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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

April 8, 2016

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

Re: Progress Report: March 2016
Frost Street Sites: Site ID #s 1-30043 I, L, M
New Cassel Industrial Area, Westbury, New York

Dear Mr. Dyber:

EnSafe, Inc. (EnSafe) is pleased to submit the Progress Report for the Frost Street Sites (Site ID #s 1-30043 I, L, M) for work completed in March 2016.

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

- 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 (GAC) influent and effluent air flow was conducted on March 17, 2016 using a Summa canister and a tedlar bag (due to Summa canister malfunction). These samples were obtained by EnviroTrac, submitted to Chemtech, and analyzed by Method TO-15. Results are included in **Appendix B**.

Quarterly/Annual Groundwater Monitoring

- The first quarter 2016 groundwater sampling event was completed during the week of April 4, 2016.

If you have any questions regarding this progress report, 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	<i>Via email to amtamuno@gw.dec.state.ny.us</i>
G. Bobersky, NYSDEC	<i>Via email to gtbobers@gw.dec.state.ny.us</i>
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C. Wise, EnSafe	<i>Via email to cwise@ensafe.com</i>

Appendix A

SVE/AS System O&M Logs

Operation & Maintenance Data Sheet

Ensae-Frost Street
101 Frost Street
Westbury, NY

EnviroTrac Environmental Services

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

Date: 4-Mar
Weather / Temp: Snow / 30 DEG
Technician / Operator: JW

Arrival Time: 9:00
Departure Time: 10:00

System Status									
	Arrival		Departure			Arrival		Departure	
SVE Blower 1 (ON/OFF)	OFF		ON		Sensaphone (ON/OFF)	ON		ON	
SVE Blower 2 (ON/OFF)	ON		OFF		Surge Protection (ON/OFF)	ON		ON	
AS Compressor 1 (ON/OFF)	OFF		OFF		Lightning Protection (White/Black)	White		White	
AS Compressor 2 (ON/OFF)	ON		ON						
Soil Vapor Extraction System									
Blower Air Velocity/Flow Rate (fpm)/(cfm)	4200		825		Blower 1 Total Runtime (hrs)	41,690.1			
Blower 1 Fresh Air Valve Open (%)	0				Blower 2 Total Runtime (hrs)	42,544.9			
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)	70				VGAC-1 Influent PID (ppm)	25.0			
VGAC-1 Effluent Vacuum ("H2O)	68				VGAC-1 Effluent PID (ppm)	0.0			
VGAC-2 Influent Vacuum ("H2O)	58				VGAC-2 Influent PID (ppm)	25.0			
VGAC-2 Effluent Vacuum ("H2O)	80				VGAC-2 Effluent PID (ppm)	0.0			
VGAC-3 Influent Pressure ("H2O)	9				VGAC-3 Influent PID (ppm)	0.0			
VGAC-3 Effluent Pressure ("H2O)	2				VGAC-3 Effluent PID (ppm)	0.0			
VGAC-3 Influent Temperature (DegF)	130				Blower Effluent PID (ppm)	0.0			
Blower Effluent Pressure ("H2O)	17								
Transfer Pump Total Runtime (hrs)	25,022.3				Condensate Storage Tank Level (gal)	20			
SVE Manifold Legs - Vacuum/Flow Rate/PID									
	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	50	7500	164		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	45	3500	76	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	50	4500	98		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	45	2500	55	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	50	3500	76		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	45	6000	131	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	40	3500	76		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	40	2500	55	
Air Sparge System									
Compressor 1 Pressure (psi)	Off for repairs				Compressor 2 Pressure (psi)	92			
Compressor 1 Temperature (degF)	Off for repairs				Compressor 2 Temperature (degF)	178			
Compressor 1 Runtime (hrs)	27,317.0				Compressor 2 Runtime (hrs)	15,156.0			
Manifold Regulator Pressure (psi)	70								
AS Manifold Legs - Pressure/Flow Rate									
	Pressure	Flow Rate				Pressure	Flow Rate		
AS-1 (psi)/(cfm)	17	8			AS-11 (psi)/(cfm)	15	8		
AS-2 (psi)/(cfm)	15	8			AS-12B (psi)/(cfm)	15	8		
AS-3 (psi)/(cfm)	14	8			AS-13B (psi)/(cfm)	15	8		
AS-4 (psi)/(cfm)	15	8			AS-14 (psi)/(cfm)	15	8		
AS-5 (psi)/(cfm)	15	8			AS-15 (psi)/(cfm)	15	8		
AS-6 (psi)/(cfm)	15	8			AS-16B (psi)/(cfm)	15	8		
AS-7 (psi)/(cfm)	15	8			AS-17 (psi)/(cfm)	15	8		
AS-8 (psi)/(cfm)	15	8			AS-18 (psi)/(cfm)	16	8		
AS-9 (psi)/(cfm)	16	8			AS-19 (psi)/(cfm)	15	8		
AS-10B (psi)/(cfm)	15	8							

Notes, Comments & Observations:

Compressor 1 off for repairs.

Left Blower 2 off due to bad belts.

Operation & Maintenance Data Sheet

Ensafe-Frost Street
101 Frost Street
Westbury, NY

EnviroTrac Environmental Services

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

Date: 11-Mar
Weather / Temp: Clear / 66 DEG
Technician / Operator: DW

Arrival Time: 16:30
Departure Time: 17:30

System Status									
	Arrival		Departure			Arrival		Departure	
SVE Blower 1 (ON/OFF)	ON		OFF		Sensaphone (ON/OFF)	ON		ON	
SVE Blower 2 (ON/OFF)	OFF		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)	4400		864		Blower 1 Total Runtime (hrs)	41,777.7			
Blower 1 Fresh Air Valve Open (%)	0				Blower 2 Total Runtime (hrs)	42,544.9			
Blower 2 Fresh Air Valve Open (%)	0				Blower 1 Air Filter Differential Pressure ("H2O)	8			
Moisture Separator Vacuum ("Hg)	4				Blower 2 Air Filter Differential Pressure ("H2O)	0			
VGAC-1 Influent Vacuum ("H2O)	68				VGAC-1 Influent PID (ppm)	15.0			
VGAC-1 Effluent Vacuum ("H2O)	76				VGAC-1 Effluent PID (ppm)	0.0			
VGAC-2 Influent Vacuum ("H2O)	66				VGAC-2 Influent PID (ppm)	15.0			
VGAC-2 Effluent Vacuum ("H2O)	64				VGAC-2 Effluent PID (ppm)	0.0			
VGAC-3 Influent Pressure ("H2O)	9				VGAC-3 Influent PID (ppm)	0.0			
VGAC-3 Effluent Pressure ("H2O)	3				VGAC-3 Effluent PID (ppm)	0.0			
VGAC-3 Influent Temperature (DegF)	140				Blower Effluent PID (ppm)	0.0			
Blower Effluent Pressure ("H2O)	13								
Transfer Pump Total Runtime (hrs)	25,022.3				Condensate Storage Tank Level (gal)	10			
SVE Manifold Legs - Vacuum/Flow Rate/PID									
	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	50	7500	164		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	44	4000	87	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	52	4000	87		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	44	3000	65	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	50	4000	87		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	42	7000	153	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	40	4000	87		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	46	3100	68	
Air Sparge System									
Compressor 1 Pressure (psi)	Off for repairs				Compressor 2 Pressure (psi)	76			
Compressor 1 Temperature (degF)	Off for repairs				Compressor 2 Temperature (degF)	190			
Compressor 1 Runtime (hrs)	27,317.0				Compressor 2 Runtime (hrs)	15,244.0			
Manifold Regulator Pressure (psi)	65								
AS Manifold Legs - Pressure/Flow Rate									
	Pressure	Flow Rate			Pressure	Flow Rate			
AS-1 (psi)/(cfm)	16	8			AS-11 (psi)/(cfm)	15	4		
AS-2 (psi)/(cfm)	15	8			AS-12B (psi)/(cfm)	15	8		
AS-3 (psi)/(cfm)	13	8			AS-13B (psi)/(cfm)	15	8		
AS-4 (psi)/(cfm)	15	8			AS-14 (psi)/(cfm)	15	8		
AS-5 (psi)/(cfm)	16	8			AS-15 (psi)/(cfm)	15	8		
AS-6 (psi)/(cfm)	14	8			AS-16B (psi)/(cfm)	14	8		
AS-7 (psi)/(cfm)	15	6			AS-17 (psi)/(cfm)	15	5		
AS-8 (psi)/(cfm)	15	8			AS-18 (psi)/(cfm)	16	7		
AS-9 (psi)/(cfm)	15	7			AS-19 (psi)/(cfm)	15	6		
AS-10B (psi)/(cfm)	15	8							

Notes, Comments & Observations:

Compressor 1 off for repairs.

Changed belts, restarted blower 2.

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: 17-Mar
Weather / Temp: Clear / 50 DEG
Technician / Operator: DW

Arrival Time: 6:00
Departure Time: 7:00

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)	4400		864		Blower 1 Total Runtime (hrs)	41,848.3			
Blower 1 Fresh Air Valve Open (%)	0				Blower 2 Total Runtime (hrs)	42,610.9			
Blower 2 Fresh Air Valve Open (%)	0				Blower 1 Air Filter Differential Pressure ("H2O)	8			
Moisture Separator Vacuum ("Hg)	4				Blower 2 Air Filter Differential Pressure ("H2O)	0			
VGAC-1 Influent Vacuum ("H2O)	68				VGAC-1 Influent PID (ppm)	37.0			
VGAC-1 Effluent Vacuum ("H2O)	76				VGAC-1 Effluent PID (ppm)	0.0			
VGAC-2 Influent Vacuum ("H2O)	66				VGAC-2 Influent PID (ppm)	37.0			
VGAC-2 Effluent Vacuum ("H2O)	60				VGAC-2 Effluent PID (ppm)	0.0			
VGAC-3 Influent Pressure ("H2O)	9				VGAC-3 Influent PID (ppm)	0.0			
VGAC-3 Effluent Pressure ("H2O)	3				VGAC-3 Effluent PID (ppm)	0.0			
VGAC-3 Influent Temperature (DegF)	140				Blower Effluent PID (ppm)	0.0			
Blower Effluent Pressure ("H2O)	13								
Transfer Pump Total Runtime (hrs)	25,022.4				Condensate Storage Tank Level (gal)	20			
SVE Manifold Legs - Vacuum/Flow Rate/PID									
	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	50	8000	175	45.0	SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	46	4000	87	0.0
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	54	4500	98	20.0	SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	46	3000	65	0.0
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	44	5200	113	3.2	SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	42	7000	153	67.0
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	44	4300	94	2.6	SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	46	3000	65	0.0
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)	195			
Compressor 1 Runtime (hrs)	27,317.0				Compressor 2 Runtime (hrs)	15,380.0			
Manifold Regulator Pressure (psi)	65								
AS Manifold Legs - Pressure/Flow Rate									
	Pressure	Flow Rate			Pressure	Flow Rate			
AS-1 (psi)/(cfm)	16	8	AS-11 (psi)/(cfm)		15	8			
AS-2 (psi)/(cfm)	15	8	AS-12B (psi)/(cfm)		15	8			
AS-3 (psi)/(cfm)	14	8	AS-13B (psi)/(cfm)		15	8			
AS-4 (psi)/(cfm)	15	8	AS-14 (psi)/(cfm)		15	8			
AS-5 (psi)/(cfm)	16	8	AS-15 (psi)/(cfm)		15	8			
AS-6 (psi)/(cfm)	15	8	AS-16B (psi)/(cfm)		14	8			
AS-7 (psi)/(cfm)	15	6	AS-17 (psi)/(cfm)		15	6			
AS-8 (psi)/(cfm)	15	8	AS-18 (psi)/(cfm)		16	7			
AS-9 (psi)/(cfm)	15	8	AS-19 (psi)/(cfm)		15	6			
AS-10B (psi)/(cfm)	15	8							

Notes, Comments & Observations:

Compressor 1 off for repairs.

Collected monthly samples.

Operation & Maintenance Data Sheet

Ensae-Frost Street
101 Frost Street
Westbury, NY

EnviroTrac Environmental Services

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

Date: 23-Mar
Weather / Temp: Clear / 50 DEG
Technician / Operator: DW

Arrival Time: 6:00
Departure Time: 7:00

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)	4500		884		Blower 1 Total Runtime (hrs)	41,922.3			
Blower 1 Fresh Air Valve Open (%)	0				Blower 2 Total Runtime (hrs)	42,680.3			
Blower 2 Fresh Air Valve Open (%)	0				Blower 1 Air Filter Differential Pressure ("H2O)	0			
Moisture Separator Vacuum ("Hg)	4				Blower 2 Air Filter Differential Pressure ("H2O)	0			
VGAC-1 Influent Vacuum ("H2O)	70				VGAC-1 Influent PID (ppm)	20.0			
VGAC-1 Effluent Vacuum ("H2O)	76				VGAC-1 Effluent PID (ppm)	0.0			
VGAC-2 Influent Vacuum ("H2O)	66				VGAC-2 Influent PID (ppm)	20.0			
VGAC-2 Effluent Vacuum ("H2O)	62				VGAC-2 Effluent PID (ppm)	0.0			
VGAC-3 Influent Pressure ("H2O)	9				VGAC-3 Influent PID (ppm)	0.0			
VGAC-3 Effluent Pressure ("H2O)	2				VGAC-3 Effluent PID (ppm)	0.0			
VGAC-3 Influent Temperature (DegF)	140				Blower Effluent PID (ppm)	0.0			
Blower Effluent Pressure ("H2O)	13								
Transfer Pump Total Runtime (hrs)	25,022.4				Condensate Storage Tank Level (gal)	20			
SVE Manifold Legs - Vacuum/Flow Rate/PID									
	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	50	8000	175		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	44	4200	92	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	54	4500	98		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	44	3000	65	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	44	5000	109		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	44	6500	142	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	44	4300	94		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	46	3000	65	
Air Sparge System									
Compressor 1 Pressure (psi)	Off for repairs				Compressor 2 Pressure (psi)	97			
Compressor 1 Temperature (degF)	Off for repairs				Compressor 2 Temperature (degF)	180			
Compressor 1 Runtime (hrs)	27,317.0				Compressor 2 Runtime (hrs)	15,482.0			
Manifold Regulator Pressure (psi)	80								
AS Manifold Legs - Pressure/Flow Rate									
	Pressure	Flow Rate				Pressure	Flow Rate		
AS-1 (psi)/(cfm)	18	8			AS-11 (psi)/(cfm)	17	7		
AS-2 (psi)/(cfm)	16	5			AS-12B (psi)/(cfm)	15	8		
AS-3 (psi)/(cfm)	15	8			AS-13B (psi)/(cfm)	16	6		
AS-4 (psi)/(cfm)	14	8			AS-14 (psi)/(cfm)	16	8		
AS-5 (psi)/(cfm)	17	8			AS-15 (psi)/(cfm)	17	8		
AS-6 (psi)/(cfm)	16	8			AS-16B (psi)/(cfm)	16	8		
AS-7 (psi)/(cfm)	17	6			AS-17 (psi)/(cfm)	17	4		
AS-8 (psi)/(cfm)	17	8			AS-18 (psi)/(cfm)	16	8		
AS-9 (psi)/(cfm)	17	8			AS-19 (psi)/(cfm)	16	8		
AS-10B (psi)/(cfm)	16	8							

Notes, Comments & Observations:

Compressor 1 off for repairs.

Compressor 2 off upon arrival due to low oil level, added oil, restarted.

Appendix B

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

DATA PACKAGE

VOLATILE ORGANICS

PROJECT NAME : FROST STREET SITES / SPGL 100.03

ENVIROTRAC ENVIRONMENTAL SERVICES

5 Old Dock Road

Yaphank, NY - 11980

Phone No: 631-924-3001

ORDER ID : H1852

ATTENTION : James Wilkinson



DoD ELAP

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1

2

3

4

5

6

Cover Page

Order ID : H1852

Project ID : Frost Street Sites / SPGL 100.03

Client : Envirotrac Environmental Services

Lab Sample Number

H1852-01

Client Sample Number

EFFLUENT

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : *Mildred V Reyes* -

NYDOH CERTIFICATION NO - 11376

APPROVED

Date: 3/28/2016

By Mildred V Reyes, QAQC Supervisor at 12:56 pm, Mar 30, 2016

NJDEP CERTIFICATION NO - 20012

CASE NARRATIVE

Envirotrac Environmental Services

Project Name: Frost Street Sites / SPGL 100.03

Project # N/A

Chemtech Project # H1852

Test Name: TO-15

A. Number of Samples and Date of Receipt:

1 Air sample was received on 03/18/2016.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: TO-15. This data package contains results for TO-15.

C. Analytical Techniques:

The analysis performed on instrument MSVOA_L were done using GC column RTX-1, which is 60 meters, 0.32 mm id, 1.0 um df, Restek Cat. #10157. The Trap was supplied by Entech, glass bead and Tenax , Entech 7100A Preconcentrator. The analysis of TO-15 was based on method TO-15.

D. QA/ QC Samples:

The Holding Times were met for all analysis except for EFFLUENT.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The RPD for H1833-01DUP {VMF-NWDUP} with File ID: VL027304.D recoveries met requirements for all parameters except for Dichlorodifluoromethane[61.5%], Tetrachloroethene[22.2%] .

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration File ID VL027298.D met the requirements except for t-1,3-Dichloropropene but it was not detect in any samples.

The Tuning criteria met requirements.

E. Additional Comments:

F. Manual Integration Comments:

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature _____ *Mildred V Reyes* _____

APPROVED

By Mildred V Reyes, QAQC Supervisor at 12:56 pm, Mar 30, 2016

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following "Results Qualifiers" are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as "12 B".
E	Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P".
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.
Q	Indicates the LCS did not meet the control limits requirements

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: H1852

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

1st Level QA Review Signature: ASHA PATEL

Date: 03/28/2016

2nd Level QA Review Signature: Mildred V Reyes

APPROVED

By Mildred V Reyes, QAQC Supervisor at 12:55 pm, Mar 30, 2016



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	H1852	OrderDate:	3/18/2016 4:05:00 PM
Client:	Envirotrac Environmental Services	Project:	Frost Street Sites / SPGL 100.03
Contact:	James Wilkinson	Location:	Air Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
H1852-01	EFFLUENT	Air	TO-15	TO-15	03/17/16		03/22/16	03/18/16

Hit Summary Sheet SW-846

SDG No.: H1852

Client: Envirotrac Environmental Services

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID:	EFFLUENT								
H1852-01	EFFLUENT	Air	Dichlorodifluoromethane	0.89	J	0.2	0.49	2.47	ug/m3
H1852-01	EFFLUENT	Air	Chloromethane	0.43	J	0.04	0.21	1.03	ug/m3
H1852-01	EFFLUENT	Air	Tetrahydrofuran	6.49		0.09	0.29	1.47	ug/m3
H1852-01	EFFLUENT	Air	Heptane	0.61	J	0.08	0.41	2.05	ug/m3
H1852-01	EFFLUENT	Air	Acetone	15.20		0.02	0.24	1.19	ug/m3
H1852-01	EFFLUENT	Air	Methylene Chloride	5.21		0.07	0.35	1.74	ug/m3
H1852-01	EFFLUENT	Air	2-Butanone	4.42		0.06	0.29	1.47	ug/m3
H1852-01	EFFLUENT	Air	Benzene	0.96	J	0.06	0.32	1.6	ug/m3
H1852-01	EFFLUENT	Air	Trichloroethene	0.32		0.11	0.16	0.16	ug/m3
H1852-01	EFFLUENT	Air	4-Methyl-2-Pentanone	1.84	J	0.08	0.41	2.05	ug/m3
H1852-01	EFFLUENT	Air	Toluene	14.70		0.04	0.38	1.88	ug/m3
H1852-01	EFFLUENT	Air	Tetrachloroethene	1.42		0.14	0.2	0.2	ug/m3
H1852-01	EFFLUENT	Air	Ethyl Benzene	0.65	J	0.09	0.43	2.17	ug/m3
H1852-01	EFFLUENT	Air	m/p-Xylene	3.00	J	0.13	0.87	4.34	ug/m3
H1852-01	EFFLUENT	Air	o-Xylene	0.91	J	0.09	0.43	2.17	ug/m3
H1852-01	EFFLUENT	Air	Styrene	0.47	J	0.04	0.43	2.13	ug/m3
H1852-01	EFFLUENT	Air	1,3,5-Trimethylbenzene	0.54	J	0.1	0.49	2.46	ug/m3
H1852-01	EFFLUENT	Air	1,2,4-Trimethylbenzene	1.92	J	0.1	0.49	2.46	ug/m3
H1852-01	EFFLUENT	Air	1,4-Dichlorobenzene	10.80		0.18	0.6	3.01	ug/m3
H1852-01	EFFLUENT	Air	4-Ethyltoluene	0.74	J	0.1	0.49	2.46	ug/m3
Total Voc :				71.52					
Total Concentration:				71.52					

Project : Frost Street Sites / SPGL 100.03

Sampling Date : 03/17/16

Field Id Number : EFFLUENT

Analysis Date : 03/22/16

Laboratory Id Number : H1852-01

Target Analyts : Air Results

Chemical	Cas Number	Molecular Weight	Insert Results in PPBV	Qualifier	Generate Results in ug/m3	QAS Decision	Foot Notes
Dichlorodifluoromethane	75-71-8	120.9	0.18	J	0.89		
Chloromethane	74-87-3	50.49	0.21	J	0.43		
Vinyl Chloride	75-01-4	62.5	0.03	U	0.08		
Bromomethane	74-83-9	94.94	0.1	U	0.39		
Chloroethane	75-00-3	64.52	0.1	U	0.26		
Tetrahydrofuran	109-99-9	72.11	2.2		6.49		
Trichlorofluoromethane	75-69-4	137.4	0.1	U	0.56		
Dichlorotetrafluoroethane	76-14-2	170.9	0.1	U	0.7		
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.1	U	0.77		
Bromoethene	593-60-2	106.9	0.1	U	0.44		
tert-Butyl alcohol	75-65-0	74.12	0.1	U	0.3		
Heptane	142-82-5	100.2	0.15	J	0.61		
1,1-Dichloroethene	75-35-4	96.94	0.1	U	0.4		
Acetone	67-64-1	58.08	6.4		15.2		
Carbon Disulfide	75-15-0	76.14	0.1	U	0.31		
Methyl tert-Butyl Ether	1634-04-4	88.15	0.1	U	0.36		
Methylene Chloride	75-09-2	84.94	1.5		5.21		
trans-1,2-Dichloroethene	156-60-5	96.94	0.1	U	0.4		
1,1-Dichloroethane	75-34-3	98.96	0.1	U	0.4		
Cyclohexane	110-82-7	84.16	0.1	U	0.34		
2-Butanone	78-93-3	72.11	1.5		4.42		
Carbon Tetrachloride	56-23-5	153.8	0.03	U	0.19		
cis-1,2-Dichloroethene	156-59-2	96.94	0.1	U	0.4		
Chloroform	67-66-3	119.4	0.1	U	0.49		
1,1,1-Trichloroethane	71-55-6	133.4	0.03	U	0.16		
2,2,4-Trimethylpentane	540-84-1	114.2	0.1	U	0.47		
Benzene	71-43-2	78.11	0.3	J	0.96		
1,2-Dichloroethane	107-06-2	98.96	0.1	U	0.4		
Trichloroethene	79-01-6	131.4	0.06		0.32		
1,2-Dichloropropane	78-87-5	113	0.1	U	0.46		
Bromodichloromethane	75-27-4	163.8	0.1	U	0.67		
4-Methyl-2-Pentanone	108-10-1	100.2	0.45	J	1.84		
Toluene	108-88-3	92.14	3.9		14.7		
t-1,3-Dichloropropene	10061-02-6	111	0.1	U	0.45		
cis-1,3-Dichloropropene	10061-01-5	111	0.1	U	0.45		
1,1,2-Trichloroethane	79-00-5	133.4	0.1	U	0.55		

Project : Frost Street Sites / SPGL 100.03

Sampling Date : 03/17/16

Field Id Number : EFFLUENT

Analysis Date : 03/22/16

Laboratory Id Number : H1852-01

Target Analyts : Air Results

Dibromochloromethane	124-48-1	208.3	0.1	U	0.85		
1,2-Dibromoethane	106-93-4	187.9	0.1	U	0.77		
Tetrachloroethene	127-18-4	165.8	0.21		1.42		
Chlorobenzene	108-90-7	112.6	0.1	U	0.46		
Ethyl Benzene	100-41-4	106.2	0.15	J	0.65		
m/p-Xylene	179601-23-1	106.2	0.69	J	3		
o-Xylene	95-47-6	106.2	0.21	J	0.91		
Styrene	100-42-5	104.1	0.11	J	0.47		
Bromoform	75-25-2	252.8	0.1	U	1.03		
1,1,2,2-Tetrachloroethane	79-34-5	167.9	0.1	U	0.69		
2-Chlorotoluene	95-49-8	126.6	0.1	U	0.52		
1,3,5-Trimethylbenzene	108-67-8	120.2	0.11	J	0.54		
1,2,4-Trimethylbenzene	95-63-6	120.2	0.39	J	1.92		
1,3-Dichlorobenzene	541-73-1	147	0.1	U	0.6		
1,4-Dichlorobenzene	106-46-7	147	1.8		10.8		
1,2-Dichlorobenzene	95-50-1	147	0.1	U	0.6		
1,2,4-Trichlorobenzene	120-82-1	181.5	0.1	U	0.74		
Hexachloro-1,3-Butadiene	87-68-3	260.8	0.1	U	1.07		
Naphthalene	91-20-3	128.17	0.1	U	0.52		
1,3-Butadiene	106-99-0	54.09	0.1	U	0.22		
4-Ethyltoluene	622-96-8	120.2	0.15	J	0.74		
Hexane	110-54-3	86.17	0.1	U	0.35		
Allyl Chloride	107-05-1	76.53	0.1	U	0.31		
1,4-Dioxane	123-91-1	88.12	0.4	U	1.44		
Methyl Methacrylate	80-62-6	100.117	0.1	U	0.41		

Project : Frost Street Sites / SPGL 100.03**Field Id Number :** EFFLUENT**Laboratory Id Number :** H1852-01**Sampling Date :** 03/17/16**Analysis Date :** 03/22/16**Target Analyts :** Air Results

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SAMPLE DATA

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	03/17/16
Project:	Frost Street Sites / SPGL 100.03	Date Received:	03/18/16
Client Sample ID:	EFFLUENT	SDG No.:	H1852
Lab Sample ID:	H1852-01	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400 Units: mL		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027312.D	1		03/22/16 00:35	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS								
75-71-8	Dichlorodifluoromethane	0.18	0.89	J	0.2	0.49	2.47	ug/m3
74-87-3	Chloromethane	0.21	0.43	J	0.04	0.21	1.03	ug/m3
75-01-4	Vinyl Chloride	0.03	0.08	U	0.05	0.08	0.08	ug/m3
74-83-9	Bromomethane	0.1	0.39	U	0.08	0.39	1.94	ug/m3
75-00-3	Chloroethane	0.1	0.26	U	0.08	0.26	1.32	ug/m3
109-99-9	Tetrahydrofuran	2.2	6.49		0.09	0.29	1.47	ug/m3
75-69-4	Trichlorofluoromethane	0.1	0.56	U	0.11	0.56	2.81	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	0.1	0.77	U	0.15	0.77	3.83	ug/m3
76-14-2	Dichlorotetrafluoroethane	0.1	0.7	U	0.14	0.7	3.49	ug/m3
593-60-2	Bromoethene	0.1	0.44	U	0.13	0.44	2.19	ug/m3
75-65-0	tert-Butyl alcohol	0.1	0.3	U	0.12	0.3	1.52	ug/m3
142-82-5	Heptane	0.15	0.61	J	0.08	0.41	2.05	ug/m3
75-35-4	1,1-Dichloroethene	0.1	0.4	U	0.08	0.4	1.98	ug/m3
67-64-1	Acetone	6.4	15.2		0.02	0.24	1.19	ug/m3
75-15-0	Carbon Disulfide	0.1	0.31	U	0.06	0.31	1.56	ug/m3
1634-04-4	Methyl tert-Butyl Ether	0.1	0.36	U	0.07	0.36	1.8	ug/m3
75-09-2	Methylene Chloride	1.5	5.21		0.07	0.35	1.74	ug/m3
156-60-5	trans-1,2-Dichloroethene	0.1	0.4	U	0.08	0.4	1.98	ug/m3
75-34-3	1,1-Dichloroethane	0.1	0.4	U	0.04	0.4	2.02	ug/m3
110-82-7	Cyclohexane	0.1	0.34	U	0.07	0.34	1.72	ug/m3
78-93-3	2-Butanone	1.5	4.42		0.06	0.29	1.47	ug/m3
56-23-5	Carbon Tetrachloride	0.03	0.19	U	0.13	0.19	0.19	ug/m3
156-59-2	cis-1,2-Dichloroethene	0.1	0.4	U	0.08	0.4	1.98	ug/m3
67-66-3	Chloroform	0.1	0.49	U	0.1	0.49	2.44	ug/m3
71-55-6	1,1,1-Trichloroethane	0.03	0.16	U	0.05	0.16	0.16	ug/m3
540-84-1	2,2,4-Trimethylpentane	0.1	0.47	U	0.09	0.47	2.34	ug/m3
71-43-2	Benzene	0.3	0.96	J	0.06	0.32	1.6	ug/m3
107-06-2	1,2-Dichloroethane	0.1	0.4	U	0.08	0.4	2.02	ug/m3
79-01-6	Trichloroethene	0.06	0.32		0.11	0.16	0.16	ug/m3
78-87-5	1,2-Dichloropropane	0.1	0.46	U	0.42	0.46	2.31	ug/m3
75-27-4	Bromodichloromethane	0.1	0.67	U	0.13	0.67	3.35	ug/m3
108-10-1	4-Methyl-2-Pentanone	0.45	1.84	J	0.08	0.41	2.05	ug/m3
108-88-3	Toluene	3.9	14.7		0.04	0.38	1.88	ug/m3
10061-02-6	t-1,3-Dichloropropene	0.1	0.45	U	0.09	0.45	2.27	ug/m3
10061-01-5	cis-1,3-Dichloropropene	0.1	0.45	U	0.09	0.45	2.27	ug/m3
79-00-5	1,1,2-Trichloroethane	0.1	0.55	U	0.11	0.55	2.73	ug/m3
124-48-1	Dibromochloromethane	0.1	0.85	U	0.09	0.85	4.26	ug/m3
106-93-4	1,2-Dibromoethane	0.1	0.77	U	0.15	0.77	3.84	ug/m3

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	03/17/16
Project:	Frost Street Sites / SPGL 100.03	Date Received:	03/18/16
Client Sample ID:	EFFLUENT	SDG No.:	H1852
Lab Sample ID:	H1852-01	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027312.D	1		03/22/16 00:35	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
127-18-4	Tetrachloroethene	0.21	1.42		0.14	0.2	0.2	ug/m3
108-90-7	Chlorobenzene	0.1	0.46	U	0.09	0.46	2.3	ug/m3
100-41-4	Ethyl Benzene	0.15	0.65	J	0.09	0.43	2.17	ug/m3
179601-23-1	m/p-Xylene	0.69	3	J	0.13	0.87	4.34	ug/m3
95-47-6	o-Xylene	0.21	0.91	J	0.09	0.43	2.17	ug/m3
100-42-5	Styrene	0.11	0.47	J	0.04	0.43	2.13	ug/m3
75-25-2	Bromoform	0.1	1.03	U	0.1	1.03	5.17	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	0.1	0.69	U	0.14	0.69	3.43	ug/m3
95-49-8	2-Chlorotoluene	0.1	0.52	U	0.1	0.52	2.59	ug/m3
108-67-8	1,3,5-Trimethylbenzene	0.11	0.54	J	0.1	0.49	2.46	ug/m3
95-63-6	1,2,4-Trimethylbenzene	0.39	1.92	J	0.1	0.49	2.46	ug/m3
541-73-1	1,3-Dichlorobenzene	0.1	0.6	U	0.12	0.6	3.01	ug/m3
106-46-7	1,4-Dichlorobenzene	1.8	10.8		0.18	0.6	3.01	ug/m3
95-50-1	1,2-Dichlorobenzene	0.1	0.6	U	0.12	0.6	3.01	ug/m3
120-82-1	1,2,4-Trichlorobenzene	0.1	0.74	U	0.3	0.74	3.71	ug/m3
87-68-3	Hexachloro-1,3-Butadiene	0.1	1.07	U	0.32	1.07	5.33	ug/m3
106-99-0	1,3-Butadiene	0.1	0.22	U	0.04	0.22	1.11	ug/m3
91-20-3	Naphthalene	0.1	0.52	U	0.21	0.52	2.62	ug/m3
622-96-8	4-Ethyltoluene	0.15	0.74	J	0.1	0.49	2.46	ug/m3
110-54-3	Hexane	0.1	0.35	U	0.07	0.35	1.76	ug/m3
107-05-1	Allyl Chloride	0.1	0.31	U	0.13	0.31	1.57	ug/m3
123-91-1	1,4-Dioxane	0.4	1.44	U	0.36	1.44	1.8	ug/m3
80-62-6	Methyl Methacrylate	0.1	0.41	U	0.08	0.41	2.05	ug/m3
SURROGATES								
460-00-4	1-Bromo-4-Fluorobenzene	10.5			65 - 135		105%	SPK: 10
INTERNAL STANDARDS								
74-97-5	Bromochloromethane	1529930			6.64			
540-36-3	1,4-Difluorobenzene	3743530			8.31			
3114-55-4	Chlorobenzene-d5	3787730			13.72			

U = Not Detected

RL = Reporting Limit

MDL = Method Detection Limit

E = Value Exceeds Calibration Range

D = Dilution

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

Q = indicates LCS control criteria did not meet requirements

QC SUMMARY

Surrogate Summary

SDG No.: H1852

Client: Envirotrac Environmental Services

Analytical Method: SWTO-15

Lab Sample ID	Client ID	Parameter	Spike	Result	RecoveryQual	Limits	
						Low	High
H1833-01DUP	VMF-NWDUP	1-Bromo-4-Fluorobenzene	10	10.7	107	65	135
H1852-01	EFFLUENT	1-Bromo-4-Fluorobenzene	10	10.52	105	65	135
VL0321ABL01	VL0321ABL01	1-Bromo-4-Fluorobenzene	10	9.82	98	65	135
VL0321ABS01	VL0321ABS01	1-Bromo-4-Fluorobenzene	10	10.01	100	65	135

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
SW-846

SDG No.: H1852

Client: Envirotrac Environmental Services

Analytical Method: SWTO-15

Datafile : VL027300.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	
									High	RPD
VL0321ABS01	Dichlorodifluoromethane	10	9.9	ppbv	99			70	130	
	Chloromethane	10	9.4	ppbv	94			70	130	
	Vinyl Chloride	10	9.3	ppbv	93			70	130	
	Bromomethane	10	9.8	ppbv	98			70	130	
	Chloroethane	10	9.3	ppbv	93			70	130	
	Tetrahydrofuran	10	11.2	ppbv	112			70	130	
	Trichlorofluoromethane	10	9.9	ppbv	99			70	130	
	1,1,2-Trichlorotrifluoroethane	10	9.8	ppbv	98			70	130	
	Dichlorotetrafluoroethane	10	9.6	ppbv	96			70	130	
	Bromoethene	10	9.8	ppbv	98			70	130	
	tert-Butyl Alcohol	10	11	ppbv	110			70	130	
	Heptane	10	9.8	ppbv	98			70	130	
	1,1-Dichloroethene	10	9.8	ppbv	98			70	130	
	Acetone	10	8.6	ppbv	86			70	130	
	Carbon disulfide	10	9.9	ppbv	99			70	130	
	Methyl tert-butyl Ether	10	10.1	ppbv	101			70	130	
	Methylene Chloride	10	8.9	ppbv	89			70	130	
	trans-1,2-Dichloroethene	10	9.3	ppbv	93			70	130	
	1,1-Dichloroethane	10	9.4	ppbv	94			70	130	
	Cyclohexane	10	9.7	ppbv	97			70	130	
	2-Butanone	10	10.6	ppbv	106			70	130	
	Carbon Tetrachloride	10	9.9	ppbv	99			70	130	
	cis-1,2-Dichloroethene	10	9.8	ppbv	98			70	130	
	Chloroform	10	9.2	ppbv	92			70	130	
	1,1,1-Trichloroethane	10	9.4	ppbv	94			70	130	
	2,2,4-Trimethylpentane	10	10.3	ppbv	103			70	130	
	Benzene	10	10.2	ppbv	102			70	130	
	1,2-Dichloroethane	10	10.1	ppbv	101			70	130	
	Trichloroethene	10	10	ppbv	100			70	130	
	1,2-Dichloropropane	10	10	ppbv	100			70	130	
	Bromodichloromethane	10	10.5	ppbv	105			70	130	
	4-Methyl-2-Pentanone	10	10.9	ppbv	109			70	130	
	Toluene	10	10.8	ppbv	108			70	130	
	t-1,3-Dichloropropene	10	11.9	ppbv	119			70	130	
	cis-1,3-Dichloropropene	10	11.4	ppbv	114			70	130	
	1,1,2-Trichloroethane	10	10	ppbv	100			70	130	
	Dibromochloromethane	10	10.8	ppbv	108			70	130	
	1,2-Dibromoethane	10	10.4	ppbv	104			70	130	
	Tetrachloroethene	10	10.3	ppbv	103			70	130	
	Chlorobenzene	10	9.8	ppbv	98			70	130	
	Ethyl Benzene	10	10.8	ppbv	108			70	130	
	m/p-Xylene	20	21.3	ppbv	106			70	130	
	o-Xylene	10	10.9	ppbv	109			70	130	
	Styrene	10	12.2	ppbv	122			70	130	
	Bromoform	10	11	ppbv	110			70	130	
	1,1,2,2-Tetrachloroethane	10	9.8	ppbv	98			70	130	
	2-Chlorotoluene	10	11	ppbv	110			70	130	
	1,3,5-Trimethylbenzene	10	10.8	ppbv	108			70	130	
	1,2,4-Trimethylbenzene	10	10.9	ppbv	109			70	130	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
SW-846

SDG No.: H1852
Client: Envirotrac Environmental Services
Analytical Method: SWTO-15

Datafile : VL027300.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	
									High	RPD
VL0321ABS01	1,3-Dichlorobenzene	10	10.3	ppbv	103			70	130	
	1,4-Dichlorobenzene	10	10.4	ppbv	104			70	130	
	1,2-Dichlorobenzene	10	10.4	ppbv	104			70	130	
	1,2,4-Trichlorobenzene	10	10.8	ppbv	108			70	130	
	Hexachloro-1,3-butadiene	10	11.6	ppbv	116			70	130	
	Naphthalene	10	10.2	ppbv	102			70	130	
	1,3-Butadiene	10	9.3	ppbv	93			70	130	
	4-Ethyltoluene	10	10.9	ppbv	109			70	130	
	Hexane	10	9.9	ppbv	99			70	130	
	Allyl Chloride	10	9.4	ppbv	94			70	130	
	1,4-Dioxane	10	11.5	ppbv	115			70	130	
	Methyl methacrylate	10	11.1	ppbv	111			70	130	

Duplicate Sample Summary

Lab Sample Id :	H1833-01DUP	H1833-01
Client Id :	VMF-NWDUP	VMF-NW
DF :	1	1
Datafile :	VL027304.D	VL027303.D
Anal Date & Time :	03/21/2016 19:16	03/21/2016 18:35

Parameter	Result	Result	RPD
1,1,1-Trichloroethane	0	0	0
1,1,2,2-Tetrachloroethane	0	0	0
1,1,2-Trichloroethane	0	0	0
1,1,2-Trichlorotrifluoroethane	0	0	0
1,1-Dichloroethane	0	0	0
1,1-Dichloroethene	0	0	0
1,2,4-Trichlorobenzene	0	0	0
1,2,4-Trimethylbenzene	8	7.8	2.5
1,2-Dibromoethane	0	0	0
1,2-Dichlorobenzene	0	0	0
1,2-Dichloroethane	0	0	0
1,2-Dichloropropane	0	0	0
1,3,5-Trimethylbenzene	2.6	2.4	8
1,3-Butadiene	0	0	0
1,3-Dichlorobenzene	0	0	0
1,4-Dichlorobenzene	0	0	0
1,4-Dioxane	0	0	0
2,2,4-Trimethylpentane	16	16.5	3.1
2-Butanone	1.9	1.7	11.1
2-Chlorotoluene	0	0	0
4-Ethyltoluene	2.8	2.6	7.4
4-Methyl-2-Pentanone	3.6	3.4	5.7
Acetone	120	130	8
Allyl Chloride	0	0	0
Benzene	3.2	3.2	0
Bromodichloromethane	0	0	0
Bromoethene	0	0	0
Bromoform	0	0	0
Bromomethane	0	0	0
Carbon Disulfide	0.29	0.29	0

Duplicate Sample Summary

Lab Sample Id :	H1833-01DUP	H1833-01
Client Id :	VMF-NWDUP	VMF-NW
DF :	1	1
Datafile :	VL027304.D	VL027303.D
Anal Date & Time :	03/21/2016 19:16	03/21/2016 18:35

Parameter	Result	Result	RPD
Carbon Tetrachloride	0.07	0.07	0
Chlorobenzene	0	0	0
Chloroethane	0	0	0
Chloroform	0	0	0
Chloromethane	0.55	0.52	5.6
cis-1,2-Dichloroethene	0	0	0
cis-1,3-Dichloropropene	0	0	0
Cyclohexane	4.3	4	7.2
Dibromochloromethane	0	0	0
Dichlorodifluoromethane	0.51	0.27	61.5 *
Dichlorotetrafluoroethane	0	0	0
Ethyl Benzene	6.5	6.1	6.3
Heptane	30.7	30.2	1.6
Hexachloro-1,3-Butadiene	0	0	0
Hexane	8.5	7.9	7.3
m/p-Xylene	24.5	24.5	0
Methyl Methacrylate	0	0	0
Methyl tert-Butyl Ether	0	0	0
Methylene Chloride	1.8	1.8	0
Naphthalene	2.8	2.9	3.5
o-Xylene	7.7	7.5	2.6
Styrene	0.69	0.61	12.3
t-1,3-Dichloropropene	0	0	0
tert-Butyl alcohol	0	0	0
Tetrachloroethene	0.04	0.05	22.2 *
Tetrahydrofuran	0	0	0
Toluene	43.5	48.5	10.9
trans-1,2-Dichloroethene	0.2	0.18	10.5
Trichloroethene	2.1	2.1	0
Trichlorofluoromethane	0.41	0.43	4.8
Vinyl Chloride	0	0	0

Duplicate Sample Summary

Lab Sample Id :

H1833-01DUP

H1833-01

Client Id :

VMF-NWDUP

VMF-NW

DF :

1

1

Datafile :

VL027304.D

VL027303.D

Anal Date & Time :

03/21/2016

19:16

03/21/2016

18:35

Parameter	Result	Result	RPD

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VL0321ABL01

Lab Name: CHEMTECH

Contract: ENVI27

Lab Code: CHEM Case No.: H1852

SAS No.: H1852 SDG NO.: H1852

Lab File ID: VL027299.D

Lab Sample ID: VL0321ABL01

Date Analyzed: 03/21/2016

Time Analyzed: 15:53

GC Column: RTX-1 ID: 0.32 (mm)

Heated Purge: (Y/N) N

Instrument ID: MSVOA_L

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VL0321ABS01	VL0321ABS01	VL027300.D	03/21/2016
VMF-NWDUP	H1833-01DUP	VL027304.D	03/21/2016
EFFLUENT	H1852-01	VL027312.D	03/22/2016

COMMENTS: _____

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: ENVI27
Lab Code: CHEM Case No.: H1852 SAS No.: H1852 SDG NO.: H1852
Lab File ID: VL027231.D BFB Injection Date: 03/15/2016
Instrument ID: MSVOA_L BFB Injection Time: 11:01
GC Column: RTX-1 ID: 0.32 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	22.6
75	30.0 - 66.0% of mass 95	58
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.5 (0.8) 1
174	50.0 - 120.0% of mass 95	60.5
175	4.0 - 9.0% of mass 174	4.4 (7.2) 1
176	93.0 - 101.0% of mass 174	58.5 (96.8) 1
177	5.0 - 9.0% of mass 176	3.8 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDICCC010	VSTDICCC010	VL027232.D	03/15/2016	11:40
VSTDICCC002	VSTDICCC002	VL027233.D	03/15/2016	12:21
VSTDICCC001	VSTDICCC001	VL027234.D	03/15/2016	12:59
VSTDICCC0.5	VSTDICCC0.5	VL027235.D	03/15/2016	13:36
VSTDICCC0.1	VSTDICCC0.1	VL027236.D	03/15/2016	14:14
VSTDICCC0.03	VSTDICCC0.03	VL027237.D	03/15/2016	14:51
VSTDICCC015	VSTDICCC015	VL027238.D	03/15/2016	15:32

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: ENVI27
Lab Code: CHEM Case No.: H1852 SAS No.: H1852 SDG NO.: H1852
Lab File ID: VL027297.D BFB Injection Date: 03/21/2016
Instrument ID: MSVOA_L BFB Injection Time: 13:23
GC Column: RTX-1 ID: 0.32 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	23.7
75	30.0 - 66.0% of mass 95	59.9
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.4 (0.7) 1
174	50.0 - 120.0% of mass 95	61.2
175	4.0 - 9.0% of mass 174	4.3 (7) 1
176	93.0 - 101.0% of mass 174	58.3 (95.2) 1
177	5.0 - 9.0% of mass 176	3.6 (6.3) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC010	VSTDCCC010	VL027298.D	03/21/2016	14:19
VL0321ABL01	VL0321ABL01	VL027299.D	03/21/2016	15:53
VL0321ABS01	VL0321ABS01	VL027300.D	03/21/2016	16:31
VMF-NWDUP	H1833-01DUP	VL027304.D	03/21/2016	19:16
EFFLUENT	H1852-01	VL027312.D	03/22/2016	00:35

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: ENVI27
 Lab Code: CHEM Case No.: H1852 SAS No.: H1852 SDG NO.: H1852
 Lab File ID: VL027298.D Date Analyzed: 03/21/2016
 Instrument ID: MSVOA_L Time Analyzed: 14:19
 GC Column: RTX-1 ID: 0.32 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	1330490	6.68	2960890	8.35	3239980	13.77
UPPER LIMIT	1862680	7.01	4145240	8.68	4535970	14.10
LOWER LIMIT	798292	6.35	1776530	8.02	1943990	13.44
EPA SAMPLE NO.						
VMF-NWDUP	1451033	6.68	3500953	8.35	3690017	13.76
EFFLUENT	1529927	6.64	3743531	8.31	3787726	13.72
VL0321ABL01	1196654	6.67	2651947	8.34	2752452	13.76
VL0321ABS01	1343261	6.68	2981508	8.35	3181358	13.77

IS1 = Bromochloromethane
 IS2 = 1,4-Difluorobenzene
 IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +40% of internal standard area
 AREA LOWER LIMIT = -40% of internal standard area
 RT UPPER LIMIT = +0.33 minutes of internal standard RT
 RT LOWER LIMIT = -0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of QC limits.

QC SAMPLE DATA

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	
Project:	Frost Street Sites / SPGL 100.03	Date Received:	
Client Sample ID:	VL0321ABL01	SDG No.:	H1852
Lab Sample ID:	VL0321ABL01	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027299.D	1		03/21/16 15:53	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS								
75-71-8	Dichlorodifluoromethane	0.1	0.49	U	0.2	0.49	2.47	ug/m3
74-87-3	Chloromethane	0.1	0.21	U	0.04	0.21	1.03	ug/m3
75-01-4	Vinyl Chloride	0.03	0.08	U	0.05	0.08	0.08	ug/m3
74-83-9	Bromomethane	0.1	0.39	U	0.08	0.39	1.94	ug/m3
75-00-3	Chloroethane	0.1	0.26	U	0.08	0.26	1.32	ug/m3
109-99-9	Tetrahydrofuran	0.1	0.29	U	0.09	0.29	1.47	ug/m3
75-69-4	Trichlorofluoromethane	0.1	0.56	U	0.11	0.56	2.81	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	0.1	0.77	U	0.15	0.77	3.83	ug/m3
76-14-2	Dichlorotetrafluoroethane	0.1	0.7	U	0.14	0.7	3.49	ug/m3
593-60-2	Bromoethene	0.1	0.44	U	0.13	0.44	2.19	ug/m3
75-65-0	tert-Butyl alcohol	0.1	0.3	U	0.12	0.3	1.52	ug/m3
142-82-5	Heptane	0.1	0.41	U	0.08	0.41	2.05	ug/m3
75-35-4	1,1-Dichloroethene	0.1	0.4	U	0.08	0.4	1.98	ug/m3
67-64-1	Acetone	0.1	0.24	U	0.02	0.24	1.19	ug/m3
75-15-0	Carbon Disulfide	0.1	0.31	U	0.06	0.31	1.56	ug/m3
1634-04-4	Methyl tert-Butyl Ether	0.1	0.36	U	0.07	0.36	1.8	ug/m3
75-09-2	Methylene Chloride	0.1	0.35	U	0.07	0.35	1.74	ug/m3
156-60-5	trans-1,2-Dichloroethene	0.1	0.4	U	0.08	0.4	1.98	ug/m3
75-34-3	1,1-Dichloroethane	0.1	0.4	U	0.04	0.4	2.02	ug/m3
110-82-7	Cyclohexane	0.1	0.34	U	0.07	0.34	1.72	ug/m3
78-93-3	2-Butanone	0.1	0.29	U	0.06	0.29	1.47	ug/m3
56-23-5	Carbon Tetrachloride	0.03	0.19	U	0.13	0.19	0.19	ug/m3
156-59-2	cis-1,2-Dichloroethene	0.1	0.4	U	0.08	0.4	1.98	ug/m3
67-66-3	Chloroform	0.1	0.49	U	0.1	0.49	2.44	ug/m3
71-55-6	1,1,1-Trichloroethane	0.03	0.16	U	0.05	0.16	0.16	ug/m3
540-84-1	2,2,4-Trimethylpentane	0.1	0.47	U	0.09	0.47	2.34	ug/m3
71-43-2	Benzene	0.1	0.32	U	0.06	0.32	1.6	ug/m3
107-06-2	1,2-Dichloroethane	0.1	0.4	U	0.08	0.4	2.02	ug/m3
79-01-6	Trichloroethene	0.03	0.16	U	0.11	0.16	0.16	ug/m3
78-87-5	1,2-Dichloropropane	0.1	0.46	U	0.42	0.46	2.31	ug/m3
75-27-4	Bromodichloromethane	0.1	0.67	U	0.13	0.67	3.35	ug/m3
108-10-1	4-Methyl-2-Pentanone	0.1	0.41	U	0.08	0.41	2.05	ug/m3
108-88-3	Toluene	0.1	0.38	U	0.04	0.38	1.88	ug/m3
10061-02-6	t-1,3-Dichloropropene	0.1	0.45	U	0.09	0.45	2.27	ug/m3
10061-01-5	cis-1,3-Dichloropropene	0.1	0.45	U	0.09	0.45	2.27	ug/m3
79-00-5	1,1,2-Trichloroethane	0.1	0.55	U	0.11	0.55	2.73	ug/m3
124-48-1	Dibromochloromethane	0.1	0.85	U	0.09	0.85	4.26	ug/m3
106-93-4	1,2-Dibromoethane	0.1	0.77	U	0.15	0.77	3.84	ug/m3

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	
Project:	Frost Street Sites / SPGL 100.03	Date Received:	
Client Sample ID:	VL0321ABL01	SDG No.:	H1852
Lab Sample ID:	VL0321ABL01	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027299.D	1		03/21/16 15:53	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
127-18-4	Tetrachloroethene	0.03	0.2	U	0.14	0.2	0.2	ug/m3
108-90-7	Chlorobenzene	0.1	0.46	U	0.09	0.46	2.3	ug/m3
100-41-4	Ethyl Benzene	0.1	0.43	U	0.09	0.43	2.17	ug/m3
179601-23-1	m/p-Xylene	0.2	0.87	U	0.13	0.87	4.34	ug/m3
95-47-6	o-Xylene	0.1	0.43	U	0.09	0.43	2.17	ug/m3
100-42-5	Styrene	0.1	0.43	U	0.04	0.43	2.13	ug/m3
75-25-2	Bromoform	0.1	1.03	U	0.1	1.03	5.17	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	0.1	0.69	U	0.14	0.69	3.43	ug/m3
95-49-8	2-Chlorotoluene	0.1	0.52	U	0.1	0.52	2.59	ug/m3
108-67-8	1,3,5-Trimethylbenzene	0.1	0.49	U	0.1	0.49	2.46	ug/m3
95-63-6	1,2,4-Trimethylbenzene	0.1	0.49	U	0.1	0.49	2.46	ug/m3
541-73-1	1,3-Dichlorobenzene	0.1	0.6	U	0.12	0.6	3.01	ug/m3
106-46-7	1,4-Dichlorobenzene	0.1	0.6	U	0.18	0.6	3.01	ug/m3
95-50-1	1,2-Dichlorobenzene	0.1	0.6	U	0.12	0.6	3.01	ug/m3
120-82-1	1,2,4-Trichlorobenzene	0.1	0.74	U	0.3	0.74	3.71	ug/m3
87-68-3	Hexachloro-1,3-Butadiene	0.1	1.07	U	0.32	1.07	5.33	ug/m3
106-99-0	1,3-Butadiene	0.1	0.22	U	0.04	0.22	1.11	ug/m3
91-20-3	Naphthalene	0.1	0.52	U	0.21	0.52	2.62	ug/m3
622-96-8	4-Ethyltoluene	0.1	0.49	U	0.1	0.49	2.46	ug/m3
110-54-3	Hexane	0.1	0.35	U	0.07	0.35	1.76	ug/m3
107-05-1	Allyl Chloride	0.1	0.31	U	0.13	0.31	1.57	ug/m3
123-91-1	1,4-Dioxane	0.4	1.44	U	0.36	1.44	1.8	ug/m3
80-62-6	Methyl Methacrylate	0.1	0.41	U	0.08	0.41	2.05	ug/m3
SURROGATES								
460-00-4	1-Bromo-4-Fluorobenzene	9.8			65 - 135		98%	SPK: 10
INTERNAL STANDARDS								
74-97-5	Bromochloromethane	1196650		6.67				
540-36-3	1,4-Difluorobenzene	2651950		8.34				
3114-55-4	Chlorobenzene-d5	2752450		13.76				

U = Not Detected

RL = Reporting Limit

MDL = Method Detection Limit

E = Value Exceeds Calibration Range

D = Dilution

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

Q = indicates LCS control criteria did not meet requirements

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	
Project:	Frost Street Sites / SPGL 100.03	Date Received:	
Client Sample ID:	VL0321ABS01	SDG No.:	H1852
Lab Sample ID:	VL0321ABS01	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027300.D	1		03/21/16 16:31	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS								
75-71-8	Dichlorodifluoromethane	9.9	49.0		0.2	0.49	2.47	ug/m3
74-87-3	Chloromethane	9.4	19.4		0.04	0.21	1.03	ug/m3
75-01-4	Vinyl Chloride	9.3	23.8		0.05	0.08	0.08	ug/m3
74-83-9	Bromomethane	9.8	38.0		0.08	0.39	1.94	ug/m3
75-00-3	Chloroethane	9.3	24.5		0.08	0.26	1.32	ug/m3
109-99-9	Tetrahydrofuran	11.2	33.0		0.09	0.29	1.47	ug/m3
75-69-4	Trichlorofluoromethane	9.9	55.6		0.11	0.56	2.81	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	9.8	75.1		0.15	0.77	3.83	ug/m3
76-14-2	Dichlorotetrafluoroethane	9.6	67.1		0.14	0.7	3.49	ug/m3
593-60-2	Bromoethene	9.8	42.8		0.13	0.44	2.19	ug/m3
75-65-0	tert-Butyl alcohol	11	33.4		0.12	0.3	1.52	ug/m3
142-82-5	Heptane	9.8	40.2		0.08	0.41	2.05	ug/m3
75-35-4	1,1-Dichloroethene	9.8	38.9		0.08	0.4	1.98	ug/m3
67-64-1	Acetone	8.6	20.4		0.02	0.24	1.19	ug/m3
75-15-0	Carbon Disulfide	9.9	30.8		0.06	0.31	1.56	ug/m3
1634-04-4	Methyl tert-Butyl Ether	10.1	36.4		0.07	0.36	1.8	ug/m3
75-09-2	Methylene Chloride	8.9	30.9		0.07	0.35	1.74	ug/m3
156-60-5	trans-1,2-Dichloroethene	9.3	36.9		0.08	0.4	1.98	ug/m3
75-34-3	1,1-Dichloroethane	9.4	38.0		0.04	0.4	2.02	ug/m3
110-82-7	Cyclohexane	9.7	33.4		0.07	0.34	1.72	ug/m3
78-93-3	2-Butanone	10.6	31.3		0.06	0.29	1.47	ug/m3
56-23-5	Carbon Tetrachloride	9.9	62.3		0.13	0.19	0.19	ug/m3
156-59-2	cis-1,2-Dichloroethene	9.8	38.9		0.08	0.4	1.98	ug/m3
67-66-3	Chloroform	9.2	44.9		0.1	0.49	2.44	ug/m3
71-55-6	1,1,1-Trichloroethane	9.4	51.3		0.05	0.16	0.16	ug/m3
540-84-1	2,2,4-Trimethylpentane	10.3	48.1		0.09	0.47	2.34	ug/m3
71-43-2	Benzene	10.2	32.6		0.06	0.32	1.6	ug/m3
107-06-2	1,2-Dichloroethane	10.1	40.9		0.08	0.4	2.02	ug/m3
79-01-6	Trichloroethene	10	53.7		0.11	0.16	0.16	ug/m3
78-87-5	1,2-Dichloropropane	10	46.2		0.42	0.46	2.31	ug/m3
75-27-4	Bromodichloromethane	10.5	70.3		0.13	0.67	3.35	ug/m3
108-10-1	4-Methyl-2-Pentanone	10.9	44.7		0.08	0.41	2.05	ug/m3
108-88-3	Toluene	10.8	40.7		0.04	0.38	1.88	ug/m3
10061-02-6	t-1,3-Dichloropropene	11.9	54.0		0.09	0.45	2.27	ug/m3
10061-01-5	cis-1,3-Dichloropropene	11.4	51.8		0.09	0.45	2.27	ug/m3
79-00-5	1,1,2-Trichloroethane	10	54.6		0.11	0.55	2.73	ug/m3
124-48-1	Dibromochloromethane	10.8	92.0		0.09	0.85	4.26	ug/m3
106-93-4	1,2-Dibromoethane	10.4	79.9		0.15	0.77	3.84	ug/m3

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	
Project:	Frost Street Sites / SPGL 100.03	Date Received:	
Client Sample ID:	VL0321ABS01	SDG No.:	H1852
Lab Sample ID:	VL0321ABS01	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027300.D	1		03/21/16 16:31	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
127-18-4	Tetrachloroethene	10.3	69.8		0.14	0.2	0.2	ug/m3
108-90-7	Chlorobenzene	9.8	45.1		0.09	0.46	2.3	ug/m3
100-41-4	Ethyl Benzene	10.8	46.9		0.09	0.43	2.17	ug/m3
179601-23-1	m/p-Xylene	21.3	92.5		0.13	0.87	4.34	ug/m3
95-47-6	o-Xylene	10.9	47.3		0.09	0.43	2.17	ug/m3
100-42-5	Styrene	12.2	51.9		0.04	0.43	2.13	ug/m3
75-25-2	Bromoform	11	113		0.1	1.03	5.17	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	9.8	67.3		0.14	0.69	3.43	ug/m3
95-49-8	2-Chlorotoluene	11	57.0		0.1	0.52	2.59	ug/m3
108-67-8	1,3,5-Trimethylbenzene	10.8	53.1		0.1	0.49	2.46	ug/m3
95-63-6	1,2,4-Trimethylbenzene	10.9	53.6		0.1	0.49	2.46	ug/m3
541-73-1	1,3-Dichlorobenzene	10.3	61.9		0.12	0.6	3.01	ug/m3
106-46-7	1,4-Dichlorobenzene	10.4	62.5		0.18	0.6	3.01	ug/m3
95-50-1	1,2-Dichlorobenzene	10.4	62.5		0.12	0.6	3.01	ug/m3
120-82-1	1,2,4-Trichlorobenzene	10.8	80.2		0.3	0.74	3.71	ug/m3
87-68-3	Hexachloro-1,3-Butadiene	11.6	123		0.32	1.07	5.33	ug/m3
106-99-0	1,3-Butadiene	9.3	20.6		0.04	0.22	1.11	ug/m3
91-20-3	Naphthalene	10.2	53.5		0.21	0.52	2.62	ug/m3
622-96-8	4-Ethyltoluene	10.9	53.6		0.1	0.49	2.46	ug/m3
110-54-3	Hexane	9.9	34.9		0.07	0.35	1.76	ug/m3
107-05-1	Allyl Chloride	9.4	29.4		0.13	0.31	1.57	ug/m3
123-91-1	1,4-Dioxane	11.5	41.4		0.36	1.44	1.8	ug/m3
80-62-6	Methyl Methacrylate	11.1	45.4		0.08	0.41	2.05	ug/m3
SURROGATES								
460-00-4	1-Bromo-4-Fluorobenzene	10			65 - 135		100%	SPK: 10
INTERNAL STANDARDS								
74-97-5	Bromochloromethane	1343260		6.68				
540-36-3	1,4-Difluorobenzene	2981510		8.35				
3114-55-4	Chlorobenzene-d5	3181360		13.77				

U = Not Detected

RL = Reporting Limit

MDL = Method Detection Limit

E = Value Exceeds Calibration Range

D = Dilution

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

Q = indicates LCS control criteria did not meet requirements

CALIBRATION SUMMARY

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: ENVI27
 Lab Code: CHEM Case No.: H1852 SAS No.: H1852 SDG No.: H1852
 Instrument ID: MSVOA_L Calibration Date(s): 03/15/2016 03/15/2016
 Heated Purge: (Y/N) N Calibration Time(s): 11:40 15:32
 GC Column: RTX-1 ID: 0.32 (mm)

LAB FILE ID:								
RRF010 = VL027232.D			RRF002 = VL027233.D			RRF001 = VL027234.D		
RRF0.5 = VL027235.D			RRF0.1 = VL027236.D			RRF.03 = VL027237.D		
COMPOUND	RRF010	RRF002	RRF001	RRF0.5	RRF0.1	RRF.03	RRF	% RSD
Dichlorodifluoromethane	1.791	2.264	2.307	2.406			2.160	11.5
Chloromethane	0.605	0.689	0.694	0.699			0.656	7.9
Vinyl Chloride	0.643	0.707	0.690	0.718	0.647	0.804	0.693	8.4
Bromomethane	0.469	0.533	0.533	0.537			0.508	7
Chloroethane	0.285	0.318	0.320	0.335			0.308	7.4
Tetrahydrofuran	0.327	0.316	0.260	0.227			0.291	15.5
Trichlorofluoromethane	2.143	2.360	2.432	2.482			2.316	6.7
1,1,2-Trichlorotrifluoroethane	1.388	1.547	1.587	1.648			1.514	7.6
Dichlorotetrafluoroethane	1.676	1.879	1.863	2.000			1.819	7.7
Bromoethene	0.517	0.554	0.556	0.551			0.542	3.2
tert-Butyl alcohol	1.188	0.919	0.881	0.856			0.987	14.7
Heptane	1.524	1.577	1.477	1.353			1.495	5.9
1,1-Dichloroethene	0.602	0.658	0.633	0.676			0.632	5.7
Acetone	1.105	1.547	1.556	1.584			1.384	17.6
Carbon Disulfide	1.757	1.925	1.852	1.856			1.830	3.9
Methyl tert-Butyl Ether	1.871	1.920	1.738	1.627			1.815	7.1
Methylene Chloride	0.565	0.665	0.700	0.747			0.646	13.2
trans-1,2-Dichloroethene	0.641	0.676	0.654	0.678			0.660	2.5
1,1-Dichloroethane	1.435	1.561	1.544	1.541			1.509	3.7
Cyclohexane	0.968	0.987	0.935	0.899			0.955	3.9
2-Butanone	0.574	0.594	0.540	0.506			0.559	6.4
Carbon Tetrachloride	0.741	0.753	0.750	0.739	0.768	1.017	0.787	12.9
cis-1,2-Dichloroethene	1.027	1.010	0.941	0.907			0.990	6.5
Chloroform	1.679	1.823	1.813	1.837			1.765	4.7
1,1,1-Trichloroethane	1.675	1.719	1.692	1.704	1.665	2.002	1.738	6.8
2,2,4-Trimethylpentane	1.645	1.733	1.580	1.425			1.596	7
Benzene	0.942	0.951	0.911	0.852			0.917	4.3
1,2-Dichloroethane	0.573	0.594	0.585	0.564			0.577	2.1
Trichloroethene	0.396	0.410	0.389	0.378	0.333	0.394	0.383	6.4
1,2-Dichloropropane	0.334	0.349	0.333	0.325			0.335	2.6
Bromodichloromethane	0.771	0.793	0.761	0.730			0.765	3
4-Methyl-2-Pentanone	0.753	0.735	0.652	0.537			0.692	14.3
Toluene	1.228	1.188	1.070	0.885			1.123	13.3

* Compounds with required minimum RRF and maximum %RSD values.
 All other compounds must meet a minimum RRF of 0.010.
 RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: ENVI27
 Lab Code: CHEM Case No.: H1852 SAS No.: H1852 SDG No.: H1852
 Instrument ID: MSVOA_L Calibration Date(s): 03/15/2016 03/15/2016
 Heated Purge: (Y/N) N Calibration Time(s): 11:40 15:32
 GC Column: RTX-1 ID: 0.32 (mm)

LAB FILE ID:	RRF010 = VL027232.D	RRF002 = VL027233.D	RRF001 = VL027234.D					
	RRF0.5 = VL027235.D	RRF0.1 = VL027236.D	RRF.03 = VL027237.D					
COMPOUND	RRF010	RRF002	RRF001	RRF0.5	RRF0.1	RRF.03	RRF	% RSD
t-1,3-Dichloropropene	0.533	0.458	0.371	0.309			0.448	24.4
cis-1,3-Dichloropropene	0.639	0.562	0.482	0.397			0.547	19.7
1,1,2-Trichloroethane	0.418	0.422	0.414	0.413			0.419	1.4
Dibromochloromethane	0.694	0.667	0.618	0.563			0.652	9.5
1,2-Dibromoethane	0.625	0.609	0.568	0.529			0.596	7.9
Tetrachloroethene	0.379	0.364	0.343	0.328	0.334	0.380	0.361	7.3
Chlorobenzene	0.908	0.932	0.945	0.944			0.925	2.4
Ethyl Benzene	1.538	1.464	1.317	1.082			1.380	13.5
m/p-Xylene	1.263	1.242	1.173	1.035			1.187	7.7
o-Xylene	1.323	1.300	1.210	1.044			1.237	9.4
Styrene	0.519	0.431	0.336	0.247			0.412	29.3
Bromoform	0.509	0.462	0.399	0.352			0.456	18.1
1,1,2,2-Tetrachloroethane	0.882	0.917	0.899	0.888	0.848	1.097	0.917	8.9
2-Chlorotoluene	1.170	1.149	1.008	0.819			1.071	14.9
1,3,5-Trimethylbenzene	1.295	1.227	1.139	0.984			1.189	11.1
1,2,4-Trimethylbenzene	1.391	1.332	1.246	1.100			1.293	9.5
1,3-Dichlorobenzene	0.815	0.810	0.785	0.740			0.795	4.3
1,4-Dichlorobenzene	0.823	0.798	0.772	0.688			0.782	7.4
1,2-Dichlorobenzene	0.797	0.798	0.762	0.722			0.778	4.7
1,2,4-Trichlorobenzene	0.369	0.313	0.265	0.219			0.307	21.3
Hexachloro-1,3-Butadiene	0.261	0.226	0.206	0.213			0.236	12.8
1,3-Butadiene	0.568	0.686	0.692	0.684			0.641	10
Naphthalene	0.817	0.770	0.621	0.450			0.690	22.4
4-Ethyltoluene	1.345	1.287	1.146	0.940			1.215	14.4
1-Bromo-4-Fluorobenzene	0.734	0.725	0.737	0.748	0.741	0.733	0.737	1
Hexane	1.169	1.256	1.198	1.123			1.178	4.4
Allyl Chloride	0.874	0.955	0.939	1.204			0.972	13.7
1,4-Dioxane	72.848	89.288	57.354	47.696			73.225	29.2
Methyl Methacrylate	0.354	0.338	0.296	0.250			0.319	14.3

* Compounds with required minimum RRF and maximum %RSD values.
 All other compounds must meet a minimum RRF of 0.010.
 RRF of 1,4-Dioxane = Value should be divide by 1000.

Method Path : W:\HPCHEM1\MSVOA_L\METHODS\

Method File : VL031516AIR.M

Title : AIR ANALYSIS BY METHOD T0-15 Instrument: MSVOA_L Tue Mar 15 16:18:15 2016

Last Update : Tue Mar 15 16:18:15 2016

Response Via : Initial Calibration

Calibration Files

0.03=VL027237.D 0.1 =VL027236.D 0.5 =VL027235.D 1 =VL027234.D 2 =VL027233.D 10 =VL027232.D 15 =VL027238.D

Compound		0.03	0.1	0.5	1	2	10	15	Avg	%RSD
-----ISTD-----										
1) I	Bromochloromethane									
2) T	Dichlorodifluo...		2.406	2.307	2.264	1.791	2.032	2.160	11.47	
3)	Chlorodifluoro...		1.840	1.792	1.727	1.021	1.018	1.479	28.53	
4)	Chloromethane		0.699	0.694	0.689	0.605	0.595	0.656	7.89	
5) T	Vinyl Chloride	0.804	0.647	0.718	0.690	0.707	0.643	0.642	0.693	8.41
6) T	Bromomethane		0.537	0.533	0.533	0.469	0.470	0.508	6.98	
7)	Chloroethane		0.335	0.320	0.318	0.285	0.284	0.308	7.40	
8) T	Dichlorotetra...		2.000	1.863	1.879	1.676	1.677	1.819	7.72	
9) T	Propene		0.510	0.515	0.525	0.466	0.465	0.496	5.73	
10) T	Heptane		1.353	1.477	1.577	1.524	1.546	1.495	5.86	
11) T	Trichlorofluor...		2.482	2.432	2.360	2.143	2.165	2.316	6.67	
12) T	1,1,2-Trichlor...		1.648	1.587	1.547	1.388	1.401	1.514	7.58	
13)	Ethanol		0.074	0.095	0.117	0.067	0.093	0.089	21.96	
14) T	Bromoethene		0.551	0.556	0.554	0.517	0.529	0.542	3.22	
15) T	Acetone		1.584	1.556	1.547	1.105	1.130	1.384	17.64	
16) T	1,3-Butadiene		0.684	0.692	0.686	0.568	0.573	0.641	10.00	
17)	tert-Butyl alc...		0.856	0.881	0.919	1.188	1.091	0.987	14.72	
18) T	1,1-Dichloroet...		0.676	0.633	0.658	0.602	0.591	0.632	5.69	
19) T	Isopropyl Alcohol		0.539	0.604	0.607	0.619	0.640	0.602	6.31	
20) T	Methylene Chlo...		0.747	0.700	0.665	0.565	0.551	0.646	13.22	
21) T	Allyl Chloride		1.204	0.939	0.955	0.874	0.890	0.972	13.74	
22) T	trans-1,2-Dich...		0.678	0.654	0.676	0.641	0.650	0.660	2.48	
23) T	Vinyl Acetate		1.914	2.073	2.245	1.924	2.108	2.053	6.73	
24) T	1,1-Dichloroet...		1.541	1.544	1.561	1.435	1.462	1.509	3.71	
25) T	Ethyl Acetate		1.467	2.357	2.460	2.314	2.277	2.175	18.46	
26) T	Hexane		1.123	1.198	1.256	1.169	1.144	1.178	4.40	
27) T	Carbon Disulfide		1.856	1.852	1.925	1.757	1.761	1.830	3.89	
28) T	Methyl tert-Bu...		1.627	1.738	1.920	1.871	1.919	1.815	7.09	
29) T	Chloroform		1.837	1.813	1.823	1.679	1.672	1.765	4.65	
30) T	Cyclohexane		0.899	0.935	0.987	0.968	0.986	0.955	3.95	
31) T	cis-1,2-Dichlo...		0.907	0.941	1.010	1.027	1.064	0.990	6.50	
32) T	1,1,1-Trichlor...	2.002	1.665	1.704	1.692	1.719	1.675	1.708	1.738	6.78
-----ISTD-----										
33) I	1,4-Difluorobenzene									
34) T	2-Butanone		0.506	0.540	0.594	0.574	0.583	0.559	6.43	
35) T	Carbon Tetrach...	1.017	0.768	0.739	0.750	0.753	0.741	0.739	0.787	12.95
36) T	Benzene		0.852	0.911	0.951	0.942	0.927	0.917	4.27	
37) T	1,2-Dichloroet...		0.564	0.585	0.594	0.573	0.571	0.577	2.06	

Method	Path : W:\HPCHEM1\MSVOA_L\METHODS\									
Method	File : VL031516AIR.M									
38) T	Trichloroethene	0.394	0.333	0.378	0.389	0.410	0.396	0.382	0.383	6.35
39) T	1,2-Dichloropr...			0.325	0.333	0.349	0.334	0.333	0.335	2.60
40) T	1,4-Dioxane			0.048	0.057	0.089	0.073	0.099	0.073	29.15
41) T	Tetrahydrofuran			0.227	0.260	0.316	0.327	0.326	0.291	15.50
42) T	Bromodichlorom...			0.730	0.761	0.793	0.771	0.769	0.765	2.95
43)	Methyl Methacr...			0.250	0.296	0.338	0.354	0.359	0.319	14.31
44) T	2,2,4-Trimethy...			1.425	1.580	1.733	1.645	1.596	1.596	7.04
45) T	t-1,3-Dichloro...			0.309	0.371	0.458	0.533	0.571	0.448	24.35
46) T	cis-1,3-Dichlo...			0.397	0.482	0.562	0.639	0.653	0.547	19.73
47) T	1,1,2-Trichlor...			0.413	0.414	0.422	0.418	0.427	0.419	1.42
48) T	Dibromochlorom...			0.563	0.618	0.667	0.694	0.718	0.652	9.54
49) T	Bromoform			0.352	0.399	0.462	0.509	0.557	0.456	18.08
50) T	4-Methyl-2-Pen...			0.537	0.652	0.735	0.753	0.781	0.692	14.32
51) T	2-Hexanone			0.391	0.511	0.620	0.683	0.718	0.585	22.88
52) T	Tetrachloroethene	0.380	0.334	0.328	0.343	0.364	0.379	0.397	0.361	7.26
53) T	Toluene			0.885	1.070	1.188	1.228	1.246	1.123	13.34
54) T	1,2-Dibromoethane			0.529	0.568	0.609	0.625	0.647	0.596	7.92
55) I	Chlorobenzene-d5	-----ISTD-----								
56)	1,1,1,2-Tetrac...			0.447	0.446	0.462	0.455	0.454	0.453	1.45
57) T	Chlorobenzene			0.944	0.945	0.932	0.908	0.896	0.925	2.37
58) T	Ethyl Benzene			1.082	1.317	1.464	1.538	1.499	1.380	13.51
59) T	m/p-Xylene			1.035	1.173	1.242	1.263	1.222	1.187	7.68
60) T	o-Xylene			1.044	1.210	1.300	1.323	1.308	1.237	9.45
61) T	Styrene			0.247	0.336	0.431	0.519	0.528	0.412	29.27
62)	Isopropylbenzene			1.385	1.528	1.604	1.637	1.616	1.554	6.63
63) T	1,1,2,2-Tetrac...	1.097	0.848	0.888	0.899	0.917	0.882	0.886	0.917	8.93
64)	n-propylbenzene			0.341	0.401	0.418	0.426	0.429	0.403	8.99
65)	tert-Butylbenzene			1.106	1.304	1.430	1.505	1.501	1.369	12.29
66) T	Benzyl Chloride			0.304	0.365	0.444	0.590	0.633	0.467	30.31
67)	sec-Butylbenzene			1.640	1.859	1.991	2.040	2.003	1.907	8.60
68) S	1-Bromo-4-Fluo...	0.733	0.741	0.748	0.737	0.725	0.734	0.743	0.737	1.01
69)	p-Isopropyltol...			1.163	1.418	1.561	1.658	1.657	1.492	13.97
70)	n-Butylbenzene			1.113	1.353	1.531	1.626	1.604	1.445	14.85
71)	2-Chlorotoluene			0.819	1.008	1.149	1.170	1.207	1.071	14.89
72) T	4-Ethyltoluene			0.940	1.146	1.287	1.345	1.356	1.215	14.40
73) T	1,3,5-Trimethy...			0.984	1.139	1.227	1.295	1.302	1.189	11.10
74) T	1,2,4-Trimethy...			1.100	1.246	1.332	1.391	1.394	1.293	9.52
75) T	1,3-Dichlorobe...			0.740	0.785	0.810	0.815	0.826	0.795	4.27
76) T	1,4-Dichlorobe...			0.688	0.772	0.798	0.823	0.831	0.782	7.39
77) T	1,2-Dichlorobe...			0.722	0.762	0.798	0.797	0.812	0.778	4.68
78) T	Hexachloro-1,3...			0.213	0.206	0.226	0.261	0.274	0.236	12.76
79) T	Naphthalene			0.450	0.621	0.770	0.817	0.793	0.690	22.39
80) T	Naphthalene,2-...			0.224	0.249	0.312	0.250	0.270	0.261	12.63
81) T	1,2,4-Trichlor...			0.219	0.265	0.313	0.369	0.368	0.307	21.29

(#) = Out of Range

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: ENVI27
 Lab Code: CHEM Case No.: H1852 SAS No.: H1852 SDG No.: H1852
 Instrument ID: MSVOA_L Calibration Date/Time: 03/21/2016 14:19
 Lab File ID: VL027298.D Init. Calib. Date(s): 03/15/2016 03/15/2016
 Heated Purge: (Y/N) N Init. Calib. Time(s): 11:40 15:32
 GC Column: RTX-1 ID: 0.32 (mm)

COMPOUND	RRF	RRF010	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	2.160	2.209		2.28	30
Chloromethane	0.656	0.640		-2.44	30
Vinyl Chloride	0.693	0.676		-2.5	30
Bromomethane	0.508	0.491		-3.35	30
Chloroethane	0.308	0.301		-2.3	30
Tetrahydrofuran	0.291	0.349		19.82	30
Trichlorofluoromethane	2.316	2.391		3.22	30
1,1,2-Trichlorotrifluoroethane	1.514	1.543		1.91	30
Dichlorotetrafluoroethane	1.819	1.813		-0.34	30
Bromoethene	0.542	0.563		3.88	30
tert-Butyl alcohol	0.987	1.066		8.01	30
Heptane	1.495	1.548		3.53	30
1,1-Dichloroethene	0.632	0.654		3.42	30
Acetone	1.384	1.225		-11.52	30
Carbon Disulfide	1.830	1.931		5.54	30
Methyl tert-Butyl Ether	1.815	1.965		8.23	30
Methylene Chloride	0.646	0.612		-5.16	30
trans-1,2-Dichloroethene	0.660	0.644		-2.35	30
1,1-Dichloroethane	1.509	1.487		-1.41	30
Cyclohexane	0.955	0.972		1.75	30
2-Butanone	0.559	0.631		12.75	30
Carbon Tetrachloride	0.787	0.824		4.78	30
cis-1,2-Dichloroethene	0.990	1.046		5.65	30
Chloroform	1.765	1.743		-1.26	30
1,1,1-Trichloroethane	1.738	1.746		0.44	30
2,2,4-Trimethylpentane	1.596	1.750		9.66	30
Benzene	0.917	0.992		8.27	30
1,2-Dichloroethane	0.577	0.623		7.84	30
Trichloroethene	0.383	0.413		7.76	30
1,2-Dichloropropane	0.335	0.357		6.57	30
Bromodichloromethane	0.765	0.868		13.48	30
4-Methyl-2-Pentanone	0.692	0.801		15.88	30
Toluene	1.123	1.292		15.03	30
t-1,3-Dichloropropene	0.448	0.586		30.63	30
cis-1,3-Dichloropropene	0.547	0.688		25.75	30
1,1,2-Trichloroethane	0.419	0.439		4.85	30
Dibromochloromethane	0.652	0.767		17.59	30
1,2-Dibromoethane	0.596	0.669		12.36	30
Tetrachloroethene	0.361	0.395		9.43	30

All other compounds must meet a minimum RRF of 0.010.
 RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: ENVI27
 Lab Code: CHEM Case No.: H1852 SAS No.: H1852 SDG No.: H1852
 Instrument ID: MSVOA_L Calibration Date/Time: 03/21/2016 14:19
 Lab File ID: VL027298.D Init. Calib. Date(s): 03/15/2016 03/15/2016
 Heated Purge: (Y/N) N Init. Calib. Time(s): 11:40 15:32
 GC Column: RTX-1 ID: 0.32 (mm)

COMPOUND	RRF	RRF010	MIN RRF	%D	MAX%D
Chlorobenzene	0.925	0.941		1.73	30
Ethyl Benzene	1.380	1.576		14.22	30
m/p-Xylene	1.187	1.318		11.02	30
o-Xylene	1.237	1.396		12.88	30
Styrene	0.412	0.529		28.27	30
Bromoform	0.456	0.548		20.16	30
1,1,2,2-Tetrachloroethane	0.917	0.941		2.62	30
2-Chlorotoluene	1.071	1.225		14.36	30
1,3,5-Trimethylbenzene	1.189	1.326		11.51	30
1,2,4-Trimethylbenzene	1.293	1.464		13.3	30
1,3-Dichlorobenzene	0.795	0.846		6.38	30
1,4-Dichlorobenzene	0.782	0.845		8.02	30
1,2-Dichlorobenzene	0.778	0.821		5.46	30
1,2,4-Trichlorobenzene	0.307	0.388		26.36	30
Hexachloro-1,3-Butadiene	0.236	0.292		23.56	30
1,3-Butadiene	0.641	0.613		-4.37	30
Naphthalene	0.690	0.846		22.58	30
4-Ethyltoluene	1.215	1.387		14.18	30
1-Bromo-4-Fluorobenzene	0.737	0.714		-3.13	30
Hexane	1.178	1.217		3.37	30
Allyl Chloride	0.972	0.956		-1.72	30
1,4-Dioxane	73.225	83.026		13.39	30
Methyl Methacrylate	0.319	0.376		17.73	30

All other compounds must meet a minimum RRF of 0.010.
 RRF of 1,4-Dioxane = Value should be divide by 1000.

SHIPPING DOCUMENTS

[illegible]

Internal Chain of Custody

Instructions: Use 1 form for each 20 samples of aliquot

Laboratory: Chemtech		Location: 284 Sheffield Street, Mountainside, NJ 7092	
Title: Sample Custodian		Date Broken: 3/18/2016	
Field Sample Seal No.: H1852		Military Time Seal Broken: 10:15:00	
Case No.: Frost Street Sites / SPGL 1		Analytical Parameter/Fraction: TO-15	

Sample No.	Alliquot/Extract No.	Sample No.	Alliquot/Extract No.
H1852-01	EFFLUENT		

Date	Time	Relinquished By	Received By	Purpose of Change of Custody
3/18/16	5:16	Signature: [Signature] Printed Name: Cassette, Eric	Signature: [Signature] Printed Name: [Signature]	TO VOC H2N
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	

Distribution: White - Original (Sent With Report) Yellow - Contractor Archive Pink - Sample Custodian - Interim Copy

ENVIROTRAC - NY
631-924-3001
5 OLD DOCK ROAD
YAPHANK NY 11980

5 LBS

1 OF 1

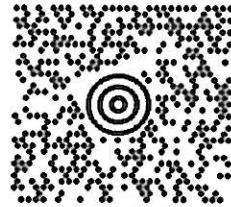
SHIP TO:

ATTN: SAMPLE MANAGEMENT
908-789-8900
CHEMTECH
284 SHEFFIELD STREET
MOUNTAINSIDE NJ 07092-2319

C. Lee
3-18-16
10:15
19.2

6

6.2

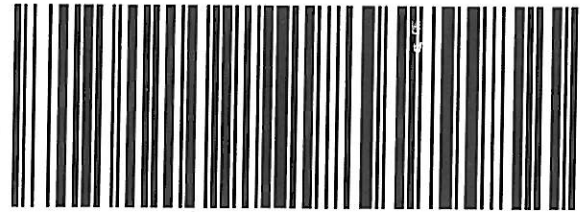


NJ 078 9-61



UPS GROUND

TRACKING #: 1Z 12X 822 03 9757 8486



BILLING: P/P

H1852

Reference#1: 01.990969.00/72.0000

UIS 18.0.33. WNTINV50 72.0A 01/2016



Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	EP-W-14-030
Connecticut	PH-0649
DOD ELAP (L-A-B)	L2219
Florida	E87935
Louisiana	05035
Maine	2012025
Maryland	296
Massachusetts	M-NJ503
New Hampshire	255413
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	P330-13-00380
Texas	T104704488-13-5

DATA PACKAGE

VOLATILE ORGANICS

PROJECT NAME : FROST STREET SITES / SPGL 100.03

ENVIROTRAC ENVIRONMENTAL SERVICES

5 Old Dock Road

Yaphank, NY - 11980

Phone No: 631-924-3001

ORDER ID : H1851

ATTENTION : James Wilkinson



DoD ELAP

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1

2

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Cover Page

Order ID : H1851

Project ID : Frost Street Sites / SPGL 100.03

Client : Envirotrac Environmental Services

Lab Sample Number

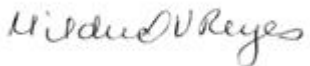
H1851-01

Client Sample Number

INF

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature :



APPROVED

Date: 3/28/2016
By Mildred V Reyes, QAQC Supervisor at 12:47 pm, Mar 30, 2016

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CASE NARRATIVE

Envirotrac Environmental Services

Project Name: Frost Street Sites / SPGL 100.03

Project # N/A

Chemtech Project # H1851

Test Name: TO-15

A. Number of Samples and Date of Receipt:

1 Air sample was received on 03/18/2016.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: SUMMA Canister Rental and TO-15. This data package contains results for TO-15.

C. Analytical Techniques:

The analysis performed on instrument MSVOA_L were done using GC column RTX-1, which is 60 meters, 0.32 mm id, 1.0 um df, Restek Cat. #10157. The Trap was supplied by Entech, glass bead and Tenax , Entech 7100A Preconcentrator. The analysis of TO-15 was based on method TO-15.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The RPD for H1833-01DUP {VMF-NWDUP} with File ID: VL027304.D recoveries met requirements for all parameters except for Dichlorodifluoromethane[61.5%], Tetrachloroethene[22.2%]

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration File ID VL027298.D met the requirements except for t-1,3-Dichloropropene but it was not detected in any samples.

The Tuning criteria met requirements.

Sample INF was diluted due to bad matrix.

Samples INF, INFDL and INFDL2 were diluted due to high concentrations.

E. Additional Comments:

F. Manual Integration Comments:

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes

APPROVED

By Mildred V Reyes, QAQC Supervisor at 12:47 pm, Mar 30, 2016

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following "Results Qualifiers" are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as "12 B".
E	Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P".
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.
Q	Indicates the LCS did not meet the control limits requirements

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: H1851

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

1st Level QA Review Signature: ASHA PATEL

Date: 03/28/2016

2nd Level QA Review Signature: Mildred V Reyes

APPROVED

By Mildred V Reyes, QAQC Supervisor at 12:47 pm, Mar 30, 2016



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	H1851	OrderDate:	3/18/2016 3:59:00 PM
Client:	Envirotrac Environmental Services	Project:	Frost Street Sites / SPGL 100.03
Contact:	James Wilkinson	Location:	Air Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
H1851-01	INF	Air	TO-15	TO-15	03/17/16		03/22/16	03/18/16
H1851-01DL	INFDL	Air	TO-15	TO-15	03/17/16		03/22/16	03/18/16
H1851-01DL 2	INFDL2	Air	TO-15	TO-15	03/17/16		03/22/16	03/18/16

Hit Summary Sheet SW-846

SDG No.: H1851

Client: Envirotrac Environmental Services

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID:	INF								
H1851-01	INF	Air	trans-1,2-Dichloroethene	9.91	J	0.67	3.96	19.8	ug/m3
H1851-01	INF	Air	cis-1,2-Dichloroethene	1,466.00	E	0.71	3.96	19.8	ug/m3
H1851-01	INF	Air	1,1,1-Trichloroethane	6.00		0.65	1.64	1.64	ug/m3
H1851-01	INF	Air	Trichloroethene	3,600.00	E	0.81	1.61	1.61	ug/m3
H1851-01	INF	Air	Tetrachloroethene	32,549.00	E	1.15	2.03	2.03	ug/m3
H1851-01	INF	Air	Chlorobenzene	3.68	J	0.69	4.61	23.0	ug/m3
			Total Voc :	37634.59					
			Total Concentration:	37634.59					
Client ID:	INFDL								
H1851-01DL	INFDL	Air	cis-1,2-Dichloroethene	1,268.00	D	2.85	15.9	79.3	ug/m3
H1851-01DL	INFDL	Air	Trichloroethene	3,385.00	ED	3.28	6.45	6.45	ug/m3
H1851-01DL	INFDL	Air	Tetrachloroethene	67,133.00	ED	4.54	8.14	8.14	ug/m3
			Total Voc :	71786					
			Total Concentration:	71786					
Client ID:	INFDL2								
H1851-01DL2	INFDL2	Air	cis-1,2-Dichloroethene	1,149.00	JD	86.0	475	2378	ug/m3
H1851-01DL2	INFDL2	Air	Trichloroethene	3,332.00	D	98.9	193	193	ug/m3
H1851-01DL2	INFDL2	Air	Tetrachloroethene	134,267.00	ED	136	244	244	ug/m3
			Total Voc :	138748					
			Total Concentration:	138748					

Project : Frost Street Sites / SPGL 100.03

Sampling Date : 03/17/16

Field Id Number : INF

Analysis Date : 03/22/16

Laboratory Id Number : H1851-01

Target Analyts : Air Results

Chemical	Cas Number	Molecular Weight	Insert Results in PPBV	Qualifier	Generate Results in ug/m3	QAS Decision	Foot Notes
Dichlorodifluoromethane	75-71-8	120.9	1	U	4.94		
Chloromethane	74-87-3	50.49	1	U	2.07		
Vinyl Chloride	75-01-4	62.5	0.3	U	0.77		
Bromomethane	74-83-9	94.94	1	U	3.88		
Chloroethane	75-00-3	64.52	1	U	2.64		
Tetrahydrofuran	109-99-9	72.11	1	U	2.95		
Trichlorofluoromethane	75-69-4	137.4	1	U	5.62		
Dichlorotetrafluoroethane	76-14-2	170.9	1	U	6.99		
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	1	U	7.66		
Bromoethene	593-60-2	106.9	1	U	4.37		
tert-Butyl alcohol	75-65-0	74.12	1	U	3.03		
Heptane	142-82-5	100.2	1	U	4.1		
1,1-Dichloroethene	75-35-4	96.94	1	U	3.96		
Acetone	67-64-1	58.08	1	U	2.38		
Carbon Disulfide	75-15-0	76.14	1	U	3.11		
Methyl tert-Butyl Ether	1634-04-4	88.15	1	U	3.61		
Methylene Chloride	75-09-2	84.94	1	U	3.47		
trans-1,2-Dichloroethene	156-60-5	96.94	2.5	J	9.91		
1,1-Dichloroethane	75-34-3	98.96	1	U	4.05		
Cyclohexane	110-82-7	84.16	1	U	3.44		
2-Butanone	78-93-3	72.11	1	U	2.95		
Carbon Tetrachloride	56-23-5	153.8	0.3	U	1.89		
cis-1,2-Dichloroethene	156-59-2	96.94	370	E	1466		
Chloroform	67-66-3	119.4	1	U	4.88		
1,1,1-Trichloroethane	71-55-6	133.4	1.1		6		
2,2,4-Trimethylpentane	540-84-1	114.2	1	U	4.67		
Benzene	71-43-2	78.11	1	U	3.19		
1,2-Dichloroethane	107-06-2	98.96	1	U	4.05		
Trichloroethene	79-01-6	131.4	670	E	3600		
1,2-Dichloropropane	78-87-5	113	1	U	4.62		
Bromodichloromethane	75-27-4	163.8	1	U	6.7		
4-Methyl-2-Pentanone	108-10-1	100.2	1	U	4.1		
Toluene	108-88-3	92.14	1	U	3.77		
t-1,3-Dichloropropene	10061-02-6	111	1	U	4.54		
cis-1,3-Dichloropropene	10061-01-5	111	1	U	4.54		
1,1,2-Trichloroethane	79-00-5	133.4	1	U	5.46		

Project : Frost Street Sites / SPGL 100.03

Sampling Date : 03/17/16

Field Id Number : INF

Analysis Date : 03/22/16

Laboratory Id Number : H1851-01

Target Analyts : Air Results

Dibromochloromethane	124-48-1	208.3	1	U	8.52		
1,2-Dibromoethane	106-93-4	187.9	1	U	7.69		
Tetrachloroethene	127-18-4	165.8	4800	E	32549		
Chlorobenzene	108-90-7	112.6	0.8	J	3.68		
Ethyl Benzene	100-41-4	106.2	1	U	4.34		
m/p-Xylene	179601-23-1	106.2	2	U	8.69		
o-Xylene	95-47-6	106.2	1	U	4.34		
Styrene	100-42-5	104.1	1	U	4.26		
Bromoform	75-25-2	252.8	1	U	10.3		
1,1,2,2-Tetrachloroethane	79-34-5	167.9	1	U	6.87		
2-Chlorotoluene	95-49-8	126.6	1	U	5.18		
1,3,5-Trimethylbenzene	108-67-8	120.2	1	U	4.92		
1,2,4-Trimethylbenzene	95-63-6	120.2	1	U	4.92		
1,3-Dichlorobenzene	541-73-1	147	1	U	6.01		
1,4-Dichlorobenzene	106-46-7	147	1	U	6.01		
1,2-Dichlorobenzene	95-50-1	147	1	U	6.01		
1,2,4-Trichlorobenzene	120-82-1	181.5	1	U	7.42		
Hexachloro-1,3-Butadiene	87-68-3	260.8	1	U	10.7		
Naphthalene	91-20-3	128.17	1	U	5.24		
1,3-Butadiene	106-99-0	54.09	1	U	2.21		
4-Ethyltoluene	622-96-8	120.2	1	U	4.92		
Hexane	110-54-3	86.17	1	U	3.52		
Allyl Chloride	107-05-1	76.53	1	U	3.13		
1,4-Dioxane	123-91-1	88.12	4	U	14.4		
Methyl Methacrylate	80-62-6	100.117	1	U	4.09		

Project : Frost Street Sites / SPGL 100.03

Sampling Date : 03/17/16

Field Id Number : INFDL

Analysis Date : 03/22/16

Laboratory Id Number : H1851-01DL

Target Analyts : Air Results

Chemical	Cas Number	Molecular Weight	Insert Results in PPBV	Qualifier	Generate Results in ug/m3	QAS Decision	Foot Notes
Dichlorodifluoromethane	75-71-8	120.9	4	UD	19.8		
Chloromethane	74-87-3	50.49	4	UD	8.26		
Vinyl Chloride	75-01-4	62.5	1.2	UD	3.07		
Bromomethane	74-83-9	94.94	4	UD	15.5		
Chloroethane	75-00-3	64.52	4	UD	10.6		
Tetrahydrofuran	109-99-9	72.11	4	UD	11.8		
Trichlorofluoromethane	75-69-4	137.4	4	UD	22.5		
Dichlorotetrafluoroethane	76-14-2	170.9	4	UD	28.0		
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	4	UD	30.7		
Bromoethene	593-60-2	106.9	4	UD	17.5		
tert-Butyl alcohol	75-65-0	74.12	4	UD	12.1		
Heptane	142-82-5	100.2	4	UD	16.4		
1,1-Dichloroethene	75-35-4	96.94	4	UD	15.9		
Acetone	67-64-1	58.08	4	UD	9.5		
Carbon Disulfide	75-15-0	76.14	4	UD	12.5		
Methyl tert-Butyl Ether	1634-04-4	88.15	4	UD	14.4		
Methylene Chloride	75-09-2	84.94	4	UD	13.9		
trans-1,2-Dichloroethene	156-60-5	96.94	4	UD	15.9		
1,1-Dichloroethane	75-34-3	98.96	4	UD	16.2		
Cyclohexane	110-82-7	84.16	4	UD	13.8		
2-Butanone	78-93-3	72.11	4	UD	11.8		
Carbon Tetrachloride	56-23-5	153.8	1.2	UD	7.55		
cis-1,2-Dichloroethene	156-59-2	96.94	320	D	1268		
Chloroform	67-66-3	119.4	4	UD	19.5		
1,1,1-Trichloroethane	71-55-6	133.4	1.2	UD	6.55		
2,2,4-Trimethylpentane	540-84-1	114.2	4	UD	18.7		
Benzene	71-43-2	78.11	4	UD	12.8		
1,2-Dichloroethane	107-06-2	98.96	4	UD	16.2		
Trichloroethene	79-01-6	131.4	630	ED	3385		
1,2-Dichloropropane	78-87-5	113	4	UD	18.5		
Bromodichloromethane	75-27-4	163.8	4	UD	26.8		
4-Methyl-2-Pentanone	108-10-1	100.2	4	UD	16.4		
Toluene	108-88-3	92.14	4	UD	15.1		
t-1,3-Dichloropropene	10061-02-6	111	4	UD	18.2		
cis-1,3-Dichloropropene	10061-01-5	111	4	UD	18.2		
1,1,2-Trichloroethane	79-00-5	133.4	4	UD	21.8		

Project : Frost Street Sites / SPGL 100.03

Sampling Date : 03/17/16

Field Id Number : INFDL

Analysis Date : 03/22/16

Laboratory Id Number : H1851-01DL

Target Analyts : Air Results

Dibromochloromethane	124-48-1	208.3	4	UD	34.1		
1,2-Dibromoethane	106-93-4	187.9	4	UD	30.7		
Tetrachloroethene	127-18-4	165.8	9900	ED	67133		
Chlorobenzene	108-90-7	112.6	4	UD	18.4		
Ethyl Benzene	100-41-4	106.2	4	UD	17.4		
m/p-Xylene	179601-23-1	106.2	8	UD	34.8		
o-Xylene	95-47-6	106.2	4	UD	17.4		
Styrene	100-42-5	104.1	4	UD	17.0		
Bromoform	75-25-2	252.8	4	UD	41.4		
1,1,2,2-Tetrachloroethane	79-34-5	167.9	4	UD	27.5		
2-Chlorotoluene	95-49-8	126.6	4	UD	20.7		
1,3,5-Trimethylbenzene	108-67-8	120.2	4	UD	19.7		
1,2,4-Trimethylbenzene	95-63-6	120.2	4	UD	19.7		
1,3-Dichlorobenzene	541-73-1	147	4	UD	24.0		
1,4-Dichlorobenzene	106-46-7	147	4	UD	24.0		
1,2-Dichlorobenzene	95-50-1	147	4	UD	24.0		
1,2,4-Trichlorobenzene	120-82-1	181.5	4	UD	29.7		
Hexachloro-1,3-Butadiene	87-68-3	260.8	4	UD	42.7		
1,3-Butadiene	106-99-0	54.09	4	UD	8.85		
Naphthalene	91-20-3	128.17	4	UD	21.0		
4-Ethyltoluene	622-96-8	120.2	4	UD	19.7		
Hexane	110-54-3	86.17	4	UD	14.1		
Allyl Chloride	107-05-1	76.53	4	UD	12.5		
1,4-Dioxane	123-91-1	88.12	16	UD	57.7		
Methyl Methacrylate	80-62-6	100.117	4	UD	16.4		

Project : Frost Street Sites / SPGL 100.03

Sampling Date : 03/17/16

Field Id Number : INFDL2

Analysis Date : 03/22/16

Laboratory Id Number : H1851-01DL2

Target Analyts : Air Results

Chemical	Cas Number	Molecular Weight	Insert Results in PPBV	Qualifier	Generate Results in ug/m3	QAS Decision	Foot Notes
Dichlorodifluoromethane	75-71-8	120.9	120	UD	593		
Chloromethane	74-87-3	50.49	120	UD	247		
Vinyl Chloride	75-01-4	62.5	36	UD	92.0		
Bromomethane	74-83-9	94.94	120	UD	465		
Chloroethane	75-00-3	64.52	120	UD	316		
Tetrahydrofuran	109-99-9	72.11	120	UD	353		
Trichlorofluoromethane	75-69-4	137.4	120	UD	674		
Dichlorotetrafluoroethane	76-14-2	170.9	120	UD	838		
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	120	UD	919		
Bromoethene	593-60-2	106.9	120	UD	524		
tert-Butyl alcohol	75-65-0	74.12	120	UD	363		
Heptane	142-82-5	100.2	120	UD	491		
1,1-Dichloroethene	75-35-4	96.94	120	UD	475		
Acetone	67-64-1	58.08	120	UD	285		
Carbon Disulfide	75-15-0	76.14	120	UD	373		
Methyl tert-Butyl Ether	1634-04-4	88.15	120	UD	432		
Methylene Chloride	75-09-2	84.94	120	UD	416		
trans-1,2-Dichloroethene	156-60-5	96.94	120	UD	475		
1,1-Dichloroethane	75-34-3	98.96	120	UD	485		
Cyclohexane	110-82-7	84.16	120	UD	413		
2-Butanone	78-93-3	72.11	120	UD	353		
Carbon Tetrachloride	56-23-5	153.8	36	UD	226		
cis-1,2-Dichloroethene	156-59-2	96.94	290	JD	1149		
Chloroform	67-66-3	119.4	120	UD	586		
1,1,1-Trichloroethane	71-55-6	133.4	36	UD	196		
2,2,4-Trimethylpentane	540-84-1	114.2	120	UD	560		
Benzene	71-43-2	78.11	120	UD	383		
1,2-Dichloroethane	107-06-2	98.96	120	UD	485		
Trichloroethene	79-01-6	131.4	620	D	3332		
1,2-Dichloropropane	78-87-5	113	120	UD	554		
Bromodichloromethane	75-27-4	163.8	120	UD	803		
4-Methyl-2-Pentanone	108-10-1	100.2	120	UD	491		
Toluene	108-88-3	92.14	120	UD	452		
t-1,3-Dichloropropene	10061-02-6	111	120	UD	544		
cis-1,3-Dichloropropene	10061-01-5	111	120	UD	544		
1,1,2-Trichloroethane	79-00-5	133.4	120	UD	654		

Project : Frost Street Sites / SPGL 100.03

Sampling Date : 03/17/16

Field Id Number : INFDL2

Analysis Date : 03/22/16

Laboratory Id Number : H1851-01DL2

Target Analyts : Air Results

Dibromochloromethane	124-48-1	208.3	120	UD	1022		
1,2-Dibromoethane	106-93-4	187.9	120	UD	922		
Tetrachloroethene	127-18-4	165.8	19800	ED	134267		
Chlorobenzene	108-90-7	112.6	120	UD	552		
Ethyl Benzene	100-41-4	106.2	120	UD	521		
m/p-Xylene	179601-23-1	106.2	240	UD	1042		
o-Xylene	95-47-6	106.2	120	UD	521		
Styrene	100-42-5	104.1	120	UD	510		
Bromoform	75-25-2	252.8	120	UD	1240		
1,1,2,2-Tetrachloroethane	79-34-5	167.9	120	UD	824		
2-Chlorotoluene	95-49-8	126.6	120	UD	621		
1,3,5-Trimethylbenzene	108-67-8	120.2	120	UD	589		
1,2,4-Trimethylbenzene	95-63-6	120.2	120	UD	589		
1,3-Dichlorobenzene	541-73-1	147	120	UD	721		
1,4-Dichlorobenzene	106-46-7	147	120	UD	721		
1,2-Dichlorobenzene	95-50-1	147	120	UD	721		
1,2,4-Trichlorobenzene	120-82-1	181.5	120	UD	890		
Hexachloro-1,3-Butadiene	87-68-3	260.8	120	UD	1280		
Naphthalene	91-20-3	128.17	120	UD	629		
1,3-Butadiene	106-99-0	54.09	120	UD	265		
4-Ethyltoluene	622-96-8	120.2	120	UD	589		
Hexane	110-54-3	86.17	120	UD	422		
Allyl Chloride	107-05-1	76.53	120	UD	375		
1,4-Dioxane	123-91-1	88.12	480	UD	1729		
Methyl Methacrylate	80-62-6	100.117	120	UD	491		

Project : Frost Street Sites / SPGL 100.03**Field Id Number :** INFDL2**Laboratory Id Number :** H1851-01DL2**Sampling Date :** 03/17/16**Analysis Date :** 03/22/16**Target Analyts :** Air Results

A

B

C

D

E

F

G

H

SAMPLE DATA

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	03/17/16
Project:	Frost Street Sites / SPGL 100.03	Date Received:	03/18/16
Client Sample ID:	INF	SDG No.:	H1851
Lab Sample ID:	H1851-01	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027321.D	10		03/22/16 10:20	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS								
75-71-8	Dichlorodifluoromethane	1	4.94	U	1.98	4.94	24.7	ug/m3
74-87-3	Chloromethane	1	2.07	U	0.35	2.07	10.3	ug/m3
75-01-4	Vinyl Chloride	0.3	0.77	U	0.38	0.77	0.77	ug/m3
74-83-9	Bromomethane	1	3.88	U	0.7	3.88	19.4	ug/m3
75-00-3	Chloroethane	1	2.64	U	0.82	2.64	13.2	ug/m3
109-99-9	Tetrahydrofuran	1	2.95	U	0.88	2.95	14.8	ug/m3
75-69-4	Trichlorofluoromethane	1	5.62	U	1.35	5.62	28.1	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	1	7.66	U	1.15	7.66	38.3	ug/m3
76-14-2	Dichlorotetrafluoroethane	1	6.99	U	1.19	6.99	35.0	ug/m3
593-60-2	Bromoethene	1	4.37	U	1.14	4.37	21.9	ug/m3
75-65-0	tert-Butyl alcohol	1	3.03	U	1.3	3.03	15.2	ug/m3
142-82-5	Heptane	1	4.1	U	0.98	4.1	20.5	ug/m3
75-35-4	1,1-Dichloroethene	1	3.96	U	0.67	3.96	19.8	ug/m3
67-64-1	Acetone	1	2.38	U	0.29	2.38	11.9	ug/m3
75-15-0	Carbon Disulfide	1	3.11	U	0.75	3.11	15.6	ug/m3
1634-04-4	Methyl tert-Butyl Ether	1	3.61	U	0.54	3.61	18.0	ug/m3
75-09-2	Methylene Chloride	1	3.47	U	0.59	3.47	17.4	ug/m3
156-60-5	trans-1,2-Dichloroethene	2.5	9.91	J	0.67	3.96	19.8	ug/m3
75-34-3	1,1-Dichloroethane	1	4.05	U	0.49	4.05	20.2	ug/m3
110-82-7	Cyclohexane	1	3.44	U	0.83	3.44	17.2	ug/m3
78-93-3	2-Butanone	1	2.95	U	0.65	2.95	14.8	ug/m3
56-23-5	Carbon Tetrachloride	0.3	1.89	U	0.94	1.89	1.89	ug/m3
156-59-2	cis-1,2-Dichloroethene	370	1466	E	0.71	3.96	19.8	ug/m3
67-66-3	Chloroform	1	4.88	U	0.73	4.88	24.4	ug/m3
71-55-6	1,1,1-Trichloroethane	1.1	6		0.65	1.64	1.64	ug/m3
540-84-1	2,2,4-Trimethylpentane	1	4.67	U	1.03	4.67	23.4	ug/m3
71-43-2	Benzene	1	3.19	U	0.54	3.19	16.0	ug/m3
107-06-2	1,2-Dichloroethane	1	4.05	U	0.61	4.05	20.2	ug/m3
79-01-6	Trichloroethene	670	3600	E	0.81	1.61	1.61	ug/m3
78-87-5	1,2-Dichloropropane	1	4.62	U	3.93	4.62	23.1	ug/m3
75-27-4	Bromodichloromethane	1	6.7	U	1.14	6.7	33.5	ug/m3
108-10-1	4-Methyl-2-Pentanone	1	4.1	U	0.9	4.1	20.5	ug/m3
108-88-3	Toluene	1	3.77	U	0.45	3.77	18.8	ug/m3
10061-02-6	t-1,3-Dichloropropene	1	4.54	U	1.09	4.54	22.7	ug/m3
10061-01-5	cis-1,3-Dichloropropene	1	4.54	U	0.68	4.54	22.7	ug/m3
79-00-5	1,1,2-Trichloroethane	1	5.46	U	1.2	5.46	27.3	ug/m3
124-48-1	Dibromochloromethane	1	8.52	U	1.02	8.52	42.6	ug/m3
106-93-4	1,2-Dibromoethane	1	7.69	U	1.15	7.69	38.4	ug/m3

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	03/17/16
Project:	Frost Street Sites / SPGL 100.03	Date Received:	03/18/16
Client Sample ID:	INF	SDG No.:	H1851
Lab Sample ID:	H1851-01	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027321.D	10		03/22/16 10:20	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
127-18-4	Tetrachloroethene	4800	32549	E	1.15	2.03	2.03	ug/m3
108-90-7	Chlorobenzene	0.8	3.68	J	0.69	4.61	23.0	ug/m3
100-41-4	Ethyl Benzene	1	4.34	U	0.74	4.34	21.7	ug/m3
179601-23-1	m/p-Xylene	2	8.69	U	1.35	8.69	43.4	ug/m3
95-47-6	o-Xylene	1	4.34	U	0.74	4.34	21.7	ug/m3
100-42-5	Styrene	1	4.26	U	0.51	4.26	21.3	ug/m3
75-25-2	Bromoform	1	10.3	U	1.24	10.3	51.7	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	1	6.87	U	1.17	6.87	34.3	ug/m3
95-49-8	2-Chlorotoluene	1	5.18	U	0.78	5.18	25.9	ug/m3
108-67-8	1,3,5-Trimethylbenzene	1	4.92	U	1.23	4.92	24.6	ug/m3
95-63-6	1,2,4-Trimethylbenzene	1	4.92	U	1.23	4.92	24.6	ug/m3
541-73-1	1,3-Dichlorobenzene	1	6.01	U	1.02	6.01	30.1	ug/m3
106-46-7	1,4-Dichlorobenzene	1	6.01	U	1.8	6.01	30.1	ug/m3
95-50-1	1,2-Dichlorobenzene	1	6.01	U	1.5	6.01	30.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	1	7.42	U	2.97	7.42	37.1	ug/m3
87-68-3	Hexachloro-1,3-Butadiene	1	10.7	U	3.31	10.7	53.3	ug/m3
106-99-0	1,3-Butadiene	1	2.21	U	0.49	2.21	11.1	ug/m3
91-20-3	Naphthalene	1	5.24	U	2.25	5.24	26.2	ug/m3
622-96-8	4-Ethyltoluene	1	4.92	U	0.74	4.92	24.6	ug/m3
110-54-3	Hexane	1	3.52	U	0.53	3.52	17.6	ug/m3
107-05-1	Allyl Chloride	1	3.13	U	1.1	3.13	15.6	ug/m3
123-91-1	1,4-Dioxane	4	14.4	U	3.53	14.4	18.0	ug/m3
80-62-6	Methyl Methacrylate	1	4.09	U	0.7	4.09	20.5	ug/m3
SURROGATES								
460-00-4	1-Bromo-4-Fluorobenzene	10.4			65 - 135		104%	SPK: 10
INTERNAL STANDARDS								
74-97-5	Bromochloromethane	1183970		6.63				
540-36-3	1,4-Difluorobenzene	2593390		8.3				
3114-55-4	Chlorobenzene-d5	2508850		13.74				

U = Not Detected

RL = Reporting Limit

MDL = Method Detection Limit

E = Value Exceeds Calibration Range

D = Dilution

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

Q = indicates LCS control criteria did not meet requirements

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	03/17/16
Project:	Frost Street Sites / SPGL 100.03	Date Received:	03/18/16
Client Sample ID:	INFDL	SDG No.:	H1851
Lab Sample ID:	H1851-01DL	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027322.D	40		03/22/16 10:59	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS								
75-71-8	Dichlorodifluoromethane	4	19.8	UD	7.91	19.8	98.9	ug/m3
74-87-3	Chloromethane	4	8.26	UD	1.38	8.26	41.3	ug/m3
75-01-4	Vinyl Chloride	1.2	3.07	UD	1.56	3.07	3.07	ug/m3
74-83-9	Bromomethane	4	15.5	UD	2.8	15.5	77.7	ug/m3
75-00-3	Chloroethane	4	10.6	UD	3.17	10.6	52.8	ug/m3
109-99-9	Tetrahydrofuran	4	11.8	UD	3.54	11.8	59.0	ug/m3
75-69-4	Trichlorofluoromethane	4	22.5	UD	5.34	22.5	112	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	4	30.7	UD	4.68	30.7	153	ug/m3
76-14-2	Dichlorotetrafluoroethane	4	28.0	UD	4.68	28.0	139	ug/m3
593-60-2	Bromoethene	4	17.5	UD	4.37	17.5	87.4	ug/m3
75-65-0	tert-Butyl alcohol	4	12.1	UD	5.15	12.1	60.6	ug/m3
142-82-5	Heptane	4	16.4	UD	3.89	16.4	82.0	ug/m3
75-35-4	1,1-Dichloroethene	4	15.9	UD	2.66	15.9	79.3	ug/m3
67-64-1	Acetone	4	9.5	UD	1.14	9.5	47.5	ug/m3
75-15-0	Carbon Disulfide	4	12.5	UD	2.96	12.5	62.3	ug/m3
1634-04-4	Methyl tert-Butyl Ether	4	14.4	UD	2.2	14.4	72.1	ug/m3
75-09-2	Methylene Chloride	4	13.9	UD	2.33	13.9	69.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	4	15.9	UD	2.66	15.9	79.3	ug/m3
75-34-3	1,1-Dichloroethane	4	16.2	UD	1.94	16.2	81.0	ug/m3
110-82-7	Cyclohexane	4	13.8	UD	3.27	13.8	68.8	ug/m3
78-93-3	2-Butanone	4	11.8	UD	2.57	11.8	59.0	ug/m3
56-23-5	Carbon Tetrachloride	1.2	7.55	UD	3.84	7.55	7.55	ug/m3
156-59-2	cis-1,2-Dichloroethene	320	1268	D	2.85	15.9	79.3	ug/m3
67-66-3	Chloroform	4	19.5	UD	2.98	19.5	97.7	ug/m3
71-55-6	1,1,1-Trichloroethane	1.2	6.55	UD	2.62	6.55	6.55	ug/m3
540-84-1	2,2,4-Trimethylpentane	4	18.7	UD	4.06	18.7	93.4	ug/m3
71-43-2	Benzene	4	12.8	UD	2.14	12.8	63.9	ug/m3
107-06-2	1,2-Dichloroethane	4	16.2	UD	2.47	16.2	81.0	ug/m3
79-01-6	Trichloroethene	630	3385	ED	3.28	6.45	6.45	ug/m3
78-87-5	1,2-Dichloropropane	4	18.5	UD	15.7	18.5	92.4	ug/m3
75-27-4	Bromodichloromethane	4	26.8	UD	4.49	26.8	133	ug/m3
108-10-1	4-Methyl-2-Pentanone	4	16.4	UD	3.57	16.4	82.0	ug/m3
108-88-3	Toluene	4	15.1	UD	1.81	15.1	75.4	ug/m3
10061-02-6	t-1,3-Dichloropropene	4	18.2	UD	4.31	18.2	90.8	ug/m3
10061-01-5	cis-1,3-Dichloropropene	4	18.2	UD	2.77	18.2	90.8	ug/m3
79-00-5	1,1,2-Trichloroethane	4	21.8	UD	4.75	21.8	109	ug/m3
124-48-1	Dibromochloromethane	4	34.1	UD	4.09	34.1	170	ug/m3
106-93-4	1,2-Dibromoethane	4	30.7	UD	4.69	30.7	153	ug/m3

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	03/17/16
Project:	Frost Street Sites / SPGL 100.03	Date Received:	03/18/16
Client Sample ID:	INFDL	SDG No.:	H1851
Lab Sample ID:	H1851-01DL	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027322.D	40		03/22/16 10:59	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
127-18-4	Tetrachloroethene	9900	67133	ED	4.54	8.14	8.14	ug/m3
108-90-7	Chlorobenzene	4	18.4	UD	2.81	18.4	92.1	ug/m3
100-41-4	Ethyl Benzene	4	17.4	UD	2.91	17.4	86.9	ug/m3
179601-23-1	m/p-Xylene	8	34.8	UD	5.21	34.8	173	ug/m3
95-47-6	o-Xylene	4	17.4	UD	2.91	17.4	86.9	ug/m3
100-42-5	Styrene	4	17.0	UD	2.04	17.0	85.2	ug/m3
75-25-2	Bromoform	4	41.4	UD	4.96	41.4	206	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	4	27.5	UD	4.6	27.5	137	ug/m3
95-49-8	2-Chlorotoluene	4	20.7	UD	3.16	20.7	103	ug/m3
108-67-8	1,3,5-Trimethylbenzene	4	19.7	UD	4.87	19.7	98.3	ug/m3
95-63-6	1,2,4-Trimethylbenzene	4	19.7	UD	4.87	19.7	98.3	ug/m3
541-73-1	1,3-Dichlorobenzene	4	24.0	UD	4.03	24.0	120	ug/m3
106-46-7	1,4-Dichlorobenzene	4	24.0	UD	7.21	24.0	120	ug/m3
95-50-1	1,2-Dichlorobenzene	4	24.0	UD	5.95	24.0	120	ug/m3
120-82-1	1,2,4-Trichlorobenzene	4	29.7	UD	11.9	29.7	148	ug/m3
87-68-3	Hexachloro-1,3-Butadiene	4	42.7	UD	12.8	42.7	213	ug/m3
106-99-0	1,3-Butadiene	4	8.85	UD	1.92	8.85	44.2	ug/m3
91-20-3	Naphthalene	4	21.0	UD	8.91	21.0	104	ug/m3
622-96-8	4-Ethyltoluene	4	19.7	UD	3	19.7	98.3	ug/m3
110-54-3	Hexane	4	14.1	UD	2.15	14.1	70.5	ug/m3
107-05-1	Allyl Chloride	4	12.5	UD	4.38	12.5	62.6	ug/m3
123-91-1	1,4-Dioxane	16	57.7	UD	14.1	57.7	72.1	ug/m3
80-62-6	Methyl Methacrylate	4	16.4	UD	2.74	16.4	81.9	ug/m3
SURROGATES								
460-00-4	1-Bromo-4-Fluorobenzene	9.8			65 - 135		98%	SPK: 10
INTERNAL STANDARDS								
74-97-5	Bromochloromethane	1088860		6.63				
540-36-3	1,4-Difluorobenzene	2396180		8.3				
3114-55-4	Chlorobenzene-d5	2439410		13.72				

U = Not Detected

RL = Reporting Limit

MDL = Method Detection Limit

E = Value Exceeds Calibration Range

D = Dilution

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

Q = indicates LCS control criteria did not meet requirements

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	03/17/16
Project:	Frost Street Sites / SPGL 100.03	Date Received:	03/18/16
Client Sample ID:	INFDL2	SDG No.:	H1851
Lab Sample ID:	H1851-01DL2	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027323.D	1200		03/22/16 11:37	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS								
75-71-8	Dichlorodifluoromethane	120	593	UD	237	593	2966	ug/m3
74-87-3	Chloromethane	120	247	UD	41.7	247	1239	ug/m3
75-01-4	Vinyl Chloride	36	92.0	UD	47.0	92.0	92.0	ug/m3
74-83-9	Bromomethane	120	465	UD	84.3	465	2329	ug/m3
75-00-3	Chloroethane	120	316	UD	97.1	316	1583	ug/m3
109-99-9	Tetrahydrofuran	120	353	UD	105	353	1769	ug/m3
75-69-4	Trichlorofluoromethane	120	674	UD	160	674	3371	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	120	919	UD	141	919	4598	ug/m3
76-14-2	Dichlorotetrafluoroethane	120	838	UD	141	838	4193	ug/m3
593-60-2	Bromoethene	120	524	UD	134	524	2623	ug/m3
75-65-0	tert-Butyl alcohol	120	363	UD	157	363	1818	ug/m3
142-82-5	Heptane	120	491	UD	117	491	2458	ug/m3
75-35-4	1,1-Dichloroethene	120	475	UD	80.1	475	2378	ug/m3
67-64-1	Acetone	120	285	UD	34.0	285	1425	ug/m3
75-15-0	Carbon Disulfide	120	373	UD	89.1	373	1868	ug/m3
1634-04-4	Methyl tert-Butyl Ether	120	432	UD	66.3	432	2163	ug/m3
75-09-2	Methylene Chloride	120	416	UD	70.2	416	2084	ug/m3
156-60-5	trans-1,2-Dichloroethene	120	475	UD	80.1	475	2378	ug/m3
75-34-3	1,1-Dichloroethane	120	485	UD	57.9	485	2428	ug/m3
110-82-7	Cyclohexane	120	413	UD	98.4	413	2065	ug/m3
78-93-3	2-Butanone	120	353	UD	76.7	353	1769	ug/m3
56-23-5	Carbon Tetrachloride	36	226	UD	115	226	226	ug/m3
156-59-2	cis-1,2-Dichloroethene	290	1149	JD	86.0	475	2378	ug/m3
67-66-3	Chloroform	120	586	UD	89.9	586	2930	ug/m3
71-55-6	1,1,1-Trichloroethane	36	196	UD	78.0	196	196	ug/m3
540-84-1	2,2,4-Trimethylpentane	120	560	UD	121	560	2802	ug/m3
71-43-2	Benzene	120	383	UD	64.5	383	1916	ug/m3
107-06-2	1,2-Dichloroethane	120	485	UD	74.5	485	2428	ug/m3
79-01-6	Trichloroethene	620	3332	D	98.9	193	193	ug/m3
78-87-5	1,2-Dichloropropane	120	554	UD	462	554	2773	ug/m3
75-27-4	Bromodichloromethane	120	803	UD	135	803	4019	ug/m3
108-10-1	4-Methyl-2-Pentanone	120	491	UD	106	491	2458	ug/m3
108-88-3	Toluene	120	452	UD	53.9	452	2261	ug/m3
10061-02-6	t-1,3-Dichloropropene	120	544	UD	129	544	2723	ug/m3
10061-01-5	cis-1,3-Dichloropropene	120	544	UD	83.5	544	2723	ug/m3
79-00-5	1,1,2-Trichloroethane	120	654	UD	141	654	3273	ug/m3
124-48-1	Dibromochloromethane	120	1022	UD	121	1022	5111	ug/m3
106-93-4	1,2-Dibromoethane	120	922	UD	141	922	4611	ug/m3

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	03/17/16
Project:	Frost Street Sites / SPGL 100.03	Date Received:	03/18/16
Client Sample ID:	INFDL2	SDG No.:	H1851
Lab Sample ID:	H1851-01DL2	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027323.D	1200		03/22/16 11:37	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
127-18-4	Tetrachloroethene	19800	134267	ED	136	244	244	ug/m3
108-90-7	Chlorobenzene	120	552	UD	84.7	552	2763	ug/m3
100-41-4	Ethyl Benzene	120	521	UD	87.7	521	2606	ug/m3
179601-23-1	m/p-Xylene	240	1042	UD	159	1042	5212	ug/m3
95-47-6	o-Xylene	120	521	UD	87.7	521	2606	ug/m3
100-42-5	Styrene	120	510	UD	60.9	510	2554	ug/m3
75-25-2	Bromoform	120	1240	UD	147	1240	6203	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	120	824	UD	138	824	4120	ug/m3
95-49-8	2-Chlorotoluene	120	621	UD	95.3	621	3106	ug/m3
108-67-8	1,3,5-Trimethylbenzene	120	589	UD	145	589	2949	ug/m3
95-63-6	1,2,4-Trimethylbenzene	120	589	UD	145	589	2949	ug/m3
541-73-1	1,3-Dichlorobenzene	120	721	UD	121	721	3607	ug/m3
106-46-7	1,4-Dichlorobenzene	120	721	UD	215	721	3607	ug/m3
95-50-1	1,2-Dichlorobenzene	120	721	UD	177	721	3607	ug/m3
120-82-1	1,2,4-Trichlorobenzene	120	890	UD	356	890	4453	ug/m3
87-68-3	Hexachloro-1,3-Butadiene	120	1280	UD	392	1280	6400	ug/m3
106-99-0	1,3-Butadiene	120	265	UD	57.5	265	1327	ug/m3
91-20-3	Naphthalene	120	629	UD	273	629	3145	ug/m3
622-96-8	4-Ethyltoluene	120	589	UD	90.5	589	2949	ug/m3
110-54-3	Hexane	120	422	UD	64.8	422	2114	ug/m3
107-05-1	Allyl Chloride	120	375	UD	131	375	1878	ug/m3
123-91-1	1,4-Dioxane	480	1729	UD	432	1729	2162	ug/m3
80-62-6	Methyl Methacrylate	120	491	UD	82.7	491	2456	ug/m3
SURROGATES								
460-00-4	1-Bromo-4-Fluorobenzene	9.7			65 - 135		97%	SPK: 10
INTERNAL STANDARDS								
74-97-5	Bromochloromethane	1004710		6.63				
540-36-3	1,4-Difluorobenzene	2285900		8.3				
3114-55-4	Chlorobenzene-d5	2409910		13.71				

U = Not Detected

RL = Reporting Limit

MDL = Method Detection Limit

E = Value Exceeds Calibration Range

D = Dilution

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

Q = indicates LCS control criteria did not meet requirements

QC SUMMARY

Surrogate Summary

SDG No.: H1851Client: Envirotrac Environmental ServicesAnalytical Method: SWTO-15

Lab Sample ID	Client ID	Parameter	Spike	Result	RecoveryQual	Limits	
						Low	High
H1833-01DUP	VMF-NWDUP	1-Bromo-4-Fluorobenzene	10	10.7	107	65	135
H1851-01	INF	1-Bromo-4-Fluorobenzene	10	10.35	104	65	135
H1851-01DL	INFDL	1-Bromo-4-Fluorobenzene	10	9.84	98	65	135
H1851-01DL2	INFDL2	1-Bromo-4-Fluorobenzene	10	9.7	97	65	135
VL0321ABL01	VL0321ABL01	1-Bromo-4-Fluorobenzene	10	9.82	98	65	135
VL0321ABS01	VL0321ABS01	1-Bromo-4-Fluorobenzene	10	10.01	100	65	135

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
SW-846

SDG No.: H1851

Client: Envirotrac Environmental Services

Analytical Method: SWTO-15 **Datafile :** VL027300.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	
									High	RPD
VL0321ABS01	Dichlorodifluoromethane	10	9.9	ppbv	99			70	130	
	Chloromethane	10	9.4	ppbv	94			70	130	
	Vinyl Chloride	10	9.3	ppbv	93			70	130	
	Bromomethane	10	9.8	ppbv	98			70	130	
	Chloroethane	10	9.3	ppbv	93			70	130	
	Tetrahydrofuran	10	11.2	ppbv	112			70	130	
	Trichlorofluoromethane	10	9.9	ppbv	99			70	130	
	1,1,2-Trichlorotrifluoroethane	10	9.8	ppbv	98			70	130	
	Dichlorotetrafluoroethane	10	9.6	ppbv	96			70	130	
	Bromoethene	10	9.8	ppbv	98			70	130	
	tert-Butyl Alcohol	10	11	ppbv	110			70	130	
	Heptane	10	9.8	ppbv	98			70	130	
	1,1-Dichloroethene	10	9.8	ppbv	98			70	130	
	Acetone	10	8.6	ppbv	86			70	130	
	Carbon disulfide	10	9.9	ppbv	99			70	130	
	Methyl tert-butyl Ether	10	10.1	ppbv	101			70	130	
	Methylene Chloride	10	8.9	ppbv	89			70	130	
	trans-1,2-Dichloroethene	10	9.3	ppbv	93			70	130	
	1,1-Dichloroethane	10	9.4	ppbv	94			70	130	
	Cyclohexane	10	9.7	ppbv	97			70	130	
	2-Butanone	10	10.6	ppbv	106			70	130	
	Carbon Tetrachloride	10	9.9	ppbv	99			70	130	
	cis-1,2-Dichloroethene	10	9.8	ppbv	98			70	130	
	Chloroform	10	9.2	ppbv	92			70	130	
	1,1,1-Trichloroethane	10	9.4	ppbv	94			70	130	
	2,2,4-Trimethylpentane	10	10.3	ppbv	103			70	130	
	Benzene	10	10.2	ppbv	102			70	130	
	1,2-Dichloroethane	10	10.1	ppbv	101			70	130	
	Trichloroethene	10	10	ppbv	100			70	130	
	1,2-Dichloropropane	10	10	ppbv	100			70	130	
	Bromodichloromethane	10	10.5	ppbv	105			70	130	
	4-Methyl-2-Pentanone	10	10.9	ppbv	109			70	130	
	Toluene	10	10.8	ppbv	108			70	130	
	t-1,3-Dichloropropene	10	11.9	ppbv	119			70	130	
	cis-1,3-Dichloropropene	10	11.4	ppbv	114			70	130	
	1,1,2-Trichloroethane	10	10	ppbv	100			70	130	
	Dibromochloromethane	10	10.8	ppbv	108			70	130	
	1,2-Dibromoethane	10	10.4	ppbv	104			70	130	
	Tetrachloroethene	10	10.3	ppbv	103			70	130	
	Chlorobenzene	10	9.8	ppbv	98			70	130	
	Ethyl Benzene	10	10.8	ppbv	108			70	130	
	m/p-Xylene	20	21.3	ppbv	106			70	130	
	o-Xylene	10	10.9	ppbv	109			70	130	
	Styrene	10	12.2	ppbv	122			70	130	
	Bromoform	10	11	ppbv	110			70	130	
	1,1,2,2-Tetrachloroethane	10	9.8	ppbv	98			70	130	
	2-Chlorotoluene	10	11	ppbv	110			70	130	
	1,3,5-Trimethylbenzene	10	10.8	ppbv	108			70	130	
	1,2,4-Trimethylbenzene	10	10.9	ppbv	109			70	130	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
SW-846

SDG No.: H1851
Client: Envirotrac Environmental Services
Analytical Method: SWTO-15

Datafile : VL027300.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	
									High	RPD
VL0321ABS01	1,3-Dichlorobenzene	10	10.3	ppbv	103			70	130	
	1,4-Dichlorobenzene	10	10.4	ppbv	104			70	130	
	1,2-Dichlorobenzene	10	10.4	ppbv	104			70	130	
	1,2,4-Trichlorobenzene	10	10.8	ppbv	108			70	130	
	Hexachloro-1,3-butadiene	10	11.6	ppbv	116			70	130	
	Naphthalene	10	10.2	ppbv	102			70	130	
	1,3-Butadiene	10	9.3	ppbv	93			70	130	
	4-Ethyltoluene	10	10.9	ppbv	109			70	130	
	Hexane	10	9.9	ppbv	99			70	130	
	Allyl Chloride	10	9.4	ppbv	94			70	130	
	1,4-Dioxane	10	11.5	ppbv	115			70	130	
	Methyl methacrylate	10	11.1	ppbv	111			70	130	

Duplicate Sample Summary

Lab Sample Id :	H1833-01DUP	H1833-01
Client Id :	VMF-NWDUP	VMF-NW
DF :	1	1
Datafile :	VL027304.D	VL027303.D
Anal Date & Time :	03/21/2016 19:16	03/21/2016 18:35

Parameter	Result	Result	RPD
1,1,1-Trichloroethane	0	0	0
1,1,2,2-Tetrachloroethane	0	0	0
1,1,2-Trichloroethane	0	0	0
1,1,2-Trichlorotrifluoroethane	0	0	0
1,1-Dichloroethane	0	0	0
1,1-Dichloroethene	0	0	0
1,2,4-Trichlorobenzene	0	0	0
1,2,4-Trimethylbenzene	8	7.8	2.5
1,2-Dibromoethane	0	0	0
1,2-Dichlorobenzene	0	0	0
1,2-Dichloroethane	0	0	0
1,2-Dichloropropane	0	0	0
1,3,5-Trimethylbenzene	2.6	2.4	8
1,3-Butadiene	0	0	0
1,3-Dichlorobenzene	0	0	0
1,4-Dichlorobenzene	0	0	0
1,4-Dioxane	0	0	0
2,2,4-Trimethylpentane	16	16.5	3.1
2-Butanone	1.9	1.7	11.1
2-Chlorotoluene	0	0	0
4-Ethyltoluene	2.8	2.6	7.4
4-Methyl-2-Pentanone	3.6	3.4	5.7
Acetone	120	130	8
Allyl Chloride	0	0	0
Benzene	3.2	3.2	0
Bromodichloromethane	0	0	0
Bromoethene	0	0	0
Bromoform	0	0	0
Bromomethane	0	0	0
Carbon Disulfide	0.29	0.29	0

Duplicate Sample Summary

Lab Sample Id :	H1833-01DUP	H1833-01
Client Id :	VMF-NWDUP	VMF-NW
DF :	1	1
Datafile :	VL027304.D	VL027303.D
Anal Date & Time :	03/21/2016 19:16	03/21/2016 18:35

Parameter	Result	Result	RPD
Carbon Tetrachloride	0.07	0.07	0
Chlorobenzene	0	0	0
Chloroethane	0	0	0
Chloroform	0	0	0
Chloromethane	0.55	0.52	5.6
cis-1,2-Dichloroethene	0	0	0
cis-1,3-Dichloropropene	0	0	0
Cyclohexane	4.3	4	7.2
Dibromochloromethane	0	0	0
Dichlorodifluoromethane	0.51	0.27	61.5 *
Dichlorotetrafluoroethane	0	0	0
Ethyl Benzene	6.5	6.1	6.3
Heptane	30.7	30.2	1.6
Hexachloro-1,3-Butadiene	0	0	0
Hexane	8.5	7.9	7.3
m/p-Xylene	24.5	24.5	0
Methyl Methacrylate	0	0	0
Methyl tert-Butyl Ether	0	0	0
Methylene Chloride	1.8	1.8	0
Naphthalene	2.8	2.9	3.5
o-Xylene	7.7	7.5	2.6
Styrene	0.69	0.61	12.3
t-1,3-Dichloropropene	0	0	0
tert-Butyl alcohol	0	0	0
Tetrachloroethene	0.04	0.05	22.2 *
Tetrahydrofuran	0	0	0
Toluene	43.5	48.5	10.9
trans-1,2-Dichloroethene	0.2	0.18	10.5
Trichloroethene	2.1	2.1	0
Trichlorofluoromethane	0.41	0.43	4.8
Vinyl Chloride	0	0	0

Duplicate Sample Summary

Lab Sample Id :

H1833-01DUP

H1833-01

Client Id :

VMF-NWDUP

VMF-NW

DF :

1

1

Datafile :

VL027304.D

VL027303.D

Anal Date & Time :

03/21/2016

19:16

03/21/2016

18:35

Parameter	Result	Result	RPD

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VL0321ABL01

Lab Name: CHEMTECH

Contract: ENVI27

Lab Code: CHEM Case No.: H1851

SAS No.: H1851 SDG NO.: H1851

Lab File ID: VL027299.D

Lab Sample ID: VL0321ABL01

Date Analyzed: 03/21/2016

Time Analyzed: 15:53

GC Column: RTX-1 ID: 0.32 (mm)

Heated Purge: (Y/N) N

Instrument ID: MSVOA_L

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VL0321ABS01	VL0321ABS01	VL027300.D	03/21/2016
VMF-NWDUP	H1833-01DUP	VL027304.D	03/21/2016
INF	H1851-01	VL027321.D	03/22/2016
INFDL	H1851-01DL	VL027322.D	03/22/2016
INFDL2	H1851-01DL2	VL027323.D	03/22/2016

COMMENTS:

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: ENVI27
Lab Code: CHEM Case No.: H1851 SAS No.: H1851 SDG NO.: H1851
Lab File ID: VL027231.D BFB Injection Date: 03/15/2016
Instrument ID: MSVOA_L BFB Injection Time: 11:01
GC Column: RTX-1 ID: 0.32 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	22.6
75	30.0 - 66.0% of mass 95	58
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.5 (0.8) 1
174	50.0 - 120.0% of mass 95	60.5
175	4.0 - 9.0% of mass 174	4.4 (7.2) 1
176	93.0 - 101.0% of mass 174	58.5 (96.8) 1
177	5.0 - 9.0% of mass 176	3.8 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDICCC010	VSTDICCC010	VL027232.D	03/15/2016	11:40
VSTDICCC002	VSTDICCC002	VL027233.D	03/15/2016	12:21
VSTDICCC001	VSTDICCC001	VL027234.D	03/15/2016	12:59
VSTDICCC0.5	VSTDICCC0.5	VL027235.D	03/15/2016	13:36
VSTDICCC0.1	VSTDICCC0.1	VL027236.D	03/15/2016	14:14
VSTDICCC0.03	VSTDICCC0.03	VL027237.D	03/15/2016	14:51
VSTDICCC015	VSTDICCC015	VL027238.D	03/15/2016	15:32

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: ENVI27
Lab Code: CHEM Case No.: H1851 SAS No.: H1851 SDG NO.: H1851
Lab File ID: VL027297.D BFB Injection Date: 03/21/2016
Instrument ID: MSVOA_L BFB Injection Time: 13:23
GC Column: RTX-1 ID: 0.32 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	23.7
75	30.0 - 66.0% of mass 95	59.9
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.4 (0.7) 1
174	50.0 - 120.0% of mass 95	61.2
175	4.0 - 9.0% of mass 174	4.3 (7) 1
176	93.0 - 101.0% of mass 174	58.3 (95.2) 1
177	5.0 - 9.0% of mass 176	3.6 (6.3) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC010	VSTDCCC010	VL027298.D	03/21/2016	14:19
VL0321ABL01	VL0321ABL01	VL027299.D	03/21/2016	15:53
VL0321ABS01	VL0321ABS01	VL027300.D	03/21/2016	16:31
VMF-NWDUP	H1833-01DUP	VL027304.D	03/21/2016	19:16
INF	H1851-01	VL027321.D	03/22/2016	10:20
INFDL	H1851-01DL	VL027322.D	03/22/2016	10:59
INFDL2	H1851-01DL2	VL027323.D	03/22/2016	11:37

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: ENVI27
 Lab Code: CHEM Case No.: H1851 SAS No.: H1851 SDG NO.: H1851
 Lab File ID: VL027298.D Date Analyzed: 03/21/2016
 Instrument ID: MSVOA_L Time Analyzed: 14:19
 GC Column: RTX-1 ID: 0.32 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	1330490	6.68	2960890	8.35	3239980	13.77
UPPER LIMIT	1862680	7.01	4145240	8.68	4535970	14.10
LOWER LIMIT	798292	6.35	1776530	8.02	1943990	13.44
EPA SAMPLE NO.						
VMF-NWDUP	1451033	6.68	3500953	8.35	3690017	13.76
INF	1183967	6.63	2593390	8.30	2508846	13.74
INFDL	1088863	6.63	2396179	8.30	2439408	13.72
INFDL2	1004709	6.63	2285899	8.30	2409907	13.71
VL0321ABL01	1196654	6.67	2651947	8.34	2752452	13.76
VL0321ABS01	1343261	6.68	2981508	8.35	3181358	13.77

IS1 = Bromochloromethane
 IS2 = 1,4-Difluorobenzene
 IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +40% of internal standard area
 AREA LOWER LIMIT = -40% of internal standard area
 RT UPPER LIMIT = +0.33 minutes of internal standard RT
 RT LOWER LIMIT = -0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of QC limits.

QC SAMPLE DATA

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	
Project:	Frost Street Sites / SPGL 100.03	Date Received:	
Client Sample ID:	VL0321ABL01	SDG No.:	H1851
Lab Sample ID:	VL0321ABL01	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027299.D	1		03/21/16 15:53	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS								
75-71-8	Dichlorodifluoromethane	0.1	0.49	U	0.2	0.49	2.47	ug/m3
74-87-3	Chloromethane	0.1	0.21	U	0.04	0.21	1.03	ug/m3
75-01-4	Vinyl Chloride	0.03	0.08	U	0.05	0.08	0.08	ug/m3
74-83-9	Bromomethane	0.1	0.39	U	0.08	0.39	1.94	ug/m3
75-00-3	Chloroethane	0.1	0.26	U	0.08	0.26	1.32	ug/m3
109-99-9	Tetrahydrofuran	0.1	0.29	U	0.09	0.29	1.47	ug/m3
75-69-4	Trichlorofluoromethane	0.1	0.56	U	0.11	0.56	2.81	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	0.1	0.77	U	0.15	0.77	3.83	ug/m3
76-14-2	Dichlorotetrafluoroethane	0.1	0.7	U	0.14	0.7	3.49	ug/m3
593-60-2	Bromoethene	0.1	0.44	U	0.13	0.44	2.19	ug/m3
75-65-0	tert-Butyl alcohol	0.1	0.3	U	0.12	0.3	1.52	ug/m3
142-82-5	Heptane	0.1	0.41	U	0.08	0.41	2.05	ug/m3
75-35-4	1,1-Dichloroethene	0.1	0.4	U	0.08	0.4	1.98	ug/m3
67-64-1	Acetone	0.1	0.24	U	0.02	0.24	1.19	ug/m3
75-15-0	Carbon Disulfide	0.1	0.31	U	0.06	0.31	1.56	ug/m3
1634-04-4	Methyl tert-Butyl Ether	0.1	0.36	U	0.07	0.36	1.8	ug/m3
75-09-2	Methylene Chloride	0.1	0.35	U	0.07	0.35	1.74	ug/m3
156-60-5	trans-1,2-Dichloroethene	0.1	0.4	U	0.08	0.4	1.98	ug/m3
75-34-3	1,1-Dichloroethane	0.1	0.4	U	0.04	0.4	2.02	ug/m3
110-82-7	Cyclohexane	0.1	0.34	U	0.07	0.34	1.72	ug/m3
78-93-3	2-Butanone	0.1	0.29	U	0.06	0.29	1.47	ug/m3
56-23-5	Carbon Tetrachloride	0.03	0.19	U	0.13	0.19	0.19	ug/m3
156-59-2	cis-1,2-Dichloroethene	0.1	0.4	U	0.08	0.4	1.98	ug/m3
67-66-3	Chloroform	0.1	0.49	U	0.1	0.49	2.44	ug/m3
71-55-6	1,1,1-Trichloroethane	0.03	0.16	U	0.05	0.16	0.16	ug/m3
540-84-1	2,2,4-Trimethylpentane	0.1	0.47	U	0.09	0.47	2.34	ug/m3
71-43-2	Benzene	0.1	0.32	U	0.06	0.32	1.6	ug/m3
107-06-2	1,2-Dichloroethane	0.1	0.4	U	0.08	0.4	2.02	ug/m3
79-01-6	Trichloroethene	0.03	0.16	U	0.11	0.16	0.16	ug/m3
78-87-5	1,2-Dichloropropane	0.1	0.46	U	0.42	0.46	2.31	ug/m3
75-27-4	Bromodichloromethane	0.1	0.67	U	0.13	0.67	3.35	ug/m3
108-10-1	4-Methyl-2-Pentanone	0.1	0.41	U	0.08	0.41	2.05	ug/m3
108-88-3	Toluene	0.1	0.38	U	0.04	0.38	1.88	ug/m3
10061-02-6	t-1,3-Dichloropropene	0.1	0.45	U	0.09	0.45	2.27	ug/m3
10061-01-5	cis-1,3-Dichloropropene	0.1	0.45	U	0.09	0.45	2.27	ug/m3
79-00-5	1,1,2-Trichloroethane	0.1	0.55	U	0.11	0.55	2.73	ug/m3
124-48-1	Dibromochloromethane	0.1	0.85	U	0.09	0.85	4.26	ug/m3
106-93-4	1,2-Dibromoethane	0.1	0.77	U	0.15	0.77	3.84	ug/m3

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	
Project:	Frost Street Sites / SPGL 100.03	Date Received:	
Client Sample ID:	VL0321ABL01	SDG No.:	H1851
Lab Sample ID:	VL0321ABL01	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027299.D	1		03/21/16 15:53	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
127-18-4	Tetrachloroethene	0.03	0.2	U	0.14	0.2	0.2	ug/m3
108-90-7	Chlorobenzene	0.1	0.46	U	0.09	0.46	2.3	ug/m3
100-41-4	Ethyl Benzene	0.1	0.43	U	0.09	0.43	2.17	ug/m3
179601-23-1	m/p-Xylene	0.2	0.87	U	0.13	0.87	4.34	ug/m3
95-47-6	o-Xylene	0.1	0.43	U	0.09	0.43	2.17	ug/m3
100-42-5	Styrene	0.1	0.43	U	0.04	0.43	2.13	ug/m3
75-25-2	Bromoform	0.1	1.03	U	0.1	1.03	5.17	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	0.1	0.69	U	0.14	0.69	3.43	ug/m3
95-49-8	2-Chlorotoluene	0.1	0.52	U	0.1	0.52	2.59	ug/m3
108-67-8	1,3,5-Trimethylbenzene	0.1	0.49	U	0.1	0.49	2.46	ug/m3
95-63-6	1,2,4-Trimethylbenzene	0.1	0.49	U	0.1	0.49	2.46	ug/m3
541-73-1	1,3-Dichlorobenzene	0.1	0.6	U	0.12	0.6	3.01	ug/m3
106-46-7	1,4-Dichlorobenzene	0.1	0.6	U	0.18	0.6	3.01	ug/m3
95-50-1	1,2-Dichlorobenzene	0.1	0.6	U	0.12	0.6	3.01	ug/m3
120-82-1	1,2,4-Trichlorobenzene	0.1	0.74	U	0.3	0.74	3.71	ug/m3
87-68-3	Hexachloro-1,3-Butadiene	0.1	1.07	U	0.32	1.07	5.33	ug/m3
106-99-0	1,3-Butadiene	0.1	0.22	U	0.04	0.22	1.11	ug/m3
91-20-3	Naphthalene	0.1	0.52	U	0.21	0.52	2.62	ug/m3
622-96-8	4-Ethyltoluene	0.1	0.49	U	0.1	0.49	2.46	ug/m3
110-54-3	Hexane	0.1	0.35	U	0.07	0.35	1.76	ug/m3
107-05-1	Allyl Chloride	0.1	0.31	U	0.13	0.31	1.57	ug/m3
123-91-1	1,4-Dioxane	0.4	1.44	U	0.36	1.44	1.8	ug/m3
80-62-6	Methyl Methacrylate	0.1	0.41	U	0.08	0.41	2.05	ug/m3
SURROGATES								
460-00-4	1-Bromo-4-Fluorobenzene	9.8			65 - 135		98%	SPK: 10
INTERNAL STANDARDS								
74-97-5	Bromochloromethane	1196650		6.67				
540-36-3	1,4-Difluorobenzene	2651950		8.34				
3114-55-4	Chlorobenzene-d5	2752450		13.76				

U = Not Detected

RL = Reporting Limit

MDL = Method Detection Limit

E = Value Exceeds Calibration Range

D = Dilution

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

Q = indicates LCS control criteria did not meet requirements

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	
Project:	Frost Street Sites / SPGL 100.03	Date Received:	
Client Sample ID:	VL0321ABS01	SDG No.:	H1851
Lab Sample ID:	VL0321ABS01	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027300.D	1		03/21/16 16:31	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS								
75-71-8	Dichlorodifluoromethane	9.9	49.0		0.2	0.49	2.47	ug/m3
74-87-3	Chloromethane	9.4	19.4		0.04	0.21	1.03	ug/m3
75-01-4	Vinyl Chloride	9.3	23.8		0.05	0.08	0.08	ug/m3
74-83-9	Bromomethane	9.8	38.0		0.08	0.39	1.94	ug/m3
75-00-3	Chloroethane	9.3	24.5		0.08	0.26	1.32	ug/m3
109-99-9	Tetrahydrofuran	11.2	33.0		0.09	0.29	1.47	ug/m3
75-69-4	Trichlorofluoromethane	9.9	55.6		0.11	0.56	2.81	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	9.8	75.1		0.15	0.77	3.83	ug/m3
76-14-2	Dichlorotetrafluoroethane	9.6	67.1		0.14	0.7	3.49	ug/m3
593-60-2	Bromoethene	9.8	42.8		0.13	0.44	2.19	ug/m3
75-65-0	tert-Butyl alcohol	11	33.4		0.12	0.3	1.52	ug/m3
142-82-5	Heptane	9.8	40.2		0.08	0.41	2.05	ug/m3
75-35-4	1,1-Dichloroethene	9.8	38.9		0.08	0.4	1.98	ug/m3
67-64-1	Acetone	8.6	20.4		0.02	0.24	1.19	ug/m3
75-15-0	Carbon Disulfide	9.9	30.8		0.06	0.31	1.56	ug/m3
1634-04-4	Methyl tert-Butyl Ether	10.1	36.4		0.07	0.36	1.8	ug/m3
75-09-2	Methylene Chloride	8.9	30.9		0.07	0.35	1.74	ug/m3
156-60-5	trans-1,2-Dichloroethene	9.3	36.9		0.08	0.4	1.98	ug/m3
75-34-3	1,1-Dichloroethane	9.4	38.0		0.04	0.4	2.02	ug/m3
110-82-7	Cyclohexane	9.7	33.4		0.07	0.34	1.72	ug/m3
78-93-3	2-Butanone	10.6	31.3		0.06	0.29	1.47	ug/m3
56-23-5	Carbon Tetrachloride	9.9	62.3		0.13	0.19	0.19	ug/m3
156-59-2	cis-1,2-Dichloroethene	9.8	38.9		0.08	0.4	1.98	ug/m3
67-66-3	Chloroform	9.2	44.9		0.1	0.49	2.44	ug/m3
71-55-6	1,1,1-Trichloroethane	9.4	51.3		0.05	0.16	0.16	ug/m3
540-84-1	2,2,4-Trimethylpentane	10.3	48.1		0.09	0.47	2.34	ug/m3
71-43-2	Benzene	10.2	32.6		0.06	0.32	1.6	ug/m3
107-06-2	1,2-Dichloroethane	10.1	40.9		0.08	0.4	2.02	ug/m3
79-01-6	Trichloroethene	10	53.7		0.11	0.16	0.16	ug/m3
78-87-5	1,2-Dichloropropane	10	46.2		0.42	0.46	2.31	ug/m3
75-27-4	Bromodichloromethane	10.5	70.3		0.13	0.67	3.35	ug/m3
108-10-1	4-Methyl-2-Pentanone	10.9	44.7		0.08	0.41	2.05	ug/m3
108-88-3	Toluene	10.8	40.7		0.04	0.38	1.88	ug/m3
10061-02-6	t-1,3-Dichloropropene	11.9	54.0		0.09	0.45	2.27	ug/m3
10061-01-5	cis-1,3-Dichloropropene	11.4	51.8		0.09	0.45	2.27	ug/m3
79-00-5	1,1,2-Trichloroethane	10	54.6		0.11	0.55	2.73	ug/m3
124-48-1	Dibromochloromethane	10.8	92.0		0.09	0.85	4.26	ug/m3
106-93-4	1,2-Dibromoethane	10.4	79.9		0.15	0.77	3.84	ug/m3

Report of Analysis

Client:	Envirotrac Environmental Services	Date Collected:	
Project:	Frost Street Sites / SPGL 100.03	Date Received:	
Client Sample ID:	VL0321ABS01	SDG No.:	H1851
Lab Sample ID:	VL0321ABS01	Matrix:	Air
Analytical Method:	TO-15	Test:	TO-15
Sample Wt/Vol:	400	Units:	mL

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VL027300.D	1		03/21/16 16:31	VL032116

CAS Number	Parameter	Conc. ppbv	Conc. ug/M3	Qualifier	MDL	LOD	LOQ / CRQL	Units
127-18-4	Tetrachloroethene	10.3	69.8		0.14	0.2	0.2	ug/m3
108-90-7	Chlorobenzene	9.8	45.1		0.09	0.46	2.3	ug/m3
100-41-4	Ethyl Benzene	10.8	46.9		0.09	0.43	2.17	ug/m3
179601-23-1	m/p-Xylene	21.3	92.5		0.13	0.87	4.34	ug/m3
95-47-6	o-Xylene	10.9	47.3		0.09	0.43	2.17	ug/m3
100-42-5	Styrene	12.2	51.9		0.04	0.43	2.13	ug/m3
75-25-2	Bromoform	11	113		0.1	1.03	5.17	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	9.8	67.3		0.14	0.69	3.43	ug/m3
95-49-8	2-Chlorotoluene	11	57.0		0.1	0.52	2.59	ug/m3
108-67-8	1,3,5-Trimethylbenzene	10.8	53.1		0.1	0.49	2.46	ug/m3
95-63-6	1,2,4-Trimethylbenzene	10.9	53.6		0.1	0.49	2.46	ug/m3
541-73-1	1,3-Dichlorobenzene	10.3	61.9		0.12	0.6	3.01	ug/m3
106-46-7	1,4-Dichlorobenzene	10.4	62.5		0.18	0.6	3.01	ug/m3
95-50-1	1,2-Dichlorobenzene	10.4	62.5		0.12	0.6	3.01	ug/m3
120-82-1	1,2,4-Trichlorobenzene	10.8	80.2		0.3	0.74	3.71	ug/m3
87-68-3	Hexachloro-1,3-Butadiene	11.6	123		0.32	1.07	5.33	ug/m3
106-99-0	1,3-Butadiene	9.3	20.6		0.04	0.22	1.11	ug/m3
91-20-3	Naphthalene	10.2	53.5		0.21	0.52	2.62	ug/m3
622-96-8	4-Ethyltoluene	10.9	53.6		0.1	0.49	2.46	ug/m3
110-54-3	Hexane	9.9	34.9		0.07	0.35	1.76	ug/m3
107-05-1	Allyl Chloride	9.4	29.4		0.13	0.31	1.57	ug/m3
123-91-1	1,4-Dioxane	11.5	41.4		0.36	1.44	1.8	ug/m3
80-62-6	Methyl Methacrylate	11.1	45.4		0.08	0.41	2.05	ug/m3
SURROGATES								
460-00-4	1-Bromo-4-Fluorobenzene	10			65 - 135		100%	SPK: 10
INTERNAL STANDARDS								
74-97-5	Bromochloromethane	1343260		6.68				
540-36-3	1,4-Difluorobenzene	2981510		8.35				
3114-55-4	Chlorobenzene-d5	3181360		13.77				

U = Not Detected

RL = Reporting Limit

MDL = Method Detection Limit

E = Value Exceeds Calibration Range

D = Dilution

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

Q = indicates LCS control criteria did not meet requirements

CALIBRATION SUMMARY

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: ENVI27
 Lab Code: CHEM Case No.: H1851 SAS No.: H1851 SDG No.: H1851
 Instrument ID: MSVOA_L Calibration Date(s): 03/15/2016 03/15/2016
 Heated Purge: (Y/N) N Calibration Time(s): 11:40 15:32
 GC Column: RTX-1 ID: 0.32 (mm)

LAB FILE ID:		RRF010 = VL027232.D		RRF002 = VL027233.D		RRF001 = VL027234.D		RRF0.5 = VL027235.D		RRF0.1 = VL027236.D		RRF.03 = VL027237.D	
COMPOUND		RRF010	RRF002	RRF001	RRF0.5	RRF0.1	RRF.03	RRF	% RSD				
Dichlorodifluoromethane		1.791	2.264	2.307	2.406			2.160	11.5				
Chloromethane		0.605	0.689	0.694	0.699			0.656	7.9				
Vinyl Chloride		0.643	0.707	0.690	0.718	0.647	0.804	0.693	8.4				
Bromomethane		0.469	0.533	0.533	0.537			0.508	7				
Chloroethane		0.285	0.318	0.320	0.335			0.308	7.4				
Tetrahydrofuran		0.327	0.316	0.260	0.227			0.291	15.5				
Trichlorofluoromethane		2.143	2.360	2.432	2.482			2.316	6.7				
1,1,2-Trichlorotrifluoroethane		1.388	1.547	1.587	1.648			1.514	7.6				
Dichlorotetrafluoroethane		1.676	1.879	1.863	2.000			1.819	7.7				
Bromoethene		0.517	0.554	0.556	0.551			0.542	3.2				
tert-Butyl alcohol		1.188	0.919	0.881	0.856			0.987	14.7				
Heptane		1.524	1.577	1.477	1.353			1.495	5.9				
1,1-Dichloroethene		0.602	0.658	0.633	0.676			0.632	5.7				
Acetone		1.105	1.547	1.556	1.584			1.384	17.6				
Carbon Disulfide		1.757	1.925	1.852	1.856			1.830	3.9				
Methyl tert-Butyl Ether		1.871	1.920	1.738	1.627			1.815	7.1				
Methylene Chloride		0.565	0.665	0.700	0.747			0.646	13.2				
trans-1,2-Dichloroethene		0.641	0.676	0.654	0.678			0.660	2.5				
1,1-Dichloroethane		1.435	1.561	1.544	1.541			1.509	3.7				
Cyclohexane		0.968	0.987	0.935	0.899			0.955	3.9				
2-Butanone		0.574	0.594	0.540	0.506			0.559	6.4				
Carbon Tetrachloride		0.741	0.753	0.750	0.739	0.768	1.017	0.787	12.9				
cis-1,2-Dichloroethene		1.027	1.010	0.941	0.907			0.990	6.5				
Chloroform		1.679	1.823	1.813	1.837			1.765	4.7				
1,1,1-Trichloroethane		1.675	1.719	1.692	1.704	1.665	2.002	1.738	6.8				
2,2,4-Trimethylpentane		1.645	1.733	1.580	1.425			1.596	7				
Benzene		0.942	0.951	0.911	0.852			0.917	4.3				
1,2-Dichloroethane		0.573	0.594	0.585	0.564			0.577	2.1				
Trichloroethene		0.396	0.410	0.389	0.378	0.333	0.394	0.383	6.4				
1,2-Dichloropropane		0.334	0.349	0.333	0.325			0.335	2.6				
Bromodichloromethane		0.771	0.793	0.761	0.730			0.765	3				
4-Methyl-2-Pentanone		0.753	0.735	0.652	0.537			0.692	14.3				
Toluene		1.228	1.188	1.070	0.885			1.123	13.3				

* Compounds with required minimum RRF and maximum %RSD values.
 All other compounds must meet a minimum RRF of 0.010.
 RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: ENVI27
 Lab Code: CHEM Case No.: H1851 SAS No.: H1851 SDG No.: H1851
 Instrument ID: MSVOA_L Calibration Date(s): 03/15/2016 03/15/2016
 Heated Purge: (Y/N) N Calibration Time(s): 11:40 15:32
 GC Column: RTX-1 ID: 0.32 (mm)

LAB FILE ID:	RRF010 = VL027232.D	RRF002 = VL027233.D	RRF001 = VL027234.D					
	RRF0.5 = VL027235.D	RRF0.1 = VL027236.D	RRF.03 = VL027237.D					
COMPOUND	RRF010	RRF002	RRF001	RRF0.5	RRF0.1	RRF.03	RRF	% RSD
t-1,3-Dichloropropene	0.533	0.458	0.371	0.309			0.448	24.4
cis-1,3-Dichloropropene	0.639	0.562	0.482	0.397			0.547	19.7
1,1,2-Trichloroethane	0.418	0.422	0.414	0.413			0.419	1.4
Dibromochloromethane	0.694	0.667	0.618	0.563			0.652	9.5
1,2-Dibromoethane	0.625	0.609	0.568	0.529			0.596	7.9
Tetrachloroethene	0.379	0.364	0.343	0.328	0.334	0.380	0.361	7.3
Chlorobenzene	0.908	0.932	0.945	0.944			0.925	2.4
Ethyl Benzene	1.538	1.464	1.317	1.082			1.380	13.5
m/p-Xylene	1.263	1.242	1.173	1.035			1.187	7.7
o-Xylene	1.323	1.300	1.210	1.044			1.237	9.4
Styrene	0.519	0.431	0.336	0.247			0.412	29.3
Bromoform	0.509	0.462	0.399	0.352			0.456	18.1
1,1,2,2-Tetrachloroethane	0.882	0.917	0.899	0.888	0.848	1.097	0.917	8.9
2-Chlorotoluene	1.170	1.149	1.008	0.819			1.071	14.9
1,3,5-Trimethylbenzene	1.295	1.227	1.139	0.984			1.189	11.1
1,2,4-Trimethylbenzene	1.391	1.332	1.246	1.100			1.293	9.5
1,3-Dichlorobenzene	0.815	0.810	0.785	0.740			0.795	4.3
1,4-Dichlorobenzene	0.823	0.798	0.772	0.688			0.782	7.4
1,2-Dichlorobenzene	0.797	0.798	0.762	0.722			0.778	4.7
1,2,4-Trichlorobenzene	0.369	0.313	0.265	0.219			0.307	21.3
Hexachloro-1,3-Butadiene	0.261	0.226	0.206	0.213			0.236	12.8
1,3-Butadiene	0.568	0.686	0.692	0.684			0.641	10
Naphthalene	0.817	0.770	0.621	0.450			0.690	22.4
4-Ethyltoluene	1.345	1.287	1.146	0.940			1.215	14.4
1-Bromo-4-Fluorobenzene	0.734	0.725	0.737	0.748	0.741	0.733	0.737	1
Hexane	1.169	1.256	1.198	1.123			1.178	4.4
Allyl Chloride	0.874	0.955	0.939	1.204			0.972	13.7
1,4-Dioxane	72.848	89.288	57.354	47.696			73.225	29.2
Methyl Methacrylate	0.354	0.338	0.296	0.250			0.319	14.3

* Compounds with required minimum RRF and maximum %RSD values.
 All other compounds must meet a minimum RRF of 0.010.
 RRF of 1,4-Dioxane = Value should be divide by 1000.

Method Path : W:\HPCHEM1\MSVOA_L\METHODS\

Method File : VL031516AIR.M

Title : AIR ANALYSIS BY METHOD T0-15 Instrument: MSVOA_L Tue Mar 15 16:18:15 2016

Last Update : Tue Mar 15 16:18:15 2016

Response Via : Initial Calibration

Calibration Files

0.03=VL027237.D 0.1 =VL027236.D 0.5 =VL027235.D 1 =VL027234.D 2 =VL027233.D 10 =VL027232.D 15 =VL027238.D

Compound		0.03	0.1	0.5	1	2	10	15	Avg	%RSD
-----ISTD-----										
1) I	Bromochloromethane									
2) T	Dichlorodifluo...		2.406	2.307	2.264	1.791	2.032	2.160	11.47	
3)	Chlorodifluoro...		1.840	1.792	1.727	1.021	1.018	1.479	28.53	
4)	Chloromethane		0.699	0.694	0.689	0.605	0.595	0.656	7.89	
5) T	Vinyl Chloride	0.804	0.647	0.718	0.690	0.707	0.643	0.642	0.693	8.41
6) T	Bromomethane		0.537	0.533	0.533	0.469	0.470	0.508	6.98	
7)	Chloroethane		0.335	0.320	0.318	0.285	0.284	0.308	7.40	
8) T	Dichlorotetra...		2.000	1.863	1.879	1.676	1.677	1.819	7.72	
9) T	Propene		0.510	0.515	0.525	0.466	0.465	0.496	5.73	
10) T	Heptane		1.353	1.477	1.577	1.524	1.546	1.495	5.86	
11) T	Trichlorofluor...		2.482	2.432	2.360	2.143	2.165	2.316	6.67	
12) T	1,1,2-Trichlor...		1.648	1.587	1.547	1.388	1.401	1.514	7.58	
13)	Ethanol		0.074	0.095	0.117	0.067	0.093	0.089	21.96	
14) T	Bromoethene		0.551	0.556	0.554	0.517	0.529	0.542	3.22	
15) T	Acetone		1.584	1.556	1.547	1.105	1.130	1.384	17.64	
16) T	1,3-Butadiene		0.684	0.692	0.686	0.568	0.573	0.641	10.00	
17)	tert-Butyl alc...		0.856	0.881	0.919	1.188	1.091	0.987	14.72	
18) T	1,1-Dichloroet...		0.676	0.633	0.658	0.602	0.591	0.632	5.69	
19) T	Isopropyl Alcohol		0.539	0.604	0.607	0.619	0.640	0.602	6.31	
20) T	Methylene Chlo...		0.747	0.700	0.665	0.565	0.551	0.646	13.22	
21) T	Allyl Chloride		1.204	0.939	0.955	0.874	0.890	0.972	13.74	
22) T	trans-1,2-Dich...		0.678	0.654	0.676	0.641	0.650	0.660	2.48	
23) T	Vinyl Acetate		1.914	2.073	2.245	1.924	2.108	2.053	6.73	
24) T	1,1-Dichloroet...		1.541	1.544	1.561	1.435	1.462	1.509	3.71	
25) T	Ethyl Acetate		1.467	2.357	2.460	2.314	2.277	2.175	18.46	
26) T	Hexane		1.123	1.198	1.256	1.169	1.144	1.178	4.40	
27) T	Carbon Disulfide		1.856	1.852	1.925	1.757	1.761	1.830	3.89	
28) T	Methyl tert-Bu...		1.627	1.738	1.920	1.871	1.919	1.815	7.09	
29) T	Chloroform		1.837	1.813	1.823	1.679	1.672	1.765	4.65	
30) T	Cyclohexane		0.899	0.935	0.987	0.968	0.986	0.955	3.95	
31) T	cis-1,2-Dichlo...		0.907	0.941	1.010	1.027	1.064	0.990	6.50	
32) T	1,1,1-Trichlor...	2.002	1.665	1.704	1.692	1.719	1.675	1.708	1.738	6.78
-----ISTD-----										
33) I	1,4-Difluorobenzene									
34) T	2-Butanone		0.506	0.540	0.594	0.574	0.583	0.559	6.43	
35) T	Carbon Tetrach...	1.017	0.768	0.739	0.750	0.753	0.741	0.739	0.787	12.95
36) T	Benzene		0.852	0.911	0.951	0.942	0.927	0.917	4.27	
37) T	1,2-Dichloroet...		0.564	0.585	0.594	0.573	0.571	0.577	2.06	

Method	Path : W:\HPCHEM1\MSVOA_L\METHODS\									
Method	File : VL031516AIR.M									
38) T	Trichloroethene	0.394	0.333	0.378	0.389	0.410	0.396	0.382	0.383	6.35
39) T	1,2-Dichloropr...			0.325	0.333	0.349	0.334	0.333	0.335	2.60
40) T	1,4-Dioxane			0.048	0.057	0.089	0.073	0.099	0.073	29.15
41) T	Tetrahydrofuran			0.227	0.260	0.316	0.327	0.326	0.291	15.50
42) T	Bromodichlorom...			0.730	0.761	0.793	0.771	0.769	0.765	2.95
43)	Methyl Methacr...			0.250	0.296	0.338	0.354	0.359	0.319	14.31
44) T	2,2,4-Trimethy...			1.425	1.580	1.733	1.645	1.596	1.596	7.04
45) T	t-1,3-Dichloro...			0.309	0.371	0.458	0.533	0.571	0.448	24.35
46) T	cis-1,3-Dichlo...			0.397	0.482	0.562	0.639	0.653	0.547	19.73
47) T	1,1,2-Trichlor...			0.413	0.414	0.422	0.418	0.427	0.419	1.42
48) T	Dibromochlorom...			0.563	0.618	0.667	0.694	0.718	0.652	9.54
49) T	Bromoform			0.352	0.399	0.462	0.509	0.557	0.456	18.08
50) T	4-Methyl-2-Pen...			0.537	0.652	0.735	0.753	0.781	0.692	14.32
51) T	2-Hexanone			0.391	0.511	0.620	0.683	0.718	0.585	22.88
52) T	Tetrachloroethene	0.380	0.334	0.328	0.343	0.364	0.379	0.397	0.361	7.26
53) T	Toluene			0.885	1.070	1.188	1.228	1.246	1.123	13.34
54) T	1,2-Dibromoethane			0.529	0.568	0.609	0.625	0.647	0.596	7.92
55) I	Chlorobenzene-d5	-----ISTD-----								
56)	1,1,1,2-Tetrac...			0.447	0.446	0.462	0.455	0.454	0.453	1.45
57) T	Chlorobenzene			0.944	0.945	0.932	0.908	0.896	0.925	2.37
58) T	Ethyl Benzene			1.082	1.317	1.464	1.538	1.499	1.380	13.51
59) T	m/p-Xylene			1.035	1.173	1.242	1.263	1.222	1.187	7.68
60) T	o-Xylene			1.044	1.210	1.300	1.323	1.308	1.237	9.45
61) T	Styrene			0.247	0.336	0.431	0.519	0.528	0.412	29.27
62)	Isopropylbenzene			1.385	1.528	1.604	1.637	1.616	1.554	6.63
63) T	1,1,2,2-Tetrac...	1.097	0.848	0.888	0.899	0.917	0.882	0.886	0.917	8.93
64)	n-propylbenzene			0.341	0.401	0.418	0.426	0.429	0.403	8.99
65)	tert-Butylbenzene			1.106	1.304	1.430	1.505	1.501	1.369	12.29
66) T	Benzyl Chloride			0.304	0.365	0.444	0.590	0.633	0.467	30.31
67)	sec-Butylbenzene			1.640	1.859	1.991	2.040	2.003	1.907	8.60
68) S	1-Bromo-4-Fluo...	0.733	0.741	0.748	0.737	0.725	0.734	0.743	0.737	1.01
69)	p-Isopropyltol...			1.163	1.418	1.561	1.658	1.657	1.492	13.97
70)	n-Butylbenzene			1.113	1.353	1.531	1.626	1.604	1.445	14.85
71)	2-Chlorotoluene			0.819	1.008	1.149	1.170	1.207	1.071	14.89
72) T	4-Ethyltoluene			0.940	1.146	1.287	1.345	1.356	1.215	14.40
73) T	1,3,5-Trimethy...			0.984	1.139	1.227	1.295	1.302	1.189	11.10
74) T	1,2,4-Trimethy...			1.100	1.246	1.332	1.391	1.394	1.293	9.52
75) T	1,3-Dichlorobe...			0.740	0.785	0.810	0.815	0.826	0.795	4.27
76) T	1,4-Dichlorobe...			0.688	0.772	0.798	0.823	0.831	0.782	7.39
77) T	1,2-Dichlorobe...			0.722	0.762	0.798	0.797	0.812	0.778	4.68
78) T	Hexachloro-1,3...			0.213	0.206	0.226	0.261	0.274	0.236	12.76
79) T	Naphthalene			0.450	0.621	0.770	0.817	0.793	0.690	22.39
80) T	Naphthalene,2-...			0.224	0.249	0.312	0.250	0.270	0.261	12.63
81) T	1,2,4-Trichlor...			0.219	0.265	0.313	0.369	0.368	0.307	21.29

(#) = Out of Range

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: ENVI27
 Lab Code: CHEM Case No.: H1851 SAS No.: H1851 SDG No.: H1851
 Instrument ID: MSVOA_L Calibration Date/Time: 03/21/2016 14:19
 Lab File ID: VL027298.D Init. Calib. Date(s): 03/15/2016 03/15/2016
 Heated Purge: (Y/N) N Init. Calib. Time(s): 11:40 15:32
 GC Column: RTX-1 ID: 0.32 (mm)

COMPOUND	RRF	RRF010	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	2.160	2.209		2.28	30
Chloromethane	0.656	0.640		-2.44	30
Vinyl Chloride	0.693	0.676		-2.5	30
Bromomethane	0.508	0.491		-3.35	30
Chloroethane	0.308	0.301		-2.3	30
Tetrahydrofuran	0.291	0.349		19.82	30
Trichlorofluoromethane	2.316	2.391		3.22	30
1,1,2-Trichlorotrifluoroethane	1.514	1.543		1.91	30
Dichlorotetrafluoroethane	1.819	1.813		-0.34	30
Bromoethene	0.542	0.563		3.88	30
tert-Butyl alcohol	0.987	1.066		8.01	30
Heptane	1.495	1.548		3.53	30
1,1-Dichloroethene	0.632	0.654		3.42	30
Acetone	1.384	1.225		-11.52	30
Carbon Disulfide	1.830	1.931		5.54	30
Methyl tert-Butyl Ether	1.815	1.965		8.23	30
Methylene Chloride	0.646	0.612		-5.16	30
trans-1,2-Dichloroethene	0.660	0.644		-2.35	30
1,1-Dichloroethane	1.509	1.487		-1.41	30
Cyclohexane	0.955	0.972		1.75	30
2-Butanone	0.559	0.631		12.75	30
Carbon Tetrachloride	0.787	0.824		4.78	30
cis-1,2-Dichloroethene	0.990	1.046		5.65	30
Chloroform	1.765	1.743		-1.26	30
1,1,1-Trichloroethane	1.738	1.746		0.44	30
2,2,4-Trimethylpentane	1.596	1.750		9.66	30
Benzene	0.917	0.992		8.27	30
1,2-Dichloroethane	0.577	0.623		7.84	30
Trichloroethene	0.383	0.413		7.76	30
1,2-Dichloropropane	0.335	0.357		6.57	30
Bromodichloromethane	0.765	0.868		13.48	30
4-Methyl-2-Pentanone	0.692	0.801		15.88	30
Toluene	1.123	1.292		15.03	30
t-1,3-Dichloropropene	0.448	0.586		30.63	30
cis-1,3-Dichloropropene	0.547	0.688		25.75	30
1,1,2-Trichloroethane	0.419	0.439		4.85	30
Dibromochloromethane	0.652	0.767		17.59	30
1,2-Dibromoethane	0.596	0.669		12.36	30
Tetrachloroethene	0.361	0.395		9.43	30

All other compounds must meet a minimum RRF of 0.010.
 RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: ENVI27
 Lab Code: CHEM Case No.: H1851 SAS No.: H1851 SDG No.: H1851
 Instrument ID: MSVOA_L Calibration Date/Time: 03/21/2016 14:19
 Lab File ID: VL027298.D Init. Calib. Date(s): 03/15/2016 03/15/2016
 Heated Purge: (Y/N) N Init. Calib. Time(s): 11:40 15:32
 GC Column: RTX-1 ID: 0.32 (mm)

COMPOUND	RRF	RRF010	MIN RRF	%D	MAX%D
Chlorobenzene	0.925	0.941		1.73	30
Ethyl Benzene	1.380	1.576		14.22	30
m/p-Xylene	1.187	1.318		11.02	30
o-Xylene	1.237	1.396		12.88	30
Styrene	0.412	0.529		28.27	30
Bromoform	0.456	0.548		20.16	30
1,1,2,2-Tetrachloroethane	0.917	0.941		2.62	30
2-Chlorotoluene	1.071	1.225		14.36	30
1,3,5-Trimethylbenzene	1.189	1.326		11.51	30
1,2,4-Trimethylbenzene	1.293	1.464		13.3	30
1,3-Dichlorobenzene	0.795	0.846		6.38	30
1,4-Dichlorobenzene	0.782	0.845		8.02	30
1,2-Dichlorobenzene	0.778	0.821		5.46	30
1,2,4-Trichlorobenzene	0.307	0.388		26.36	30
Hexachloro-1,3-Butadiene	0.236	0.292		23.56	30
1,3-Butadiene	0.641	0.613		-4.37	30
Naphthalene	0.690	0.846		22.58	30
4-Ethyltoluene	1.215	1.387		14.18	30
1-Bromo-4-Fluorobenzene	0.737	0.714		-3.13	30
Hexane	1.178	1.217		3.37	30
Allyl Chloride	0.972	0.956		-1.72	30
1,4-Dioxane	73.225	83.026		13.39	30
Methyl Methacrylate	0.319	0.376		17.73	30

All other compounds must meet a minimum RRF of 0.010.
 RRF of 1,4-Dioxane = Value should be divide by 1000.

SHIPPING DOCUMENTS

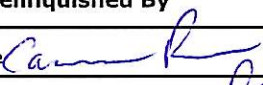
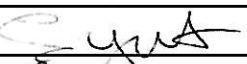
Client Contact Information				Bottle Order ID : B1603035				Courier :				_____ of _____ COCs																					
Client ID : ENV127				Project ID : Frost Street Sites / SPGL 100.03				Sampler Name(s) :				Analysis																					
Customer Name : Envirotrac Environmental Services				Project Manager : JAMES WILKINSON				AIR ANALYSIS CHAIN-OF-CUSTODY Batch Certified				Matrix																					
Address : 5 Old Dock Road				Phone Number : 631-924-3001																													
City : Yaphank				Fax Number : 6319245001																													
State : NY				Analysis Turnaround Time				Data Package Type :																									
Zip Code : 11980				Standard : 15 business days OR				EDD Type :																									
Country :				Rush (Specify): Days																													
Sample Identification		Sample Date(s)		Time Start (24 hr Clock)		Time Stop (24 hr Clock)		Can Vacuum in Field ("Hg) (Start)		Can Vacuum in Field ("Hg) (Stop)**		Interior Temp. (F) (Start)		Interior Temp. (F) (Stop)		Out going Can Pressure ("Hg)(Lab)		In coming Can Pressure ("Hg)(Lab)		Flow Reg. ID		Can ID		Can Size (L)		Flow Controller Readout		Can Cert ID		TO-15			
INF		3/16/03																-30		-8.0		NR		10746		1.4 L		NA		VL026487.D		A	
Temperature (Fahrenheit)																																	
		Ambient		Maximum		Minimum																											
Start																																	
Stop																																	
Pressure (Inches of Hg)																																	
		Ambient		Maximum		Minimum																											
Start																																	
Stop																																	
** Submittal of this COC indicates approval of the analysis based on existing condition																																	
Please follow the instructions on the back of this CO																																	
GC/MS Analyst Signature (TO-15)																																	
Special Instructions/QC Requirements & Comments :																																	
Suspected Contamination: High Medium Low																																	
Sampling site (State):																																	
Quick Connector required : Yes																																	
Canisters Shipped by:																																	
Date/Time: 3/16/03																																	
Samples Relinquished by:																																	
Date/Time: 3/16/03																																	
Relinquished by:																																	
Date/Time: 3-18-16 10:18																																	
B1603035 - 2																																	

Internal Chain of Custody

Instructions: Use 1 form for each 20 samples of aliquot

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample			
Laboratory: <u>Chemtech</u>		Location: <u>284 Sheffield Street, Mountainside, NJ 7092</u>	
SECRET		Title: <u>Sample Custodian</u>	
Field Sample Seal No. <u>H1851</u>		Date Broken <u>3/18/2016</u> Military Time Seal Broken: <u>10:15:00</u>	
Case No.: <u>Frost Street Sites / SPGL 1</u>		Analytical Parameter/Fraction <u>SUMMA Canister Rental</u>	

Sample No.	Aliquot/Extract No.	Sample No.	Aliquot/Extract No.
H1851-01	INF		

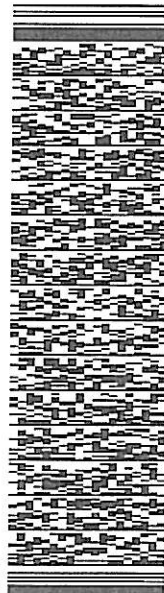
Date	Time	Relinquished By	Received By	Purpose of Change of Custody
3-18-16	5:10	Signature 	Signature 	To JVC AN lens
		Printed Name <u>Conservator</u>	Printed Name <u>Samuel Gary</u>	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	

Distribution: White - Original (Sent With Report) Yellow - Contractor Archive Pink - Sample Custodian - Interim Copy

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$500, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Note: To review or print individual labels, select the Label button under each label image above.

1. Select the 'Print' button to print 1 copy of each label.
2. The Return Shipment instructions, which provide your recipient with information on the returns process, will be printed with the label(s).
3. After printing, select your next step by clicking one of the displayed buttons.

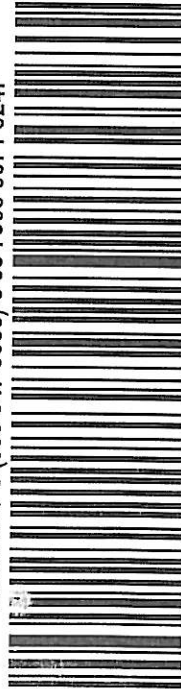
FROM: MIKE ROSE ENVIRONMENTAL 5 OLD DOCK RD. PHANK NY 11380 US	(631) 924-3001	CAD: 107979030/INET3730
TO Gorge Negron CHEMTECH 284 Sheffield St Mountainside NJ 07092 (908) 789-8900 INV PO		
REF: CHEMTECH DEPT:		
RMA:		
540J11CFC34727F		
J161016020501uv		
		
		

RETURN

TRK# 7900 0671 5247

07092

9622 0137 0 (000 047 3355) 5 00 7900 0671 5247



Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	EP-W-14-030
Connecticut	PH-0649
DOD ELAP (L-A-B)	L2219
Florida	E87935
Louisiana	05035
Maine	2012025
Maryland	296
Massachusetts	M-NJ503
New Hampshire	255413
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	P330-13-00380
Texas	T104704488-13-5