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

Via email to rob.decandia@dec.ny.gov

June 11, 2018

Mr. Robert D. DeCandia Jr. P.E
NYSDEC, Division of Environmental Remediation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7015

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

Dear Mr. DeCandia:

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 May 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**).
- Quantitative sampling of the SVE system granular activated carbon influent and effluent air flow was conducted on May 10, 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**.
    - Photoionization detector readings and influent concentrations of Frost Street-related contaminants of concern (tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, and vinyl chloride [22,234 µg/m^3]) 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 ($\mu g/m^3$)	May 2018 Effluent Concentration ($\mu g/m^3$)
Trichloroethene	500	19,000	23.6
Tetrachloroethene	1,000	38,000	19.3
Vinyl Chloride	100	3,800	ND
Cis-1,2-Dichloroethene	100	3,800	18.1

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.

- On May 18, 2018, approximately 260 gallons of system condensate water was discharged from the holding tank to the sewer via the onsite connection. All water is treated via activated carbon adsorption prior to discharge. Groundwater concentrations did not exceed applicable permit limits, as shown in **Appendix C.**

Groundwater Extraction/Hydraulic Containment System Installation (OU2)

The pump test was completed for the groundwater extraction system, as described below and in the attached summary report (**Appendix D**). Extraction wells have shown appropriate response to pumping and have sustained the design flow rates for the duration of the test. The pump test data is currently being analyzed and a report summarizing the results and recommended pumping configuration(s) is forthcoming.

Construction of the in-vault treatment for the pH treatment cell was completed on May 31, 2018. As previously discussed, the cell will be filled with approximately 50 gallons of PHIX material. Installation of the PHIX material and system startup is planned for Wednesday, June 13, 2018 pending delivery of the material on Tuesday, June 12, 2018. Once system startup is successful, a revised schedule and summary report will be submitted to NYSDEC.

Quarterly/Annual Groundwater Monitoring

- The first quarter 2018 groundwater sampling report was submitted to NYSDEC on May 9, 2018.
- The second quarter 2018 groundwater sampling event is planned for the end of this month.

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 Stark, P.E.

Copies: A. Tamuno, Esq., NYSDEC *Via email to amtamuno@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. Mongelli, U.S. EPA *Via email to Mongelli.Thomas@epa.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*
P. Coop, EnSafe *Via email to pcoop@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:	3-May	**Arrival Time:**	9:00
Weather / Temp:	Clear / 70 DEG	**Departure Time:**	10:30
Technician / Operator:	JW		

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)	4650	913	
Blower 1 Fresh Air Valve Open (%)	0	Blower 1 Total Runtime (hrs)	50,302.5
Blower 2 Fresh Air Valve Open (%)	0	Blower 2 Total Runtime (hrs)	50,119.9
Moisture Separator Vacuum ("Hg)	3	Blower 1 Air Filter Differential Pressure ("H2O)	0
VGAC-1 Influent Vacuum ("H2O)	66	Blower 2 Air Filter Differential Pressure ("H2O)	0
VGAC-1 Effluent Vacuum ("H2O)	64	VGAC-1 Influent PID (ppm)	2.8
VGAC-2 Influent Vacuum ("H2O)	52	VGAC-1 Effluent PID (ppm)	0.0
VGAC-2 Effluent Vacuum ("H2O)	52	VGAC-2 Influent PID (ppm)	2.8
VGAC-3 Influent Pressure ("H2O)	65	VGAC-2 Effluent PID (ppm)	0.0
VGAC-3 Effluent Pressure ("H2O)	67	VGAC-3 Influent PID (ppm)	0.0
VGAC-3 Influent Temp (DegF)	NA	VGAC-3 Effluent PID (ppm)	0.0
Blower Effluent Pressure ("H2O)	8	Blower Effluent PID (ppm)	0.0
Transfer Pump Total Runtime (hrs)	25,033.0	Condensate Storage Tank Level (gal)	260

SVE Manifold Legs - Vacuum/Flow Rate/PID

		Vacuum	Velocity	Flow Rate	PID			Vacuum	Velocity	Flow Rate	PID
SVE-1	("H2O)/(FPM)/(cfm)/(ppm)	42	7000	153		SVE-4	("H2O)/(FPM)/(cfm)/(ppm)	35	4200	92	
SVE-2	("H2O)/(FPM)/(cfm)/(ppm)	44	4000	87		SVE-5	("H2O)/(FPM)/(cfm)/(ppm)	36	2900	63	
SVE-3	("H2O)/(FPM)/(cfm)/(ppm)	36	4800	105		SVE-6B	("H2O)/(FPM)/(cfm)/(ppm)	35	6000	131	
SVE-3A	("H2O)/(FPM)/(cfm)/(ppm)	34	3800	83		SVE-7	("H2O)/(FPM)/(cfm)/(ppm)	37	3000	65	

Air Sparge System

Compressor 1 Pressure (psi)	Off for repairs	Compressor 2 Pressure (psi)	90
Compressor 1 Temperature (degF)	Off for repairs	Compressor 2 Temperature (degF)	189
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	26,505
Manifold Regulator Pressure (psi)	70		

AS Manifold Legs - Pressure/Flow Rate

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

Notes, Comments & Observations:

Switched GAC-3 to vacuum side of blower.

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:	10-May	**Arrival Time:**	12:00
Weather / Temp:	Cloudy / 60 DEG	**Departure Time:**	13:00
Technician / Operator:	JW		

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)	4800 / 942	Blower 1 Total Runtime (hrs)	50,388.8
Blower 1 Fresh Air Valve Open (%)	0	Blower 2 Total Runtime (hrs)	50,203.8
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)	43	VGAC-1 Influent PID (ppm)	3.9
VGAC-1 Effluent Vacuum ("H2O)	45	VGAC-1 Effluent PID (ppm)	0.0
VGAC-2 Influent Vacuum ("H2O)	41	VGAC-2 Influent PID (ppm)	3.9
VGAC-2 Effluent Vacuum ("H2O)	45	VGAC-2 Effluent PID (ppm)	0.0
VGAC-3 Influent Pressure ("H2O)	50	VGAC-3 Influent PID (ppm)	0.0
VGAC-3 Effluent Pressure ("H2O)	60	VGAC-3 Effluent PID (ppm)	0.0
VGAC-3 Influent Temp (DegF)	NA	Blower Effluent PID (ppm)	0.0
Blower Effluent Pressure ("H2O)	9		
Transfer Pump Total Runtime (hrs)	25,033.0	Condensate Storage Tank Level (gal)	260

SVE Manifold Legs - Vacuum/Flow Rate/PID

		Vacuum	Velocity	Flow Rate	PID			Vacuum	Velocity	Flow Rate	PID
SVE-1	("H2O)/(FPM)/(cfm)/(ppm)	46	7100	155	12.3	SVE-4	("H2O)/(FPM)/(cfm)/(ppm)	38	4400	96	0.0
SVE-2	("H2O)/(FPM)/(cfm)/(ppm)	48	4500	98	6.1	SVE-5	("H2O)/(FPM)/(cfm)/(ppm)	40	3100	68	0.0
SVE-3	("H2O)/(FPM)/(cfm)/(ppm)	40	5000	109	2.9	SVE-6B	("H2O)/(FPM)/(cfm)/(ppm)	38	6300	137	11.2
SVE-3A	("H2O)/(FPM)/(cfm)/(ppm)	38	4400	96	0.0	SVE-7	("H2O)/(FPM)/(cfm)/(ppm)	40	3200	70	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)	180
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	26,676
Manifold Regulator Pressure (psi)	70		

AS Manifold Legs - Pressure/Flow Rate

		Pressure	Flow Rate			Pressure	Flow Rate
AS-1	(psi)/(cfm)	15	11	AS-11	(psi)/(cfm)	14	4
AS-2	(psi)/(cfm)	15	7	AS-12B	(psi)/(cfm)	14	10
AS-3	(psi)/(cfm)	13	6	AS-13B	(psi)/(cfm)	13	11
AS-4	(psi)/(cfm)	13	10	AS-14	(psi)/(cfm)	15	11
AS-5	(psi)/(cfm)	14	7	AS-15	(psi)/(cfm)	13	10
AS-6	(psi)/(cfm)	13	9	AS-16B	(psi)/(cfm)	13	11
AS-7	(psi)/(cfm)	14	4	AS-17	(psi)/(cfm)	14	5
AS-8	(psi)/(cfm)	14	10	AS-18	(psi)/(cfm)	12	6
AS-9	(psi)/(cfm)	14	6	AS-19	(psi)/(cfm)	13	4
AS-10B	(psi)/(cfm)	13	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: 18-May
Weather / Temp: Cloudy / 65 DEG
Technician / Operator: JW

Arrival Time: 10:30
Departure Time: 11:30

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)	4900	962	Blower 1 Total Runtime (hrs)	50,483.3
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	50,299.8
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)	43		VGAC-1 Influent PID (ppm)	3.4
VGAC-1 Effluent Vacuum ("H2O)	45		VGAC-1 Effluent PID (ppm)	0.0
VGAC-2 Influent Vacuum ("H2O)	40		VGAC-2 Influent PID (ppm)	3.4
VGAC-2 Effluent Vacuum ("H2O)	45		VGAC-2 Effluent PID (ppm)	0.0
VGAC-3 Influent Pressure ("H2O)	50		VGAC-3 Influent PID (ppm)	0.0
VGAC-3 Effluent Pressure ("H2O)	60		VGAC-3 Effluent PID (ppm)	0.0
VGAC-3 Influent Temp (DegF)	NA		Blower Effluent PID (ppm)	0.0
Blower Effluent Pressure ("H2O)	9			
Transfer Pump Total Runtime (hrs)	25,033.0		Condensate Storage Tank Level (gal)	260

SVE Manifold Legs - Vacuum/Flow Rate/PID

	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	46	7000	153		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	40	4200	92	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	48	4500	98		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	40	3200	70	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	40	5000	109		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	40	6500	142	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	40	4250	93		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	40	3300	72	

Air Sparge System

Compressor 1 Pressure (psi)	Off for repairs	Compressor 2 Pressure (psi)	91
Compressor 1 Temperature (degF)	Off for repairs	Compressor 2 Temperature (degF)	187
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	26,866
Manifold Regulator Pressure (psi)	70		

AS Manifold Legs - Pressure/Flow Rate

	Pressure	Flow Rate		Pressure	Flow Rate
AS-1 (psi)/(cfm)	14	12	AS-11 (psi)/(cfm)	15	4
AS-2 (psi)/(cfm)	15	8	AS-12B (psi)/(cfm)	15	10
AS-3 (psi)/(cfm)	14	7	AS-13B (psi)/(cfm)	13	12
AS-4 (psi)/(cfm)	14	10	AS-14 (psi)/(cfm)	15	10
AS-5 (psi)/(cfm)	15	8	AS-15 (psi)/(cfm)	14	10
AS-6 (psi)/(cfm)	15	10	AS-16B (psi)/(cfm)	14	12
AS-7 (psi)/(cfm)	15	4	AS-17 (psi)/(cfm)	15	5
AS-8 (psi)/(cfm)	14	11	AS-18 (psi)/(cfm)	13	7
AS-9 (psi)/(cfm)	15	7	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: 18-May
Weather / Temp: Cloudy / 65 DEG
Technician / Operator: JW

Arrival Time: 10:30
Departure Time: 11:30

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)	4900	962	Blower 1 Total Runtime (hrs)	50,483.3
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	50,299.8
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)	43		VGAC-1 Influent PID (ppm)	3.4
VGAC-1 Effluent Vacuum ("H2O)	45		VGAC-1 Effluent PID (ppm)	0.0
VGAC-2 Influent Vacuum ("H2O)	40		VGAC-2 Influent PID (ppm)	3.4
VGAC-2 Effluent Vacuum ("H2O)	45		VGAC-2 Effluent PID (ppm)	0.0
VGAC-3 Influent Pressure ("H2O)	50		VGAC-3 Influent PID (ppm)	0.0
VGAC-3 Effluent Pressure ("H2O)	60		VGAC-3 Effluent PID (ppm)	0.0
VGAC-3 Influent Temp (DegF)	NA		Blower Effluent PID (ppm)	0.0
Blower Effluent Pressure ("H2O)	9			
Transfer Pump Total Runtime (hrs)	25,033.0		Condensate Storage Tank Level (gal)	260 → 0

SVE Manifold Legs - Vacuum/Flow Rate/PID

	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	46	7000	153		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	40	4200	92	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	48	4500	98		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	40	3200	70	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	40	5000	109		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	40	6500	142	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	40	4250	93		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	40	3300	72	

Air Sparge System

Compressor 1 Pressure (psi)	Off for repairs	Compressor 2 Pressure (psi)	91
Compressor 1 Temperature (degF)	Off for repairs	Compressor 2 Temperature (degF)	187
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	26,866
Manifold Regulator Pressure (psi)	70		

AS Manifold Legs - Pressure/Flow Rate

	Pressure	Flow Rate		Pressure	Flow Rate
AS-1 (psi)/(cfm)	14	12	AS-11 (psi)/(cfm)	15	4
AS-2 (psi)/(cfm)	15	8	AS-12B (psi)/(cfm)	15	10
AS-3 (psi)/(cfm)	14	7	AS-13B (psi)/(cfm)	13	12
AS-4 (psi)/(cfm)	14	10	AS-14 (psi)/(cfm)	15	10
AS-5 (psi)/(cfm)	15	8	AS-15 (psi)/(cfm)	14	10
AS-6 (psi)/(cfm)	15	10	AS-16B (psi)/(cfm)	14	12
AS-7 (psi)/(cfm)	15	4	AS-17 (psi)/(cfm)	15	5
AS-8 (psi)/(cfm)	14	11	AS-18 (psi)/(cfm)	13	7
AS-9 (psi)/(cfm)	15	7	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: 31-May
Weather / Temp: Cloudy / 65 DEG
Technician / Operator: JW

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)	OFF	ON			

Soil Vapor Extraction System				
Blower Air Velocity/Flow Rate (fpm)/(cfm)	4800	942	Blower 1 Total Runtime (hrs)	50,640.4
Blower 1 Fresh Air Valve Open (%)	0		Blower 2 Total Runtime (hrs)	50,455.7
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)	43		VGAC-1 Influent PID (ppm)	4.1
VGAC-1 Effluent Vacuum ("H2O)	45		VGAC-1 Effluent PID (ppm)	0.0
VGAC-2 Influent Vacuum ("H2O)	40		VGAC-2 Influent PID (ppm)	4.1
VGAC-2 Effluent Vacuum ("H2O)	45		VGAC-2 Effluent PID (ppm)	0.0
VGAC-3 Influent Pressure ("H2O)	50		VGAC-3 Influent PID (ppm)	0.0
VGAC-3 Effluent Pressure ("H2O)	60		VGAC-3 Effluent PID (ppm)	0.0
VGAC-3 Influent Temp (DegF)	NA		Blower Effluent PID (ppm)	0.0
Blower Effluent Pressure ("H2O)	9			
Transfer Pump Total Runtime (hrs)	25,033.0		Condensate Storage Tank Level (gal)	0

SVE Manifold Legs - Vacuum/Flow Rate/PID									
	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	45	7000	153		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	40	4200	92	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	48	4500	98		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	40	3200	70	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	40	5000	109		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	40	6500	142	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	40	4000	87		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	40	3300	72	

Air Sparge System			
Compressor 1 Pressure (psi)	Off for repairs	Compressor 2 Pressure (psi)	94
Compressor 1 Temperature (degF)	Off for repairs	Compressor 2 Temperature (degF)	150
Compressor 1 Runtime (hrs)	27,317	Compressor 2 Runtime (hrs)	27,035
Manifold Regulator Pressure (psi)	72		

AS Manifold Legs - Pressure/Flow Rate					
	Pressure	Flow Rate		Pressure	Flow Rate
AS-1 (psi)/(cfm)	15	10	AS-11 (psi)/(cfm)	15	4
AS-2 (psi)/(cfm)	15	8	AS-12B (psi)/(cfm)	15	10
AS-3 (psi)/(cfm)	15	7	AS-13B (psi)/(cfm)	15	12
AS-4 (psi)/(cfm)	15	10	AS-14 (psi)/(cfm)	15	10
AS-5 (psi)/(cfm)	15	8	AS-15 (psi)/(cfm)	14	10
AS-6 (psi)/(cfm)	15	10	AS-16B (psi)/(cfm)	14	10
AS-7 (psi)/(cfm)	15	4	AS-17 (psi)/(cfm)	15	7
AS-8 (psi)/(cfm)	14	10	AS-18 (psi)/(cfm)	15	7
AS-9 (psi)/(cfm)	15	6	AS-19 (psi)/(cfm)	14	4
AS-10B (psi)/(cfm)	13	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
5/26/2018	5/31/2018	JW	AS High Temperature	Added oil to compressor and restarted.	ON	ON

Appendix B

SVE System Influent/Effluent Sampling (TO-15)

Laboratory Analytical Results

Wednesday, May 16, 2018

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

Project ID: ENSAFE-WESTBURY
Sample ID#s: CA45627 - CA45628

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

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

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

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

Sincerely yours,

Phyllis Shiller
Laboratory Director

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

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 16, 2018

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

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	JW	05/10/18	12:44
Location Code:	ENVIROTR	Received by:	SW	05/11/18	16:29
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	812				

Laboratory Data

SDG ID: GCA45627
Phoenix ID: CA45627

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*	05/12/18	KCA	1	1
1,1,1-Trichloroethane	ND		*0.183*	ND	*1.00*	05/12/18	KCA	1	
1,1,2,2-Tetrachloroethane	ND		*0.146*	ND	*1.00*	05/12/18	KCA	1	
1,1,2-Trichloroethane	ND		*0.183*	ND	*1.00*	05/12/18	KCA	1	
1,1-Dichloroethane	ND		*0.247*	ND	*1.00*	05/12/18	KCA	1	
1,1-Dichloroethene	ND		*0.051*	ND	*0.20*	05/12/18	KCA	1	
1,2,4-Trichlorobenzene	ND		*0.135*	ND	*1.00*	05/12/18	KCA	1	
1,2,4-Trimethylbenzene	ND		*0.204*	ND	*1.00*	05/12/18	KCA	1	
1,2-Dibromoethane(EDB)	ND		*0.130*	ND	*1.00*	05/12/18	KCA	1	
1,2-Dichlorobenzene	ND		*0.166*	ND	*1.00*	05/12/18	KCA	1	
1,2-Dichloroethane	ND		*0.247*	ND	*1.00*	05/12/18	KCA	1	
1,2-dichloropropane	ND		*0.217*	ND	*1.00*	05/12/18	KCA	1	
1,2-Dichlorotetrafluoroethane	ND		*0.143*	ND	*1.00*	05/12/18	KCA	1	
1,3,5-Trimethylbenzene	ND		*0.204*	ND	*1.00*	05/12/18	KCA	1	
1,3-Butadiene	ND		*0.452*	ND	*1.00*	05/12/18	KCA	1	
1,3-Dichlorobenzene	ND		*0.166*	ND	*1.00*	05/12/18	KCA	1	
1,4-Dichlorobenzene	ND		*0.166*	ND	*1.00*	05/12/18	KCA	1	
1,4-Dioxane	ND		*0.278*	ND	*1.00*	05/12/18	KCA	1	
2-Hexanone(MBK)	ND		*0.244*	ND	*1.00*	05/12/18	KCA	1	1
4-Ethyltoluene	ND		*0.204*	ND	*1.00*	05/12/18	KCA	1	1
4-Isopropyltoluene	ND		*0.182*	ND	*1.00*	05/12/18	KCA	1	1
4-Methyl-2-pentanone(MIBK)	ND		*0.244*	ND	*1.00*	05/12/18	KCA	1	
Acetone	0.538	S	*0.421*	1.28	*1.00*	05/12/18	KCA	1	
Acrylonitrile	ND		*0.461*	ND	*1.00*	05/12/18	KCA	1	
Benzene	ND		*0.313*	ND	*1.00*	05/12/18	KCA	1	
Benzyl chloride	ND		*0.193*	ND	*1.00*	05/12/18	KCA	1	

Project ID: ENSAFE-WESTBURY
Client ID: SVE EFFLUENT

Phoenix I.D.: CA45627

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*0.149*	ND	*1.00*	05/12/18	KCA	1	
Bromoform	ND	*0.097*	ND	*1.00*	05/12/18	KCA	1	
Bromomethane	ND	*0.258*	ND	*1.00*	05/12/18	KCA	1	
Carbon Disulfide	ND	*0.321*	ND	*1.00*	05/12/18	KCA	1	
Carbon Tetrachloride	ND	*0.032*	ND	*0.20*	05/12/18	KCA	1	
Chlorobenzene	ND	*0.217*	ND	*1.00*	05/12/18	KCA	1	
Chloroethane	ND	*0.379*	ND	*1.00*	05/12/18	KCA	1	
Chloroform	ND	*0.205*	ND	*1.00*	05/12/18	KCA	1	
Chloromethane	ND	*0.485*	ND	*1.00*	05/12/18	KCA	1	
Cis-1,2-Dichloroethene	4.58	*0.051*	18.1	*0.20*	05/12/18	KCA	1	
cis-1,3-Dichloropropene	ND	*0.221*	ND	*1.00*	05/12/18	KCA	1	
Cyclohexane	ND	*0.291*	ND	*1.00*	05/12/18	KCA	1	
Dibromochloromethane	ND	*0.118*	ND	*1.00*	05/12/18	KCA	1	
Dichlorodifluoromethane	0.640	*0.202*	3.16	*1.00*	05/12/18	KCA	1	
Ethanol	0.658	*0.531*	1.24	*1.00*	05/12/18	KCA	1	1
Ethyl acetate	ND	*0.278*	ND	*1.00*	05/12/18	KCA	1	1
Ethylbenzene	ND	*0.230*	ND	*1.00*	05/12/18	KCA	1	
Heptane	ND	*0.244*	ND	*1.00*	05/12/18	KCA	1	
Hexachlorobutadiene	ND	*0.094*	ND	*1.00*	05/12/18	KCA	1	
Hexane	ND	*0.284*	ND	*1.00*	05/12/18	KCA	1	
Isopropylalcohol	ND	*0.407*	ND	*1.00*	05/12/18	KCA	1	
Isopropylbenzene	ND	*0.204*	ND	*1.00*	05/12/18	KCA	1	
m,p-Xylene	ND	*0.230*	ND	*1.00*	05/12/18	KCA	1	
Methyl Ethyl Ketone	ND	*0.339*	ND	*1.00*	05/12/18	KCA	1	
Methyl tert-butyl ether(MTBE)	ND	*0.278*	ND	*1.00*	05/12/18	KCA	1	
Methylene Chloride	ND	*0.864*	ND	*3.00*	05/12/18	KCA	1	
n-Butylbenzene	ND	*0.182*	ND	*1.00*	05/12/18	KCA	1	1
o-Xylene	ND	*0.230*	ND	*1.00*	05/12/18	KCA	1	
Propylene	ND	*0.581*	ND	*1.00*	05/12/18	KCA	1	1
sec-Butylbenzene	ND	*0.182*	ND	*1.00*	05/12/18	KCA	1	1
Styrene	ND	*0.235*	ND	*1.00*	05/12/18	KCA	1	
Tetrachloroethene	2.85	*0.037*	19.3	*0.25*	05/12/18	KCA	1	
Tetrahydrofuran	ND	*0.339*	ND	*1.00*	05/12/18	KCA	1	1
Toluene	ND	*0.266*	ND	*1.00*	05/12/18	KCA	1	
Trans-1,2-Dichloroethene	ND	*0.252*	ND	*1.00*	05/12/18	KCA	1	
trans-1,3-Dichloropropene	ND	*0.221*	ND	*1.00*	05/12/18	KCA	1	
Trichloroethene	4.39	*0.037*	23.6	*0.20*	05/12/18	KCA	1	
Trichlorofluoromethane	ND	*0.178*	ND	*1.00*	05/12/18	KCA	1	
Trichlorotrifluoroethane	ND	*0.131*	ND	*1.00*	05/12/18	KCA	1	
Vinyl Chloride	ND	*0.078*	ND	*0.20*	05/12/18	KCA	1	
QA/QC Surrogates								
% Bromofluorobenzene	103	*%*	103	*%*	05/12/18	KCA	1	

Ver 1

Project ID: ENSAFE-WESTBURY
Client ID: SVE EFFLUENT

Phoenix I.D.: CA45627

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

May 16, 2018

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 16, 2018

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

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	JW	05/10/18	12:47
Location Code:	ENVIROTR	Received by:	SW	05/11/18	16:29
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	738				

Laboratory Data

SDG ID: GCA45627
Phoenix ID: CA45628

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*	05/14/18	KCA	1	1
1,1,1-Trichloroethane	0.626		*0.183*	3.41	*1.00*	05/14/18	KCA	1	
1,1,2,2-Tetrachloroethane	ND		*0.146*	ND	*1.00*	05/14/18	KCA	1	
1,1,2-Trichloroethane	ND		*0.183*	ND	*1.00*	05/14/18	KCA	1	
1,1-Dichloroethane	ND		*0.247*	ND	*1.00*	05/14/18	KCA	1	
1,1-Dichloroethene	ND		*0.051*	ND	*0.20*	05/14/18	KCA	1	
1,2,4-Trichlorobenzene	ND		*0.135*	ND	*1.00*	05/14/18	KCA	1	
1,2,4-Trimethylbenzene	ND		*0.204*	ND	*1.00*	05/14/18	KCA	1	
1,2-Dibromoethane(EDB)	ND		*0.130*	ND	*1.00*	05/14/18	KCA	1	
1,2-Dichlorobenzene	ND		*0.166*	ND	*1.00*	05/14/18	KCA	1	
1,2-Dichloroethane	ND		*0.247*	ND	*1.00*	05/14/18	KCA	1	
1,2-dichloropropane	ND		*0.217*	ND	*1.00*	05/14/18	KCA	1	
1,2-Dichlorotetrafluoroethane	ND		*0.143*	ND	*1.00*	05/14/18	KCA	1	
1,3,5-Trimethylbenzene	ND		*0.204*	ND	*1.00*	05/14/18	KCA	1	
1,3-Butadiene	ND		*0.452*	ND	*1.00*	05/14/18	KCA	1	
1,3-Dichlorobenzene	ND		*0.166*	ND	*1.00*	05/14/18	KCA	1	
1,4-Dichlorobenzene	ND		*0.166*	ND	*1.00*	05/14/18	KCA	1	
1,4-Dioxane	ND		*0.278*	ND	*1.00*	05/14/18	KCA	1	
2-Hexanone(MBK)	ND		*0.244*	ND	*1.00*	05/14/18	KCA	1	1
4-Ethyltoluene	ND		*0.204*	ND	*1.00*	05/14/18	KCA	1	1
4-Isopropyltoluene	ND		*0.182*	ND	*1.00*	05/14/18	KCA	1	1
4-Methyl-2-pentanone(MIBK)	ND		*0.244*	ND	*1.00*	05/14/18	KCA	1	
Acetone	2.01	S	*0.421*	4.77	*1.00*	05/14/18	KCA	1	
Acrylonitrile	ND		*0.461*	ND	*1.00*	05/14/18	KCA	1	
Benzene	ND		*0.313*	ND	*1.00*	05/14/18	KCA	1	
Benzyl chloride	ND		*0.193*	ND	*1.00*	05/14/18	KCA	1	

Project ID: ENSAFE-WESTBURY
Client ID: SVE INFLUENT

Phoenix I.D.: CA45628

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*0.149*	ND	*1.00*	05/14/18	KCA	1	
Bromoform	ND	*0.097*	ND	*1.00*	05/14/18	KCA	1	
Bromomethane	ND	*0.258*	ND	*1.00*	05/14/18	KCA	1	
Carbon Disulfide	ND	*0.321*	ND	*1.00*	05/14/18	KCA	1	
Carbon Tetrachloride	0.100	*0.032*	0.63	*0.20*	05/14/18	KCA	1	
Chlorobenzene	0.323	*0.217*	1.49	*1.00*	05/14/18	KCA	1	
Chloroethane	ND	*0.379*	ND	*1.00*	05/14/18	KCA	1	
Chloroform	ND	*0.205*	ND	*1.00*	05/14/18	KCA	1	
Chloromethane	ND	*0.485*	ND	*1.00*	05/14/18	KCA	1	
Cis-1,2-Dichloroethene	170	*0.505*	674	*2.00*	05/15/18	KCA	10	
cis-1,3-Dichloropropene	ND	*0.221*	ND	*1.00*	05/14/18	KCA	1	
Cyclohexane	ND	*0.291*	ND	*1.00*	05/14/18	KCA	1	
Dibromochloromethane	ND	*0.118*	ND	*1.00*	05/14/18	KCA	1	
Dichlorodifluoromethane	0.527	*0.202*	2.60	*1.00*	05/14/18	KCA	1	
Ethanol	0.837	*0.531*	1.58	*1.00*	05/14/18	KCA	1	1
Ethyl acetate	ND	*0.278*	ND	*1.00*	05/14/18	KCA	1	1
Ethylbenzene	ND	*0.230*	ND	*1.00*	05/14/18	KCA	1	
Heptane	ND	*0.244*	ND	*1.00*	05/14/18	KCA	1	
Hexachlorobutadiene	ND	*0.094*	ND	*1.00*	05/14/18	KCA	1	
Hexane	ND	*0.284*	ND	*1.00*	05/14/18	KCA	1	
Isopropylalcohol	1.71	*0.407*	4.20	*1.00*	05/14/18	KCA	1	
Isopropylbenzene	ND	*0.204*	ND	*1.00*	05/14/18	KCA	1	
m,p-Xylene	ND	*0.230*	ND	*1.00*	05/14/18	KCA	1	
Methyl Ethyl Ketone	2.56	*0.339*	7.55	*1.00*	05/14/18	KCA	1	
Methyl tert-butyl ether(MTBE)	ND	*0.278*	ND	*1.00*	05/14/18	KCA	1	
Methylene Chloride	ND	*0.864*	ND	*3.00*	05/14/18	KCA	1	
n-Butylbenzene	ND	*0.182*	ND	*1.00*	05/14/18	KCA	1	1
o-Xylene	ND	*0.230*	ND	*1.00*	05/14/18	KCA	1	
Propylene	ND	*0.581*	ND	*1.00*	05/14/18	KCA	1	1
sec-Butylbenzene	ND	*0.182*	ND	*1.00*	05/14/18	KCA	1	1
Styrene	ND	*0.235*	ND	*1.00*	05/14/18	KCA	1	
Tetrachloroethene	2990	*5.53*	20300	*37.5*	05/15/18	KCA	150	
Tetrahydrofuran	3.42	*0.339*	10.1	*1.00*	05/14/18	KCA	1	1
Toluene	ND	*0.266*	ND	*1.00*	05/14/18	KCA	1	
Trans-1,2-Dichloroethene	1.80	*0.252*	7.13	*1.00*	05/14/18	KCA	1	
trans-1,3-Dichloropropene	ND	*0.221*	ND	*1.00*	05/14/18	KCA	1	
Trichloroethene	234	*0.372*	1260	*2.00*	05/15/18	KCA	10	
Trichlorofluoromethane	0.321	*0.178*	1.80	*1.00*	05/14/18	KCA	1	
Trichlorotrifluoroethane	2.24	*0.131*	17.2	*1.00*	05/14/18	KCA	1	
Vinyl Chloride	ND	*0.078*	ND	*0.20*	05/14/18	KCA	1	
QA/QC Surrogates								
% Bromofluorobenzene	102	*%*	102	*%*	05/14/18	KCA	1	

Project ID: ENSAFE-WESTBURY
Client ID: SVE INFLUENT

Phoenix I.D.: CA45628

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

May 16, 2018

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

May 16, 2018

QA/QC Data

SDG I.D.: GCA45627

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 430295 (ppbv), QC Sample No: CA45630 (CA45627)												
Volatiles												
1,1,1,2-Tetrachloroethane	ND	0.150	ND	1.03	97	ND	ND	ND	ND	NC	70 - 130	25
1,1,1-Trichloroethane	ND	0.180	ND	0.98	92	ND	ND	ND	ND	NC	70 - 130	25
1,1,2,2-Tetrachloroethane	ND	0.150	ND	1.03	98	ND	ND	ND	ND	NC	70 - 130	25
1,1,2-Trichloroethane	ND	0.180	ND	0.98	84	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethane	ND	0.250	ND	1.01	90	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethene	ND	0.050	ND	0.20	80	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trichlorobenzene	ND	0.130	ND	0.96	101	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trimethylbenzene	ND	0.200	ND	0.98	100	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	87	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorobenzene	ND	0.170	ND	1.02	99	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichloroethane	ND	0.250	ND	1.01	90	ND	ND	ND	ND	NC	70 - 130	25
1,2-dichloropropane	ND	0.220	ND	1.02	84	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorotetrafluoroethane	ND	0.140	ND	0.98	94	ND	ND	ND	ND	NC	70 - 130	25
1,3,5-Trimethylbenzene	ND	0.200	ND	0.98	99	ND	ND	ND	ND	NC	70 - 130	25
1,3-Butadiene	ND	0.450	ND	0.99	85	ND	ND	ND	ND	NC	70 - 130	25
1,3-Dichlorobenzene	ND	0.170	ND	1.02	99	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dichlorobenzene	ND	0.170	ND	1.02	99	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dioxane	ND	0.280	ND	1.01	74	ND	ND	ND	ND	NC	70 - 130	25
2-Hexanone(MBK)	ND	0.240	ND	0.98	80	ND	ND	ND	ND	NC	70 - 130	25
4-Ethyltoluene	ND	0.200	ND	0.98	96	ND	ND	ND	ND	NC	70 - 130	25
4-Isopropyltoluene	ND	0.180	ND	0.99	93	ND	ND	ND	ND	NC	70 - 130	25
4-Methyl-2-pentanone(MIBK)	ND	0.240	ND	0.98	79	ND	ND	ND	ND	NC	70 - 130	25
Acetone	ND	0.420	ND	1.00	80	4.42 S	4.65 S	1.86 S	1.96 S	NC	70 - 130	25
Acrylonitrile	ND	0.460	ND	1.00	85	ND	ND	ND	ND	NC	70 - 130	25
Benzene	ND	0.310	ND	0.99	89	1.01	1.14	0.316	0.358	NC	70 - 130	25
Benzyl chloride	ND	0.190	ND	0.98	102	ND	ND	ND	ND	NC	70 - 130	25
Bromodichloromethane	ND	0.150	ND	1.00	88	ND	ND	ND	ND	NC	70 - 130	25
Bromoform	ND	0.097	ND	1.00	110	ND	ND	ND	ND	NC	70 - 130	25
Bromomethane	ND	0.260	ND	1.01	88	ND	ND	ND	ND	NC	70 - 130	25
Carbon Disulfide	ND	0.320	ND	1.00	91	ND	ND	ND	ND	NC	70 - 130	25
Carbon Tetrachloride	ND	0.032	ND	0.20	94	0.45	0.50	0.072	0.080	NC	70 - 130	25
Chlorobenzene	ND	0.220	ND	1.01	95	ND	ND	ND	ND	NC	70 - 130	25
Chloroethane	ND	0.380	ND	1.00	83	ND	ND	ND	ND	NC	70 - 130	25
Chloroform	ND	0.200	ND	0.98	90	2.01	2.14	0.412	0.439	NC	70 - 130	25
Chloromethane	ND	0.480	ND	0.99	80	ND	ND	ND	ND	NC	70 - 130	25
Cis-1,2-Dichloroethene	ND	0.050	ND	0.20	79	8.24	9.7	2.08	2.45	16.3	70 - 130	25
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	86	ND	ND	ND	ND	NC	70 - 130	25
Cyclohexane	ND	0.290	ND	1.00	84	ND	ND	ND	ND	NC	70 - 130	25
Dibromochloromethane	ND	0.120	ND	1.02	91	ND	ND	ND	ND	NC	70 - 130	25
Dichlorodifluoromethane	ND	0.200	ND	0.99	91	1.98	2.01	0.401	0.407	NC	70 - 130	25
Ethanol	ND	0.530	ND	1.00	111	1.38	1.46	0.732	0.777	NC	70 - 130	25

QA/QC Data

SDG I.D.: GCA45627

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	88	ND	ND	ND	ND	NC	70 - 130	25
Ethylbenzene	ND	0.230	ND	1.00	94	ND	ND	ND	ND	NC	70 - 130	25
Heptane	ND	0.240	ND	0.98	80	ND	ND	ND	ND	NC	70 - 130	25
Hexachlorobutadiene	ND	0.094	ND	1.00	100	ND	ND	ND	ND	NC	70 - 130	25
Hexane	ND	0.280	ND	0.99	88	ND	ND	ND	ND	NC	70 - 130	25
Isopropylalcohol	ND	0.410	ND	1.01	81	ND	ND	ND	ND	NC	70 - 130	25
Isopropylbenzene	ND	0.200	ND	0.98	93	ND	ND	ND	ND	NC	70 - 130	25
m,p-Xylene	ND	0.230	ND	1.00	97	ND	ND	ND	ND	NC	70 - 130	25
Methyl Ethyl Ketone	ND	0.340	ND	1.00	88	ND	ND	ND	ND	NC	70 - 130	25
Methyl tert-butyl ether(MTBE)	ND	0.280	ND	1.01	88	ND	ND	ND	ND	NC	70 - 130	25
Methylene Chloride	ND	0.860	ND	2.99	86	ND	ND	ND	ND	NC	70 - 130	25
n-Butylbenzene	ND	0.180	ND	0.99	97	ND	ND	ND	ND	NC	70 - 130	25
o-Xylene	ND	0.230	ND	1.00	97	ND	ND	ND	ND	NC	70 - 130	25
Propylene	ND	0.580	ND	1.00	84	ND	ND	ND	ND	NC	70 - 130	25
sec-Butylbenzene	ND	0.180	ND	0.99	95	ND	ND	ND	ND	NC	70 - 130	25
Styrene	ND	0.230	ND	0.98	97	ND	ND	ND	ND	NC	70 - 130	25
Tetrachloroethene	ND	0.037	ND	0.25	87	107	129	15.8	19.1	18.9	70 - 130	25
Tetrahydrofuran	ND	0.340	ND	1.00	83	ND	ND	ND	ND	NC	70 - 130	25
Toluene	ND	0.270	ND	1.02	85	ND	ND	ND	ND	NC	70 - 130	25
Trans-1,2-Dichloroethene	ND	0.250	ND	0.99	97	ND	ND	ND	ND	NC	70 - 130	25
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	86	ND	ND	ND	ND	NC	70 - 130	25
Trichloroethene	ND	0.037	ND	0.20	85	26.5	33.0	4.94	6.15	21.8	70 - 130	25
Trichlorofluoromethane	ND	0.180	ND	1.01	92	1.28	1.30	0.228	0.232	NC	70 - 130	25
Trichlorotrifluoroethane	ND	0.130	ND	1.00	90	ND	ND	ND	ND	NC	70 - 130	25
Vinyl Chloride	ND	0.078	ND	0.20	89	ND	ND	ND	ND	NC	70 - 130	25
% Bromofluorobenzene	98		98		96	98	102	98	102	NC	70 - 130	25
QA/QC Batch 430474 (ppbv), QC Sample No: CA46471 (CA45628 (1X, 10X, 150X))												
Volatiles												
1,1,1,2-Tetrachloroethane	ND	0.150	ND	1.03	105	ND	ND	ND	ND	NC	70 - 130	25
1,1,1-Trichloroethane	ND	0.180	ND	0.98	103	ND	ND	ND	ND	NC	70 - 130	25
1,1,2,2-Tetrachloroethane	ND	0.150	ND	1.03	103	ND	ND	ND	ND	NC	70 - 130	25
1,1,2-Trichloroethane	ND	0.180	ND	0.98	116	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethane	ND	0.250	ND	1.01	97	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethene	ND	0.050	ND	0.20	102	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trichlorobenzene	ND	0.130	ND	0.96	123	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trimethylbenzene	ND	0.200	ND	0.98	105	10.6	12.3	2.15	2.51	15.5	70 - 130	25
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	114	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorobenzene	ND	0.170	ND	1.02	113	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	112	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorotetrafluoroethane	ND	0.140	ND	0.98	114	ND	ND	ND	ND	NC	70 - 130	25
1,3,5-Trimethylbenzene	ND	0.200	ND	0.98	105	3.47	3.38	0.706	0.687	NC	70 - 130	25
1,3-Butadiene	ND	0.450	ND	0.99	106	ND	ND	ND	ND	NC	70 - 130	25
1,3-Dichlorobenzene	ND	0.170	ND	1.02	106	1.36	1.44	0.226	0.239	NC	70 - 130	25
1,4-Dichlorobenzene	ND	0.170	ND	1.02	109	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dioxane	ND	0.280	ND	1.01	107	ND	ND	ND	ND	NC	70 - 130	25
2-Hexanone(MBK)	ND	0.240	ND	0.98	105	ND	ND	ND	ND	NC	70 - 130	25
4-Ethyltoluene	ND	0.200	ND	0.98	102	9.14	9.19	1.86	1.87	0.5	70 - 130	25
4-Isopropyltoluene	ND	0.180	ND	0.99	101	ND	ND	ND	ND	NC	70 - 130	25
4-Methyl-2-pentanone(MIBK)	ND	0.240	ND	0.98	109	4.87	4.91	1.19	1.20	NC	70 - 130	25
Acetone	ND	0.420	ND	1.00	91	501	494	211	208	1.4	70 - 130	25
Acrylonitrile	ND	0.460	ND	1.00	104	ND	ND	ND	ND	NC	70 - 130	25

QA/QC Data

SDG I.D.: GCA45627

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
Benzene	ND	0.310	ND	0.99	103	4.02	4.18	1.26	1.31	NC	70 - 130	25
Benzyl chloride	ND	0.190	ND	0.98	102	ND	ND	ND	ND	NC	70 - 130	25
Bromodichloromethane	ND	0.150	ND	1.00	120	ND	ND	ND	ND	NC	70 - 130	25
Bromoform	ND	0.097	ND	1.00	115	ND	ND	ND	ND	NC	70 - 130	25
Bromomethane	ND	0.260	ND	1.01	106	ND	ND	ND	ND	NC	70 - 130	25
Carbon Disulfide	ND	0.320	ND	1.00	103	9.8	9.6	3.14	3.07	2.3	70 - 130	25
Carbon Tetrachloride	ND	0.032	ND	0.20	110	0.30	0.34	0.047	0.054	NC	70 - 130	25
Chlorobenzene	ND	0.220	ND	1.01	105	ND	ND	ND	ND	NC	70 - 130	25
Chloroethane	ND	0.380	ND	1.00	103	ND	ND	ND	ND	NC	70 - 130	25
Chloroform	ND	0.200	ND	0.98	106	ND	ND	ND	ND	NC	70 - 130	25
Chloromethane	ND	0.480	ND	0.99	108	9.9	10.2	4.82	4.93	2.3	70 - 130	25
Cis-1,2-Dichloroethene	ND	0.050	ND	0.20	104	ND	ND	ND	ND	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	1.64	1.61	0.476	0.467	NC	70 - 130	25
Dibromochloromethane	ND	0.120	ND	1.02	120	ND	ND	ND	ND	NC	70 - 130	25
Dichlorodifluoromethane	ND	0.200	ND	0.99	117	3.09	2.77	0.626	0.560	NC	70 - 130	25
Ethanol	ND	0.530	ND	1.00	123	121	118	64.1	62.7	2.2	70 - 130	25
Ethyl acetate	ND	0.280	ND	1.01	98	ND	ND	ND	ND	NC	70 - 130	25
Ethylbenzene	ND	0.230	ND	1.00	107	6.34	6.73	1.46	1.55	6.0	70 - 130	25
Heptane	ND	0.240	ND	0.98	100	6.88	7.13	1.68	1.74	3.5	70 - 130	25
Hexachlorobutadiene	ND	0.094	ND	1.00	102	ND	ND	ND	ND	NC	70 - 130	25
Hexane	ND	0.280	ND	0.99	93	4.40 S	4.65 S	1.25 S	1.32 S	NC	70 - 130	25
Isopropylalcohol	ND	0.410	ND	1.01	100	8.92	8.43	3.63	3.43	5.7	70 - 130	25
Isopropylbenzene	ND	0.200	ND	0.98	91	ND	ND	ND	ND	NC	70 - 130	25
m,p-Xylene	ND	0.230	ND	1.00	109	23.0	23.4	5.30	5.40	1.9	70 - 130	25
Methyl Ethyl Ketone	ND	0.340	ND	1.00	106	36.5	36.0	12.4	12.2	1.6	70 - 130	25
Methyl tert-butyl ether(MTBE)	ND	0.280	ND	1.01	104	ND	ND	ND	ND	NC	70 - 130	25
Methylene Chloride	ND	0.860	ND	2.99	98	ND	ND	ND	ND	NC	70 - 130	25
n-Butylbenzene	ND	0.180	ND	0.99	99	ND	ND	ND	ND	NC	70 - 130	25
o-Xylene	ND	0.230	ND	1.00	108	10.5	10.4	2.42	2.39	1.2	70 - 130	25
Propylene	ND	0.580	ND	1.00	117	18.7	18.4	10.9	10.7	1.9	70 - 130	25
sec-Butylbenzene	ND	0.180	ND	0.99	103	ND	ND	ND	ND	NC	70 - 130	25
Styrene	ND	0.230	ND	0.98	106	1.10	1.26	0.258	0.296	NC	70 - 130	25
Tetrachloroethene	ND	0.037	ND	0.25	114	1.42	1.60	0.210	0.236	11.7	70 - 130	25
Tetrahydrofuran	ND	0.340	ND	1.00	90	10.6	10.3	3.60	3.50	2.8	70 - 130	25
Toluene	ND	0.270	ND	1.02	114	25.9	25.9	6.87	6.89	0.3	70 - 130	25
Trans-1,2-Dichloroethene	ND	0.250	ND	0.99	104	ND	ND	ND	ND	NC	70 - 130	25
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	110	ND	ND	ND	ND	NC	70 - 130	25
Trichloroethene	ND	0.037	ND	0.20	113	ND	ND	ND	ND	NC	70 - 130	25
Trichlorofluoromethane	ND	0.180	ND	1.01	106	10.4	10.0	1.86	1.78	4.4	70 - 130	25
Trichlorotrifluoroethane	ND	0.130	ND	1.00	103	ND	ND	ND	ND	NC	70 - 130	25
Vinyl Chloride	ND	0.078	ND	0.20	108	ND	ND	ND	ND	NC	70 - 130	25
% Bromofluorobenzene	115		115		106	98	98	98	98	NC	70 - 130	25

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

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

Phyllis Shiller, Laboratory Director
May 16, 2018

Wednesday, May 16, 2018

Criteria: None

State: NJ

Sample Criteria Exceedances Report

GCA45627 - 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

May 16, 2018 SDG I.D.: GCA45627

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

AIRSIM

CHEM20 05/11/18-1: CA45627

The following Continuing Calibration compounds did not meet % deviation criteria: Trichlorofluoromethane(sim) 39%L (30%)
The following Continuing Calibration compounds did not meet Maximum % deviation criteria: Trichlorofluoromethane(sim) 39%L (30%)

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Telephone: 860.645.1102 • Fax: 860.645.0823

CHAIN OF CUSTODY RECORD
AIR ANALYSES
800-827-5426
email: greg@phoenixlabs.com

P.O. # | Page 1 of 1

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

Report to:	Invoice to: EnviroTrac	Project Name: Ensafe – Westbury
Customer: EnviroTrac Ltd		Requested Deliverable: RCP ☐ ASP CAT B ☐
Address: 5 Old Dock Road		MCP ☐ NJ Deliverables ☐
Yaphank, NY 11980	Sampled by: Jim Wilkinson	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	
45627	SVE Effluent	812	1.4	-30		N/A	N/A	12:43	12:44	5/10							4
45628	SVE Influent	738	1.4	-30		↓	↓	12:46	12:47	5/10							4

Relinquished by:	Accepted by:	Date:	Time:
		5-11-18	9:30
		5-11-18	16:25

Data Format: Excel ☐ Equis ☐ Other ☐ ( )

Turnaround Time:
☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☑ Standard

SPECIAL INSTRUCTIONS, QC REQUIREMENTS, REGULATORY INFORMATION:
②1.4L Grabs

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

System Condensate Water Sample

Laboratory Analytical Results

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

May 27, 2018

Jim Wilkinson
Envirotrac
5 Old Dock Road
Yaphank, NY 11980
TEL: (631) 924-3001
FAX (631) 924-5001

RE: 101 Frost Street, Westbury, NY Order No.: 1805173

Dear Jim Wilkinson:

American Analytical Laboratories, LLC. received 1 sample(s) on 5/24/2018 for the analyses presented in the following report.

Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report. The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified either on the sample results or in the QC section of the report. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,

Lori Beyer

Lori Beyer
Lab Director
American Analytical Laboratories, LLC.

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Workorder Sample Summary

WO#: **1805173**

27-May-18

CLIENT: Envirotrac
Project: 101 Frost Street, Westbury, NY

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1805173-001A	Discharge Water		5/24/2018 11:30:00 AM	5/24/2018 12:35:00 PM	Liquid

CHAIN OF CUSTODY

AMERICAN ANALYTICAL LABORATORIES

56 Toledo Street, Farmingdale NY 11735
(T) 631-454-6100 (F) 631-454-8027
www.american-analytical.com

CERTIFICATIONS
NY ELAP - 11418 PA DEP - 68-00573
NJ DEP - NY050 CT DOH - PH-0205

Client Information

Company Name: EnviroTrac
Address: 5 Old Dock Road
City: Yaphank State: NY Zip: 11980
Project Contact: Jim Wilkinson
Phone #: 631-924-3001
E-mail: jameswi@envirotrac.com

Project Information

Project Name: Frost Street
Street: 101 Frost Street
City: Westbury State: NY Zip:
Project #:
Sampler's Name / Company: Jim Wilkinson / EnviroTrac
Sampler's Signature:

Analytical Information

VOCS - EPA 624

LAB SAMPLE # (LAB USE ONLY)	Client Sample ID	Sample Type	Matrix Code	Date	Time	Glass / Plastic	Total # of bottles	Number of Each Preserved Bottle: NONE	HCl	NaOH	HNO_3	H_2SO_4	$NaHSO_4$	MeOH	OTHER
[illegible]	Discharge Water	Grab	L	5/24/2018	11:30	GL	3		3						

Turnaround Time (Business Days)
- [X] Standard 7-10 Business Days
- [ ] 5 Day RUSH
- [ ] 4 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH

SAMPLE TYPE
G = Grab
C = Composite
B = Blank

MATRIX CODES
L = Liquid
S = Soil
O = Oil
W = Wipe
PC = Paint Chip
SL = Sludge
SD = Solid
M = Miscellaneous

Comments / Remarks

Cooler Temp: 1.8°C

Sample custody must be documented below, each time samples change possession, with a signature, date, and time.

RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME
[signature]	5/24 11:35	Jim Wilkinson	[signature]	5/24/18 12:35	[signature]
RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Sample Log-In Check List

Client Name: ENVIROTRAC Work Order Number: 1805173 RcptNo: 1

Logged by:	Lori Beyer	5/24/2018 12:53:50 PM	Lori Beyer
Completed By:	Lori Beyer	5/24/2018 12:55:39 PM	Lori Beyer
Reviewed By:	Karen Kelly	5/24/2018	Karen Kelly

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☑
   No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☑ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Case Narrative

WO#: **1805173**
Date: **5/27/2018**

CLIENT: Envirotrac
Project: 101 Frost Street, Westbury, NY

Samples were analyzed using EPA Method 624.1.

Volatile LCS are analyzed with preservatives - HCL/NaHSO4/Methanol depending on level of analysis (high/low) similar to sample analysis. Outliers can be attributed to the presence of chemical preservatives. 2-Chloroethyl vinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

The test results meet the requirements of the NYSDOH and NELAC standards, except where noted. The information contained in this analytical report is the sole property of American Analytical Laboratories, LLC. or the client for which this report was issued. The results contained in this report are only representative of the samples received. The sample receipt checklist is included as part of this lab report. Conditions can vary at different times and at different sampling conditions. American Analytical is not responsible for the use or interpretation of the data included herein.

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Definition Only

WO#: **1805173**
Date: **5/27/2018**

Definitions:

Sample Result and QC Summary Qualifiers - Level I and Level II Reports
ND - Not detected at the reporting limit/Limit of Quantitation

B - The analyte was detected in the associated method blank. For volatiles, methylene chloride and acetone are common lab contaminants. Data users should consider anything <5x the blank value as artifact.

E - The value is above the quantitation range

D - Analyte concentration was obtained from diluted analysis or from analysis using reduced sample volume.

J - The analyte was detected below the limit of quantitation but greater than the established Limit of Detection (LOD). There is greater uncertainty associated with these results and data should be considered as estimated.

U - The compound was analyzed for but not detected.

H - Holding time for preparation or analysis has been exceeded.

S - Spike recovery is outside accepted recovery limits.

R - RPD is outside accepted recovery range.

P - Secondary column exceeds 40% difference for GC test.

* - Calibration exceeds method requirement. Due to the large number of analytes for organic testing, the method allows 10% of analytes to have %RSD and/or %D to be >20%.
LOD - Limit of Detection; the lowest level the analyte can be determined to be statistically different from a blank.
LOQ - Limit of Quantitation; the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accuracy.
PQL - Practical Quantitation Limit; the lowest level that can be reliably achieved within the specific limits of Precision and accuracy. Listed on the QC Summary Forms.
m - Analyte was manually integrated for GC/MS.
+ - Concentration exceeds regulatory level for TCLP

American Analytical Laboratories, LLC.

Date: *27-May-18*

ELAP ID : 11418

CLIENT: Envirotrac
Lab Order: 1805173
Project: 101 Frost Street, Westbury, NY
Lab ID: 1805173-001A

Client Sample ID: Discharge Water
Collection Date: 5/24/2018 11:30:00 AM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE EPA METHOD 624.1			**E624.1**		**E624.1**		Analyst: **KSS**
1,1,1-Trichloroethane	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
1,1,2,2-Tetrachloroethane	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
1,1,2-Trichloroethane	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
1,1-Dichloroethane	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
1,1-Dichloroethene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
1,2-Dichlorobenzene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
1,2-Dichloroethane	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
1,2-Dichloropropane	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
1,3-Dichlorobenzene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
1,4-Dichlorobenzene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
2-Chloroethyl vinyl ether	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Benzene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Bromodichloromethane	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Bromoform	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Bromomethane	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Carbon tetrachloride	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Chlorobenzene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Chloroethane	4.0	0.20	2.0		µg/L	1	5/25/2018 12:40:00 AM
Chloroform	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Chloromethane	1.5	0.20	2.0	J	µg/L	1	5/25/2018 12:40:00 AM
cis-1,3-Dichloropropene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Dibromochloromethane	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Ethylbenzene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Methylene chloride	ND	5.0	5.0	U	µg/L	1	5/25/2018 12:40:00 AM
Tetrachloroethene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Toluene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
trans-1,2-Dichloroethene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
trans-1,3-Dichloropropene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Trichloroethene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Trichlorofluoromethane	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Vinyl chloride	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
Xylenes, Total	ND	0.60	6.0	U	µg/L	1	5/25/2018 12:40:00 AM
Acetone	59	5.0	5.0		µg/L	1	5/25/2018 12:40:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, New York, Zip - 11735
Tel - (631) 454-6100 Fax - (631) 454-8027 www.american-analytical.com

Original

American Analytical Laboratories, LLC.

Date: *27-May-18*

ELAP ID : 11418

CLIENT:	Envirotrac	**Client Sample ID:**	Discharge Water
Lab Order:	1805173	**Collection Date:**	5/24/2018 11:30:00 AM
Project:	101 Frost Street, Westbury, NY	**Matrix:**	LIQUID
Lab ID:	1805173-001A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE EPA METHOD 624.1			**E624.1**		**E624.1**		Analyst: **KSS**
m,p-Xylene	ND	0.40	4.0	U	µg/L	1	5/25/2018 12:40:00 AM
Methyl tert-butyl ether	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM
o-Xylene	ND	0.20	2.0	U	µg/L	1	5/25/2018 12:40:00 AM

Appendix D

Groundwater Extraction/Hydraulic Containment System Installation

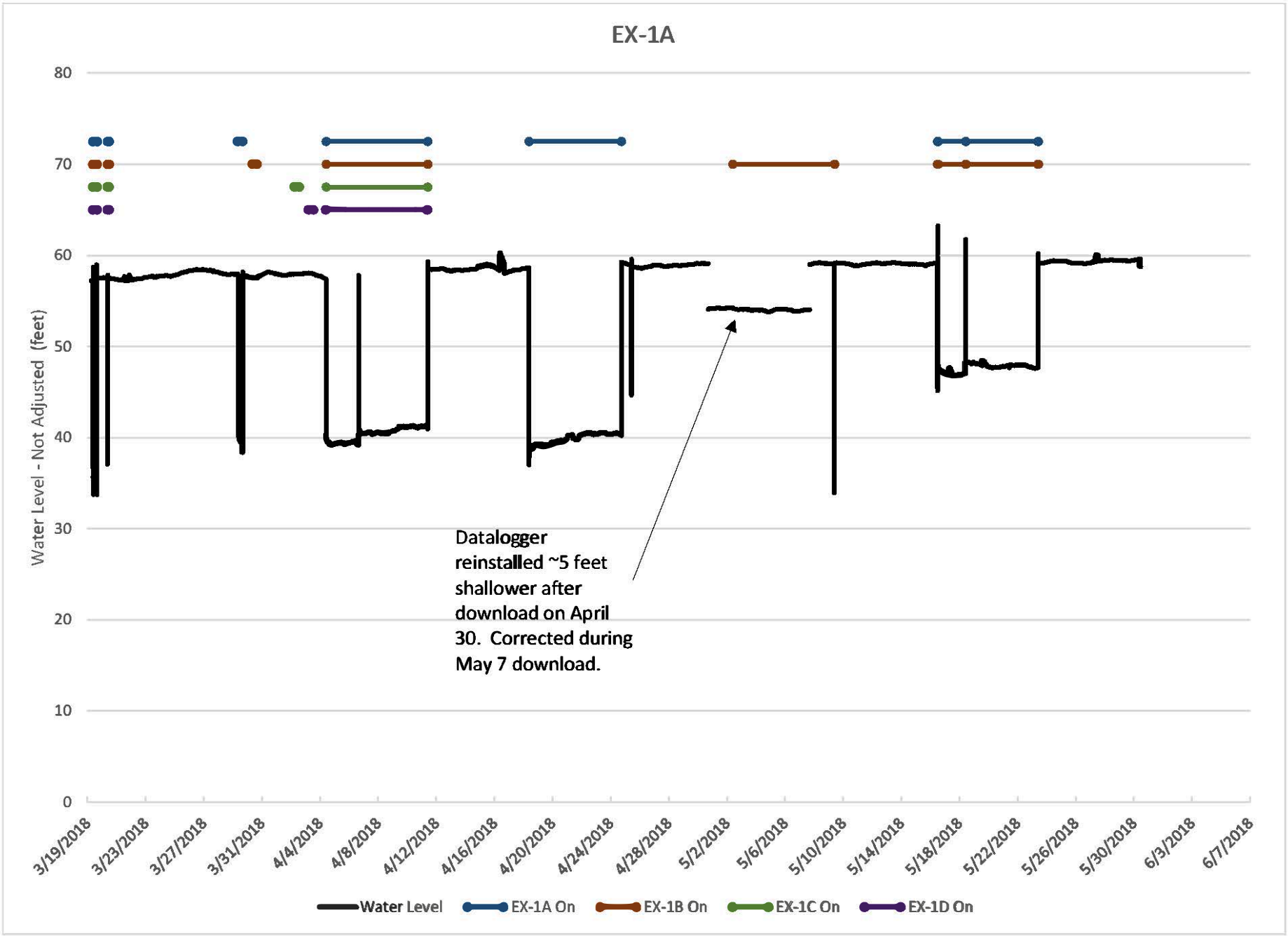
Summary Reports

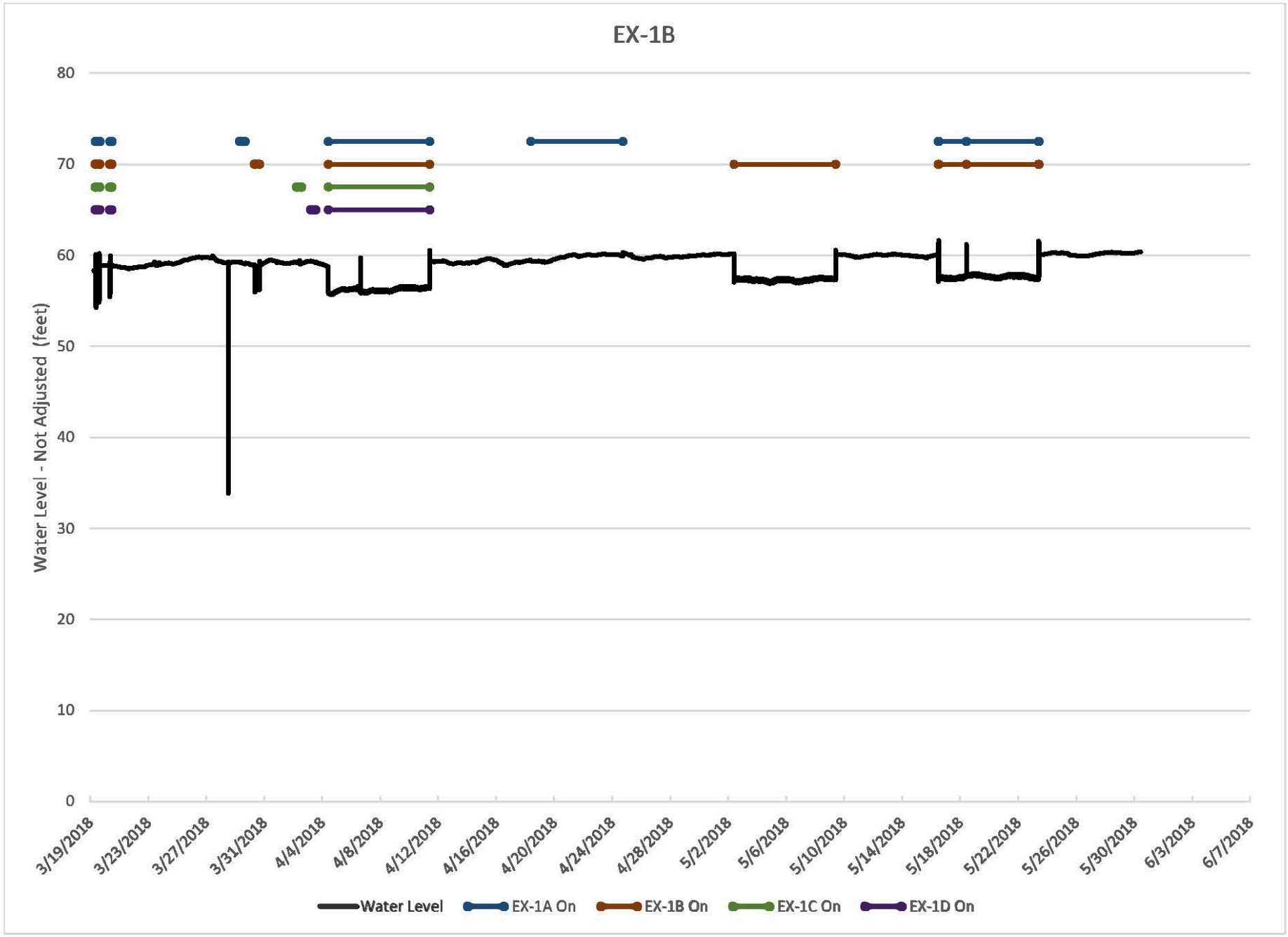
Frost Street Sites
Groundwater Extraction Hydraulic Containment
Summary Report
Tuesday, May 1 through Thursday, May 31, 2018

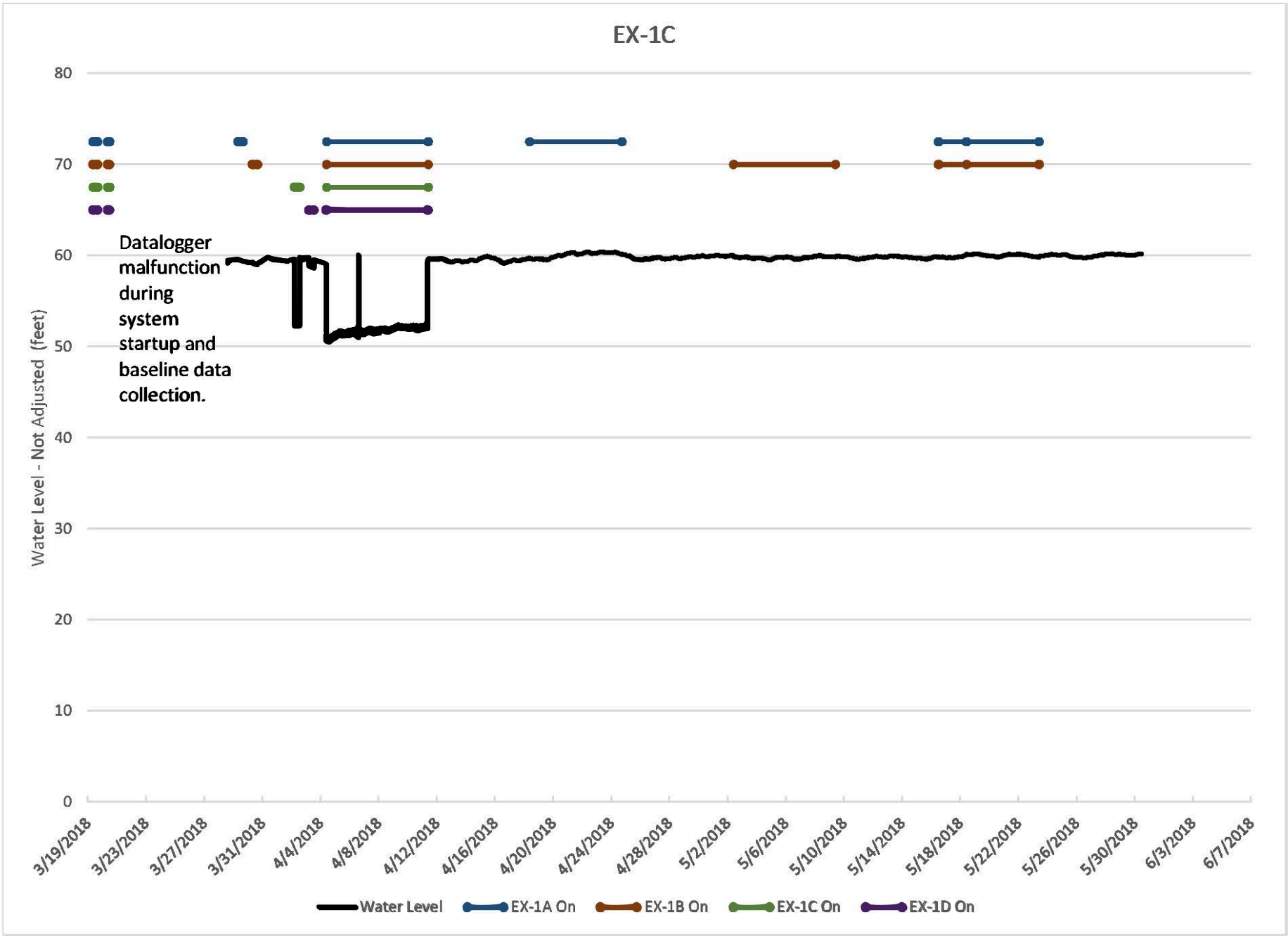
Phase II of the pump test was completed, as described below.

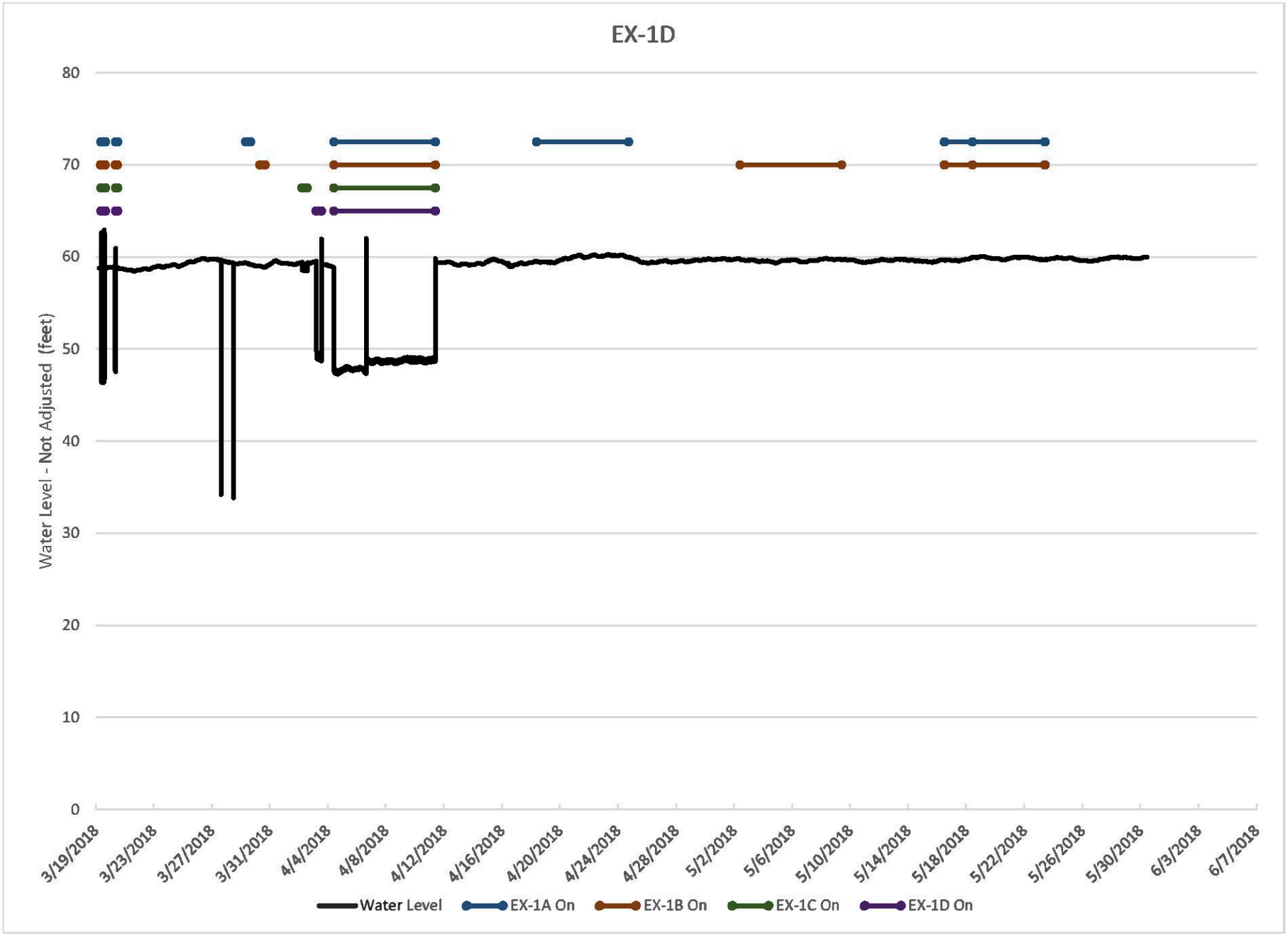
- Following completion of testing EX-1A at 30 gpm on April 24, the system remained off until May 2.
- On May 2 at 9:50 AM, EX-1B was made operational at 30 gpm. The well remained on until May 9 at 10:00 AM.
    - The well sustained the flow rate for the duration of the test.
- The system was off to allow for aquifer stabilization from May 9 at 10:00 AM to May 16 at 12:49 PM.
- On May 16 at 12:49 PM, EX-1A and EX-1B were made operational at 30 gpm each. The wells remained on until May 23 at 10:19 AM.
    - The wells sustained the flow rates for the duration of the test.
- The system was scheduled to be made fully operational on May 30. However, over the course of the pump test the pH remained below the discharge permit limit (5.5). A variance request was submitted to the POTW on April 26, 2018 but was denied. As such, pretreatment has been planned for the discharge which includes construction of treatment containment cell loaded with PHIX material (specification sheet attached), through which the extracted groundwater will flow. Installation of this contaminant cell and full system startup is tentatively planned for June 5, 2018.

The dataloggers were downloaded on Monday May 7, Monday May 14, Monday May 21, and Tuesday May 29, 2018. A response graph for each extraction well during the pump test to date is provided on the next pages (including Phase I of the test). It should be noted that the individual well graphs provided have not been adjusted for actual groundwater depth or elevation, but rather to provide an idea of relative change, drawdown, and pumping sustainability.

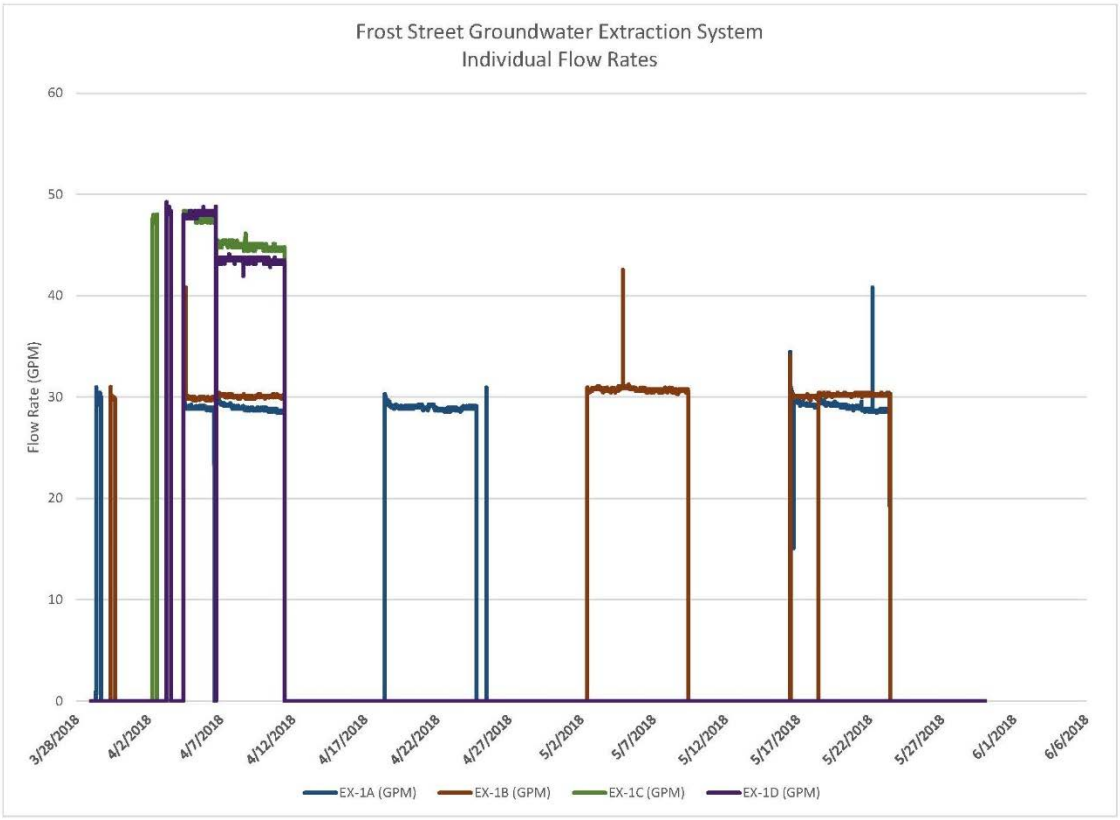

EX-1A
Water Level - Not Adjusted (feet)
80
70
60
50
40
30
20
10
0
3/19/2018
3/23/2018
3/27/2018
3/31/2018
4/4/2018
4/8/2018
4/12/2018
4/16/2018
4/20/2018
4/24/2018
4/28/2018
5/2/2018
5/6/2018
5/10/2018
5/14/2018
5/18/2018
5/22/2018
5/26/2018
5/30/2018
6/3/2018
6/7/2018
Datalogger reinstalled ~5 feet shallower after download on April 30. Corrected during May 7 download.
Water Level
EX-1A On
EX-1B On
EX-1C On
EX-1D On

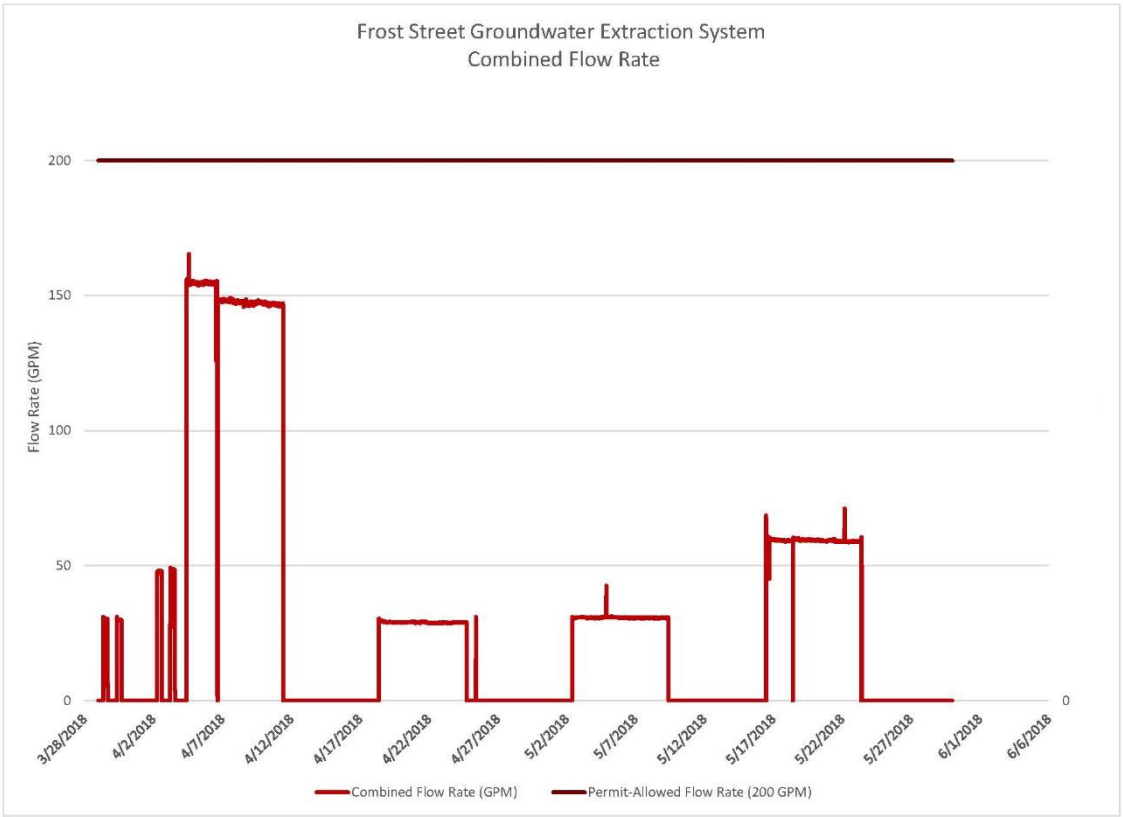

EX-1B
Water Level - Not Adjusted (feet)
80
70
60
50
40
30
20
10
0
3/19/2018
3/23/2018
3/27/2018
3/31/2018
4/4/2018
4/8/2018
4/12/2018
4/16/2018
4/20/2018
4/24/2018
4/28/2018
5/2/2018
5/6/2018
5/10/2018
5/14/2018
5/18/2018
5/22/2018
5/26/2018
5/30/2018
6/3/2018
6/7/2018
Water Level
EX-1A On
EX-1B On
EX-1C On
EX-1D On

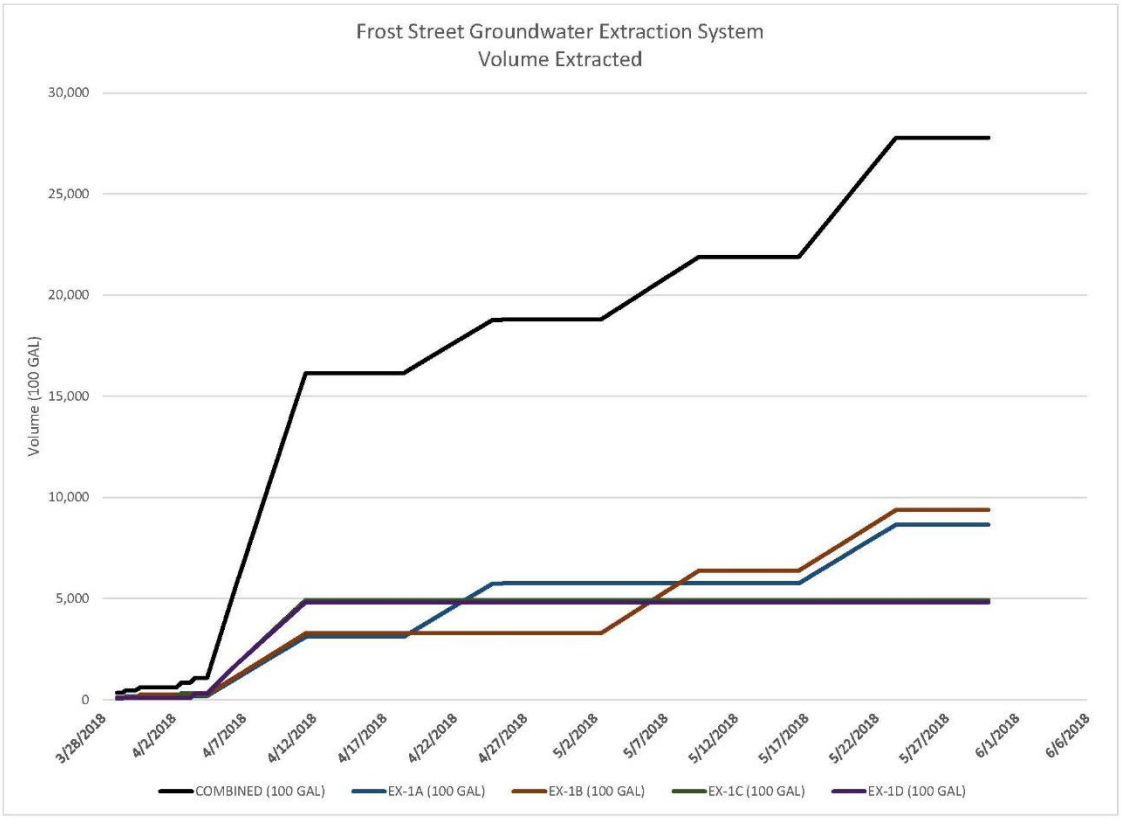

EX-1C
80
70
60
50
40
30
20
10
0
Water Level - Not Adjusted (feet)
Datalogger malfunction during system startup and baseline data collection.
3/19/2018
3/23/2018
3/27/2018
3/31/2018
4/4/2018
4/8/2018
4/12/2018
4/16/2018
4/20/2018
4/24/2018
4/28/2018
5/2/2018
5/6/2018
5/10/2018
5/14/2018
5/18/2018
5/22/2018
5/26/2018
5/30/2018
6/3/2018
6/7/2018
Water Level
EX-1A On
EX-1B On
EX-1C On
EX-1D On


EX-1D
Water Level - Not Adjusted (feet)
80
70
60
50
40
30
20
10
0
3/19/2018
3/23/2018
3/27/2018
3/31/2018
4/4/2018
4/8/2018
4/12/2018
4/16/2018
4/20/2018
4/24/2018
4/28/2018
5/2/2018
5/6/2018
5/10/2018
5/14/2018
5/18/2018
5/22/2018
5/26/2018
5/30/2018
6/3/2018
6/7/2018
Water Level
EX-1A On
EX-1B On
EX-1C On
EX-1D On

The graphs below present a summary of the system operational data (flow rates and total volume extraction) during the pump test to date (including Phase I of the test).






Frost Street Groundwater Extraction System
Volume Extracted
30,000
25,000
20,000
15,000
10,000
5,000
0
Volume (100 GAL)
3/28/2018
4/2/2018
4/7/2018
4/12/2018
4/17/2018
4/22/2018
4/27/2018
5/2/2018
5/7/2018
5/12/2018
5/17/2018
5/22/2018
5/27/2018
6/1/2018
6/6/2018
COMBINED (100 GAL)
EX-1A (100 GAL)
EX-1B (100 GAL)
EX-1C (100 GAL)
EX-1D (100 GAL)

PHIX®

pH Acid Neutralization Systems

5X More Efficient
Than Limestone

PHIX® Media – based systems feature innovative technology that neutralizes acidic water before it enters the wastewater stream. PHIX media and related application systems have been specifically engineered to deliver maximum performance in minimal space for commercial, institutional and industrial settings, including schools, labs and hospitals.

Features & **Benefits**

- Lasts 25-30 Times Longer than Limestone
- Non-toxic – Requires No Special Handling
- Easy Maintenance
- Self-Contained Systems

Ensuring **Compliance**

Most communities regulate the discharge of acidic wastewater into the sanitary sewer system. Regulations often prescribe pH limits in the range of pH 5.0 - 10.0 to prevent corrosion of the system.

Limestone systems are large, cumbersome and, in practice, minimally effective. They can be quite difficult to service and maintain. An easy-to-service, long life, high efficiency system means greater insurance against pipe failure and regulatory non-compliance. PHIX Media systems step up to the challenge.

Absolute **Simplicity**

Replacing spent PHIX Media is very simple. Unlike limestone, PHIX Media will not fuse together and become difficult to replace at the end of its service life. For PHIX Cartridge users, Green Turtle includes a pre-sized measuring scoop to take out the guesswork.

Green Turtle also has an answer for facilities currently using a limestone system they want to upgrade to a high performance solution. PHIX Media Pails can easily replace limestone by simply removing the spent limestone and replacing with the PHIX Media.

Safety & **Performance**

PHIX Media is as safe as limestone chips. There are no special storage and handling requirements. It is a proprietary mix of non-hazardous solid alkali non-resin materials. Because of its granular particle size, chemistry, and surface reactivity, it is 5 times more efficient than limestone and lasts 30 times longer. Media particle size distribution is controlled to optimize flow and maximize neutralization as the media is gradually spent.

Performance qualities of **PHIX Media** have been certifed by **NSF International**.

PHIX®

pH Acid Neutralization Systems

Applications

3 Solutions

30X Service Life of Limestone

PHIX 10 year warranty **Cartridge** Under Sink

Designed for installation directly under a sink, PHIX Cartridges are ideal for laboratory under-sink applications. With its engineered flow-through design to maximize efficiency and minimize maintenance, this non-hazardous, non-WHIMIS controlled system eliminates the need for special piping, storage or handling requirements.

Industrial strength glass-filled polypropylene construction guarantees many years of uninterrupted service.

PHIX **Media Pails** Replacements

PHIX Media Pails are an effective acid neutralization system component. Conveniently packaged in pails, PHIX Media can be placed within your existing neutralization tanks and can be easily removed and replaced. PHIX Media is easier to handle than limestone which may need to be shoveled or jack hammered out. PHIX Media is safe and effective long-term acid neutralization replacement.

pH **Monitoring**

Monitoring of the acid neutralization effectiveness can be easily accomplished by sampling the PHIX Cartridge outlet stream with litmus paper. The plumbing contractor should install a sampling port on the outlet side downstream of PHIX Cartridge. Custom automatic pH monitoring systems can also be used such as Zurn Z9A-PHMS with sampling tank.

ZMKTG700-08