Requested Criteria

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:

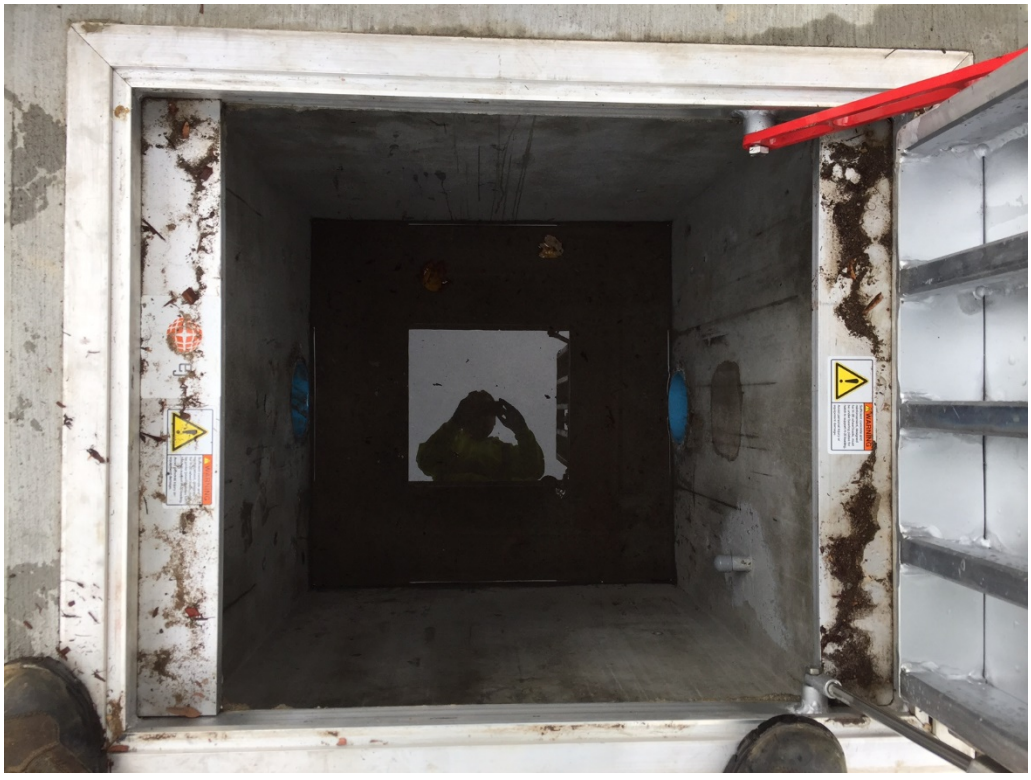
Appendix C

Groundwater Extraction/Hydraulic Containment System Installation

Daily Summary Reports

Frost Street Sites
Groundwater Extraction Hydraulic Containment
Daily Summary
Thursday, November 2, 2017

Envirotrac mobilized to the site to begin installation of the manifold and sampling vault equipment.



Frost Street Sites
Groundwater Extraction Hydraulic Containment
Daily Summary
Friday, November 10, 2017

- Envirotrac continued installation of the manifold, sampling sump, and control panel.
- Groundwater sampling activities were performed; attempt to start sampling EX-1B.

Frost Street Sites
Groundwater Extraction Hydraulic Containment
Daily Summary
Monday, November 13, 2017

- Delta Well & Pump mobilized to the site and performed video inspections on the four extraction wells.
  - Their notes are attached to this daily report.
  - Measurable accumulated sediment was observed in EX-1A, 1B, and 1C; pertinent photographs and captions are provided below.

EX-1A
Top of suspended sediment – 106 feet bgs
(Measured depth to bottom – 106.5 feet bgs)

EX-1B
Top of suspended sediment – 152.6 feet bgs
(Measure depth to bottom – 157.13 feet bgs)

EX-1C
"Coffee cup lid blocking" at 204.8 feet bgs is a piece of the surge block; it was removed from the well.

- To confirm the information collected during the video inspection, depth to bottom measurements were collected from each of the extraction wells and monitoring wells. The results are summarized in the table below.

Well	Depth to Bottom			Change	Accumulated Sediment
	Design	After Redevelopment October 2017	Inspection November 2017		
EX-1A	110	107.75	106.50	1.25	3.50
EX-1B	160	157.49	157.13	0.36	2.87
EX-1C	210	208.25	208.72	-0.47	1.28
EX-1D	245	244.60	244.20	0.40	0.80
FSMW-8C	182	NM	177.00	NA	5.00
FSMW-8D	235	NM	227.25	NA	7.75
FSMW-19A	82	NM	82.78	NA	-0.78
FSMW-19B	132	NM	132.34	NA	-0.34
FSMW-19C	182	NM	180.18	NA	1.82
FSMW-19D	235	NM	235.65	NA	-0.65

DELTA WELL & PUMP Co., Inc.

WATER AND ENVIRONMENTAL DRILLING

VIDEO LOG SUMMARY

DATE 11-13-17 DWP JOB NO _____

WELL ID B

LOCATION FROST STREET - CENTURY

LIGHTHEAD USED: SHORT LONG (GOO VISION) POWER AVAILABLE? Y (N)

0'	=	TOC 6" SCH 80 PVC
51.6'	=	BTW
100	=	TOP SCREEN
110	=	SCRN JOINT
120	=	
130	=	
140	=	
150	=	BOTTOM SCREEN
	=	
	=	
	=	
152.6	=	TOP MUSH
	=	

C

0'	=	TOC
52'	=	BTW
62.6'	=	JOINT - GROUT 120, 80, 60
152'	=	TOP SCREEN
	=	
	=	
	=	
202	=	BOTTOM
204.8	=	COFFEE CUP LID - BLOCKING
	=	
209.7	=	BOTTOM
	=	
	=	

NOTES: _____

97 UNION AVENUE • P.O. BOX 1309 • RONKONKOMA, N.Y. • 11779-0760 • (631) 981-2255 • FAX (631) 981-2369

DELTA WELL & PUMP Co., Inc.

WATER AND ENVIRONMENTAL DRILLING

VIDEO LOG SUMMARY

DATE 11-13-17 DWP JOB NO _____

WELL ID _____

LOCATION FROST ST

LIGHTHEAD USED: SHORT LONG POWER AVAILABLE? Y N

D

0' = TOC 6" SCH 80
52.2 = DTW
=
113.4 = JOINT LEAK
152.2 = " 1"
201.8 = TOP SCREEN
=
=
242 = BOTTOM SCREEN
=
245.11 =
=
A =
0' = TOC 6" SCH 80
49.5 = TOP SCREEN
=
=
51.8 = DTW
=
59.5 = JOINT - FLUFF ON EDGE
=
99.5 = BOTTOM SCREEN
=
106' = TOP FILL
=
=

NOTES: _____

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