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

December 10, 2015

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

Re: Progress Report: November 2015
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 November 2015.

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

- Operations continued this month per the O&M Manual until November 11, 2015, at which time the system was shut down to conduct the first step in a soil vapor intrusion investigation at the Century 21 building. 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 not conducted in November because the system was shut down.
- A carbon exchange is scheduled for early January 2016, to be performed prior to system restart.

Quarterly/Annual Groundwater Monitoring

- The fourth quarter 2015 groundwater sampling event will be completed during the week of December 7, 2015.
- The third quarter 2015 (annual) groundwater sampling event was completed during the week of September 28, 2015. Groundwater gauging was performed on October 4, 2015 due to inclement weather the previous week.
 - o The EDD was submitted on December 1, 2015. Results will also be presented in the annual groundwater monitoring report, expected to be submitted by the end of this year.

Soil Vapor Intrusion Investigation

- The soil vapor intrusion investigation at the Century 21 building, as described in the NYSDEC-approved September 25, 2015 work plan, has begun and will be implemented as follows:
 - o Collect initial samples (while system is on) – performed November 10, 2015
 - Preliminary results, summarized on **Table 1** and included in **Appendix B**, were received on December 2, 2015. Among all likely Frost Street related contaminants (tetrachloroethene, trichloroethene, cis-1-2-dichloroethene, and vinyl chloride, results were either non-detect or estimated values below laboratory quantification limits [and well below NYSDOH criteria]).
 - The results are consistent with the sampling performed in 2009—while there are detections of Frost Street related contaminants, none of them are above the detection limits of the 2009 sampling.
 - o Shut down system – performed November 11, 2015
 - o Collect samples after system is off – at least 60 days after system shutdown (tentative January 11, 2015)
 - o Turn system back on – immediately after 60-day samples are collected (tentative January 11, 2015)
 - o Review and report data and evaluate next steps, if any – within two weeks of receipt of results from laboratory

Reports and Work Plans

- The Frost Street Parties submitted a Supplemental Investigation/Focused Feasibility Study Work Plan in March 2015. NYSDEC has indicated they will not review the work plan.
- The Frost Street Parties submitted a Request to Reduce Monitoring Well Sampling on June 15, 2015. Following up on a phone call with you on July 29, 2015, the Frost Street Parties have submitted data via electronic mail for the Q3 2014, Q4 2014, Q1 2015, and Q2 2015 sample events in electronic data deliverable format. Reports for the Q4 2015, Q1 2015, and Q2 2015 events were submitted on September 23, 2015. The EDD containing data for the Q3 2015 sample event was submitted on December 1, 2015. Once you have an opportunity to review the data, we would like to resume discussions on the topic.
- The Frost Street Parties submitted a Plan of Action on October 20, 2015. We received a request for additional information on November 27, 2015, which was fulfilled on December 3, 2015. We would like to resume discussions regarding next steps when NYSDEC has had the opportunity to review.

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.

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Table 1

**Soil Vapor Intrusion Investigation
Preliminary Results – November 10, 2015 Samples (System On)**

Table 1
Soil Vapor Intrusion Investigation
Preliminary Results - November 10, 2015
Frost Street Sites

Compound Name	CAS Number	System On									
		MS1 11/10/2015		MS2 11/10/2015		MS3 11/10/2015		MS4 11/10/2015		MS4 Duplicate 11/10/2015	
		(ppbv)	(µg/m ³)	(ppbv)	(µg/m ³)	(ppbv)	(µg/m ³)	(ppbv)	(µg/m ³)	(ppbv)	(µg/m ³)
1,1,1-Trichloroethane	71-55-6	0.16 U	0.86 U	0.18 U	0.96 U	0.18 U	0.97 U	0.16 U	0.88 U	0.16 U	0.84 U
1,1,2,2-Tetrachloroethane	79-34-5	0.16 U	1.1 U	0.18 U	1.2 U	0.18 U	1.2 U	0.16 U	1.1 U	0.16 U	1.1 U
1,1,2-Trichloroethane	79-00-5	0.16 U	0.86 U	0.18 U	0.96 U	0.18 U	0.97 U	0.16 U	0.88 U	0.16 U	0.84 U
1,1-Dichloroethane	75-34-3	0.16 U	0.64 U	0.18 U	0.72 U	0.18 U	0.72 U	0.16 U	0.65 U	0.16 U	0.63 U
1,1-Dichloroethene	75-35-4	0.16 U	0.63 U	0.18 U	0.70 U	0.18 U	0.70 U	0.16 U	0.64 U	0.16 U	0.61 U
1,2,4-Trichlorobenzene	120-82-1	0.79 U	5.9 U	0.88 U	6.6 U	0.89 U	6.6 U	0.80 U	6.0 U	0.78 U	5.8 U
1,2,4-Trimethylbenzene	95-63-6	0.11 J	0.55 J	0.18	0.87	0.094 J	0.46 J	0.047 J	0.23 J	0.058 J	0.28 J
1,2-Dibromoethane (EDB)	106-93-4	0.16 U	1.2 U	0.18 U	1.4 U	0.18 U	1.4 U	0.16 U	1.2 U	0.16 U	1.2 U
1,2-Dichlorobenzene	95-50-1	0.16 U	0.95 U	0.18 U	1.1 U	0.18 U	1.1 U	0.16 U	0.97 U	0.16 U	0.93 U
1,2-Dichloroethane	107-06-2	0.30	1.2	0.29	1.2	0.17 J	0.69 J	0.079 J	0.32 J	0.14 J	0.55 J
1,2-Dichloropropane	78-87-5	0.16 U	0.73 U	0.051 J	0.24 J	0.18 U	0.82 U	0.076 J	0.35 J	0.098 J	0.45 J
1,3,5-Trimethylbenzene	108-67-8	0.046 J	0.23 J	0.097 J	0.48 J	0.052 J	0.26 J	0.16 U	0.79 U	0.16 U	0.76 U
1,3-Butadiene	106-99-0	0.069 J	0.15 J	0.073 J	0.16 J	0.053 J	0.12 J	0.16 U	0.36 U	0.16 U	0.34 U
1,3-Dichlorobenzene	541-73-1	0.16 U	0.95 U	0.18 U	1.1 U	0.18 U	1.1 U	0.16 U	0.97 U	0.16 U	0.93 U
1,4-Dichlorobenzene	106-46-7	0.16 U	0.95 U	0.18 U	1.1 U	0.18 U	1.1 U	0.16 U	0.97 U	0.16 U	0.93 U
1,4-Dioxane	123-91-1	0.16 U	0.57 U	0.18 U	0.64 U	0.18 U	0.64 U	0.092 J	0.33 J	0.16 U	0.56 U
2,2,4-Trimethylpentane	540-84-1	0.19 J	0.91 J	0.24 J	1.1 J	0.15 J	0.69 J	0.056 J	0.26 J	0.072 J	0.34 J
2-Butanone (Methyl Ethyl Ketone)	78-93-3	1.4	4.0	2.0	6.0	0.73 J	2.2 J	0.81	2.4	0.64 J	1.9 J
2-Hexanone	591-78-6	0.79 U	3.2 U	0.88 U	3.6 U	0.89 U	3.6 U	0.80 U	3.3 U	0.78 U	3.2 U
2-Propanol	67-63-0	3.6	8.8	4.4	11	4.6	11	1.2	2.9	1.4	3.6
3-Chloropropene	107-05-1	0.79 U	2.5 U	0.88 U	2.8 U	0.89 U	2.8 U	0.80 U	2.5 U	0.78 U	2.4 U
4-Ethyltoluene	622-96-8	0.082 J	0.40 J	0.15 J	0.75 J	0.11 J	0.53 J	0.053 J	0.26 J	0.048 J	0.24 J
4-Methyl-2-pentanone	108-10-1	0.083 J	0.34 J	0.14 J	0.56 J	0.052 J	0.21 J	0.049 J	0.20 J	0.059 J	0.24 J
Acetone	67-64-1	17	40	28	66	9.4	22	5.1	12	6.4	15
alpha-Chlorotoluene	100-44-7	0.79 U	4.1 U	0.88 U	4.6 U	0.89 U	4.6 U	0.80 U	4.2 U	0.78 U	4.0 U
Benzene	71-43-2	0.31	1.0	0.36	1.1	0.28	0.90	0.098 J	0.31 J	0.13 J	0.42 J
Bromodichloromethane	75-27-4	0.16 U	1.0 U	0.18 U	1.2 U	0.18 U	1.2 U	0.16 U	1.1 U	0.16 U	1.0 U
Bromoform	75-25-2	0.16 U	1.6 U	0.18 U	1.8 U	0.18 U	1.8 U	0.16 U	1.7 U	0.16 U	1.6 U
Bromomethane	74-83-9	0.79 U	3.1 U	0.88 U	3.4 U	0.89 U	3.4 U	0.80 U	3.1 U	0.78 U	3.0 U
Carbon Disulfide	75-15-0	0.79 U	2.5 U	0.88 U	2.8 U	0.89 U	2.8 U	0.10 J	0.31 J	0.14 J	0.44 J
Carbon Tetrachloride	56-23-5	0.076 J	0.48 J	0.076 J	0.48 J	0.076 J	0.48 J	0.058 J	0.36 J	0.063 J	0.40 J
Chlorobenzene	108-90-7	0.16 U	0.73 U	0.18 U	0.81 U	0.18 U	0.82 U	0.16 U	0.74 U	0.16 U	0.71 U
Chloroethane	75-00-3	0.79 U	2.1 U	0.88 U	2.3 U	0.89 U	2.3 U	0.80 U	2.1 U	0.78 U	2.0 U
Chloroform	67-66-3	0.16 U	0.77 U	0.18 U	0.86 U	0.18 U	0.87 U	0.067 J	0.33 J	0.16 U	0.76 U
Chloromethane	74-87-3	0.64 J	1.3 J	0.64 J	1.3 J	0.59 J	1.2 J	0.13 J	0.26 J	0.19 J	0.39 J
cis-1,2-Dichloroethene	156-59-2	0.16 U	0.63 U	0.18 U	0.70 U	0.18 U	0.70 U	0.16 U	0.64 U	0.16 U	0.61 U
cis-1,3-Dichloropropene	10061-01-5	0.16 U	0.72 U	0.18 U	0.80 U	0.18 U	0.81 U	0.16 U	0.73 U	0.16 U	0.70 U
Cumene	98-82-8	0.16 U	0.78 U	0.18 U	0.87 U	0.18 U	0.88 U	0.16 U	0.79 U	0.16 U	0.76 U
Cyclohexane	110-82-7	0.16 U	0.54 U	0.25	0.87	0.18	0.61	0.17	0.58	0.28	0.98
Dibromochloromethane	124-48-1	0.16 U	1.3 U	0.18 U	1.5 U	0.18 U	1.5 U	0.16 U	1.4 U	0.16 U	1.3 U
Ethanol	64-17-5	71 E	130 E	59	110	71	130	2.4	4.5	6.2	12
Ethyl Benzene	100-41-4	0.18	0.80	0.20	0.87	0.16 J	0.71 J	0.16 U	0.70 U	0.10 J	0.45 J
Freon 11 (Trichlorofluoromethane)	75-69-4	0.27	1.5	0.28	1.6	0.31	1.7	0.30	1.7	0.30	1.7
Freon 12 (Dichlorodifluoromethane)	75-71-8	0.45 J	2.2 J	0.50 J	2.5 J	0.34 J	1.7 J	0.50 J	2.5 J	0.49 J	2.4 J
Freon 113 (1,1,2-Trichlorotrifluoroethane)	76-13-1	0.070 J	0.54 J	0.18 U	1.4 U	0.18 U	1.4 U	0.096 J	0.74 J	0.16 U	1.2 U
Freon 114 (Dichlorotetrafluoroethane)	76-14-2	0.16 U	1.1 U	0.18 U	1.2 U	0.18 U	1.2 U	0.16 U	1.1 U	0.16 U	1.1 U
Heptane	142-82-5	0.19	0.77	0.27	1.1	0.19	0.78	0.12 J	0.51 J	0.12 J	0.47 J
Hexachlorobutadiene	87-68-3	0.79 UJ	8.4 UJ	0.88 UJ	9.4 UJ	0.89 UJ	9.5 UJ	0.80 UJ	8.6 UJ	0.78 UJ	8.3 UJ
Hexane	110-54-3	0.32	1.1	0.48	1.7	0.28	1.0	0.28	0.99	0.25	0.89
m,p-Xylene	108-38-3/106-42-3	0.33	1.4	0.61	2.7	0.45	1.9	0.17	0.73	0.35	1.5
Methyl tert-butyl ether	1634-04-4	0.16 U	0.57 U	0.18 U	0.64 U	0.18 U	0.64 U	0.16 U	0.58 U	0.16 U	0.56 U
Methylene Chloride	75-09-2	0.30 J	1.0 J	0.58	2.0	0.28 J	0.99 J	0.57	2.0	0.64	2.2
o-Xylene	95-47-6	0.19	0.82	0.27	1.2	0.24	1.0	0.069 J	0.30 J	0.12 J	0.51 J
Propylbenzene	103-65-1	0.035 J	0.17 J	0.18 U	0.87 U	0.18 U	0.88 U	0.16 U	0.79 U	0.080 J	0.40 J
Styrene	100-42-5	0.13 J	0.54 J	0.25	1.1	0.083 J	0.35 J	0.048 J	0.21 J	0.078 J	0.33 J
Tetrachloroethene	127-18-4	0.074 J	0.50 J	0.10 J	0.68 J	0.10 J	0.70 J	0.13 J	0.90 J	0.14 J	0.97 J
Tetrahydrofuran	109-99-9	0.79 U	2.3 U	0.88 U	2.6 U	0.89 U	2.6 U	0.80 U	2.4 U	0.27 J	0.81 J
Toluene	108-88-3	2.9	11	3.0	11	1.9	7.0	0.50	1.9	1.4	5.1
trans-1,2-Dichloroethene	156-60-5	0.16 U	0.63 U	0.18 U	0.70 U	0.18 U	0.70 U	0.16 U	0.64 U	0.16 U	0.61 U
trans-1,3-Dichloropropene	10061-02-6	0.16 U	0.72 U	0.18 U	0.80 U	0.18 U	0.81 U	0.16 U	0.73 U	0.16 U	0.70 U
Trichloroethene	79-01-6	0.077 J	0.42 J	0.18 U	0.95 U	0.18 U	0.96 U	0.054 J	0.29 J	0.16 U	0.83 U
Vinyl Chloride	75-01-4	0.16 U	0.40 U	0.18 U	0.45 U	0.18 U	0.46 U	0.16 U	0.41 U	0.16 U	0.40 U

Notes:

ppbv

parts per billion by volume

µg/m³

micrograms per cubic meter

E

exceeds instrument calibration range

J

estimated value

ND

not detected

U

compound analyzed for but not detected above the reporting limit, LOD, or MDL value

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: 3-Nov
 Weather / Temp: Clear / 60 DEG
 Technician / Operator: DW

Arrival Time: 11:00
 Departure Time: 12:00

System Status									
	Arrival		Departure			Arrival		Departure	
SVE Blower 1 (ON/OFF)	ON		ON		Sensaphone (ON/OFF)	ON		ON	
SVE Blower 2 (ON/OFF)	OFF		OFF		Surge Protection (ON/OFF)	ON		ON	
AS Compressor 1 (ON/OFF)	OFF		OFF		Lightning Protection (White/Black)	White		White	
AS Compressor 2 (ON/OFF)	ON		ON						
Soil Vapor Extraction System									
Blower Air Velocity/Flow Rate (fpm)/cfm)	4500		884		Blower 1 Total Runtime (hrs)	41,032.4			
Blower 1 Fresh Air Valve Open (%)	0				Blower 2 Total Runtime (hrs)	42,003.8			
Blower 2 Fresh Air Valve Open (%)	0				Blower 1 Air Filter Differential Pressure ("H2O)	0			
Moisture Separator Vacuum ("Hg)	3.5				Blower 2 Air Filter Differential Pressure ("H2O)	0			
VGAC-1 Influent Vacuum ("H2O)	64				VGAC-1 Influent PID (ppm)	19.4			
VGAC-1 Effluent Vacuum ("H2O)	60				VGAC-1 Effluent PID (ppm)	0.0			
VGAC-2 Influent Vacuum ("H2O)	58				VGAC-2 Influent PID (ppm)	19.4			
VGAC-2 Effluent Vacuum ("H2O)	58				VGAC-2 Effluent PID (ppm)	0.0			
VGAC-3 Influent Vacuum ("H2O)	65				VGAC-3 Influent PID (ppm)	0.0			
VGAC-3 Effluent Vacuum ("H2O)	69				VGAC-3 Effluent PID (ppm)	0.0			
VGAC-3 Influent Temperature (DegF)	NA				Blower Effluent PID (ppm)	0.0			
Blower Effluent Pressure ("H2O)	7.6								
Transfer Pump Total Runtime (hrs)	25,020.5				Condensate Storage Tank Level (gal)	180			
SVE Manifold Legs - Vacuum/Flow Rate/PID									
	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID
SVE-1 ("H2O)/(FPM)/(cfm)/(ppm)	42	7000	153		SVE-4 ("H2O)/(FPM)/(cfm)/(ppm)	36	4200	92	
SVE-2 ("H2O)/(FPM)/(cfm)/(ppm)	44	4500	98		SVE-5 ("H2O)/(FPM)/(cfm)/(ppm)	36	2900	63	
SVE-3 ("H2O)/(FPM)/(cfm)/(ppm)	36	4800	105		SVE-6B ("H2O)/(FPM)/(cfm)/(ppm)	36	6000	131	
SVE-3A ("H2O)/(FPM)/(cfm)/(ppm)	36	4200	92		SVE-7 ("H2O)/(FPM)/(cfm)/(ppm)	38	3000	65	
Air Sparge System									
Compressor 1 Pressure (psi)	Off for repairs				Compressor 2 Pressure (psi)	84			
Compressor 1 Temperature (degF)	Off for repairs				Compressor 2 Temperature (degF)	184			
Compressor 1 Runtime (hrs)	27,317.0				Compressor 2 Runtime (hrs)	14,410.0			
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)	16		5	
AS-2 (psi)/(cfm)	14		8		AS-12B (psi)/(cfm)	14		8	
AS-3 (psi)/(cfm)	15		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)	16		8	
AS-6 (psi)/(cfm)	15		8		AS-16B (psi)/(cfm)	15		8	
AS-7 (psi)/(cfm)	15		6		AS-17 (psi)/(cfm)	15		8	
AS-8 (psi)/(cfm)	15		8		AS-18 (psi)/(cfm)	15		8	
AS-9 (psi)/(cfm)	16		8		AS-19 (psi)/(cfm)	16		8	
AS-10B (psi)/(cfm)	15		8						

Notes, Comments & Observations:

Compressor 1 off for repairs.

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: 11-Nov
Weather / Temp: Rain / 54 DEG
Technician / Operator: DW

Arrival Time: 11:30
Departure Time: 12:30

System Status											
	Arrival		Departure			Arrival		Departure			
SVE Blower 1	(ON/OFF)	ON	ON	Sensaphone	(ON/OFF)	ON	ON				
SVE Blower 2	(ON/OFF)	OFF	OFF	Surge Protection	(ON/OFF)	ON	ON				
AS Compressor 1	(ON/OFF)	OFF	OFF	Lightning Protection	(White/Black)	White	White				
AS Compressor 2	(ON/OFF)	ON	ON								
Soil Vapor Extraction System											
Blower Air Velocity/Flow Rate (fpm)/cfm)	4400		864		Blower 1 Total Runtime (hrs)	41,130.6					
Blower 1 Fresh Air Valve Open (%)	0				Blower 2 Total Runtime (hrs)	42,003.8					
Blower 2 Fresh Air Valve Open (%)	0				Blower 1 Air Filter Differential Pressure ("H2O)	0					
Moisture Separator Vacuum ("Hg)	3.5				Blower 2 Air Filter Differential Pressure ("H2O)	0					
VGAC-1 Influent Vacuum ("H2O)	60				VGAC-1 Influent PID (ppm)	18.4					
VGAC-1 Effluent Vacuum ("H2O)	60				VGAC-1 Effluent PID (ppm)	0.0					
VGAC-2 Influent Vacuum ("H2O)	58				VGAC-2 Influent PID (ppm)	18.4					
VGAC-2 Effluent Vacuum ("H2O)	58				VGAC-2 Effluent PID (ppm)	0.0					
VGAC-3 Influent Vacuum ("H2O)	64				VGAC-3 Influent PID (ppm)	0.0					
VGAC-3 Effluent Vacuum ("H2O)	69				VGAC-3 Effluent PID (ppm)	0.0					
VGAC-3 Influent Temperature (DegF)	NA				Blower Effluent PID (ppm)	0.0					
Blower Effluent Pressure ("H2O)	7.6										
Transfer Pump Total Runtime (hrs)	25,020.5				Condensate Storage Tank Level (gal)	180					
SVE Manifold Legs - Vacuum/Flow Rate/PID											
	Vacuum	Velocity	Flow Rate	PID		Vacuum	Velocity	Flow Rate	PID		
SVE-1	("H2O)/(FPM)/(cfm)/(ppm)	42	7000	153		SVE-4	("H2O)/(FPM)/(cfm)/(ppm)	36	4200	92	
SVE-2	("H2O)/(FPM)/(cfm)/(ppm)	44	4000	87		SVE-5	("H2O)/(FPM)/(cfm)/(ppm)	36	2900	63	
SVE-3	("H2O)/(FPM)/(cfm)/(ppm)	38	4800	105		SVE-6B	("H2O)/(FPM)/(cfm)/(ppm)	36	6000	131	
SVE-3A	("H2O)/(FPM)/(cfm)/(ppm)	36	4200	92		SVE-7	("H2O)/(FPM)/(cfm)/(ppm)	38	3000	65	
Air Sparge System											
Compressor 1 Pressure (psi)	Off for repairs				Compressor 2 Pressure (psi)	86					
Compressor 1 Temperature (degF)	Off for repairs				Compressor 2 Temperature (degF)	187					
Compressor 1 Runtime (hrs)	27,317.0				Compressor 2 Runtime (hrs)	14,508.0					
Manifold Regulator Pressure (psi)	70										
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)	15	8		AS-13B	(psi)/(cfm)	15	8			
AS-4	(psi)/(cfm)	13.5	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)	15	8			
AS-7	(psi)/(cfm)	16.5	6		AS-17	(psi)/(cfm)	15	8			
AS-8	(psi)/(cfm)	15	8		AS-18	(psi)/(cfm)	15	8			
AS-9	(psi)/(cfm)	15	8		AS-19	(psi)/(cfm)	15	8			
AS-10B	(psi)/(cfm)	15	8								

Notes, Comments & Observations:

Compressor 1 off for repairs.

Shut system off for IAQ sampling. Pumped out moisture separator to holding tank, drained piping to transfer pump, left heaters and heat trace on, shut off exhaust fan.

Appendix B

Laboratory Report

Soil Vapor Intrusion Investigation

Preliminary Results – November 10, 2015 Samples (System On)

12/2/2015

Ms. Alexandra Stark
EnSafe, Inc.
5724 Summer Trees Drive

Memphis TN 38134

Project Name: Frost Street SVI Investigation

Project #: 0888811027

Workorder #: 1511291

Dear Ms. Alexandra Stark

The following report includes the data for the above referenced project for sample(s) received on 11/18/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott
Project Manager

WORK ORDER #: 1511291

Work Order Summary

CLIENT: Ms. Alexandra Stark
EnSafe, Inc.
5724 Summer Trees Drive
Memphis, TN 38134

BILL TO: Accounts Payable
EnSafe, Inc.
5724 Summer Trees Drive
Memphis, TN 38134

PHONE: 901-372-7962

P.O. # 19916

FAX: 901-383-1743

PROJECT # 0888811027 Frost Street SVI Investigation

DATE RECEIVED: 11/18/2015

CONTACT: Ausha Scott

DATE COMPLETED: 12/01/2015

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	MS2	Modified TO-15	6.9 "Hg	5.3 psi
02A	Duplicate	Modified TO-15	3.9 "Hg	5.2 psi
03A	MS1	Modified TO-15	4.7 "Hg	4.9 psi
04A	MS3	Modified TO-15	7.3 "Hg	5.1 psi
05A	MS4	Modified TO-15	4.9 "Hg	5.1 psi
06A	Lab Blank	Modified TO-15	NA	NA
07A	CCV	Modified TO-15	NA	NA
08A	LCS	Modified TO-15	NA	NA
08AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:



Technical Director

DATE: 12/02/15

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,

TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.

Eurofins Air Toxics Inc., certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 956

(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
EnSafe, Inc.
Workorder# 1511291

Five 6 Liter Summa Canister (100% Certified) samples were received on November 18, 2015. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Initial Calibration	<=30% RSD with 2 compounds allowed out to < 40% RSD	<=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. All the canisters used for this project have been certified to the Reporting Limit for the target analytes included in this workorder. Concentrations that are below the level at which the canister was certified may be false positives.

Due to the linear calibration range of the instrument, the reporting limit for Freon 12 and alpha-Chlorotoluene was raised from 0.10 ppbv to 0.50 ppbv.

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Ethanol exceeded the instrument's calibration range for sample MS1 and was flagged accordingly.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: MS2

Lab ID#: 1511291-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.88	0.50 J	4.4	2.5 J
Chloromethane	0.88	0.64 J	1.8	1.3 J
1,3-Butadiene	0.18	0.073 J	0.39	0.16 J
Freon 11	0.18	0.28	0.99	1.6
Ethanol	0.88	59	1.7	110
Acetone	0.88	28	2.1	66
2-Propanol	0.88	4.4	2.2	11
Methylene Chloride	0.35	0.58	1.2	2.0
Hexane	0.18	0.48	0.62	1.7
2-Butanone (Methyl Ethyl Ketone)	0.88	2.0	2.6	6.0
Cyclohexane	0.18	0.25	0.61	0.87
Carbon Tetrachloride	0.18	0.076 J	1.1	0.48 J
2,2,4-Trimethylpentane	0.88	0.24 J	4.1	1.1 J
Benzene	0.18	0.36	0.56	1.1
1,2-Dichloroethane	0.18	0.29	0.72	1.2
Heptane	0.18	0.27	0.72	1.1
1,2-Dichloropropane	0.18	0.051 J	0.82	0.24 J
4-Methyl-2-pentanone	0.18	0.14 J	0.72	0.56 J
Toluene	0.18	3.0	0.67	11
Tetrachloroethene	0.18	0.10 J	1.2	0.68 J
Ethyl Benzene	0.18	0.20	0.77	0.87
m,p-Xylene	0.18	0.61	0.77	2.7
o-Xylene	0.18	0.27	0.77	1.2
Styrene	0.18	0.25	0.75	1.1
4-Ethyltoluene	0.18	0.15 J	0.87	0.75 J
1,3,5-Trimethylbenzene	0.18	0.097 J	0.87	0.48 J
1,2,4-Trimethylbenzene	0.18	0.18	0.87	0.87

Client Sample ID: Duplicate

Lab ID#: 1511291-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.78	0.49 J	3.8	2.4 J

Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: Duplicate

Lab ID#: 1511291-02A

Chloromethane	0.78	0.19 J	1.6	0.39 J
Freon 11	0.16	0.30	0.87	1.7
Ethanol	0.78	6.2	1.5	12
Acetone	0.78	6.4	1.8	15
2-Propanol	0.78	1.4	1.9	3.6
Carbon Disulfide	0.78	0.14 J	2.4	0.44 J
Methylene Chloride	0.31	0.64	1.1	2.2
Hexane	0.16	0.25	0.55	0.89
2-Butanone (Methyl Ethyl Ketone)	0.78	0.64 J	2.3	1.9 J
Tetrahydrofuran	0.78	0.27 J	2.3	0.81 J
Cyclohexane	0.16	0.28	0.53	0.98
Carbon Tetrachloride	0.16	0.063 J	0.98	0.40 J
2,2,4-Trimethylpentane	0.78	0.072 J	3.6	0.34 J
Benzene	0.16	0.13 J	0.50	0.42 J
1,2-Dichloroethane	0.16	0.14 J	0.63	0.55 J
Heptane	0.16	0.12 J	0.64	0.47 J
1,2-Dichloropropane	0.16	0.098 J	0.72	0.45 J
4-Methyl-2-pentanone	0.16	0.059 J	0.63	0.24 J
Toluene	0.16	1.4	0.58	5.1
Tetrachloroethene	0.16	0.14 J	1.0	0.97 J
Ethyl Benzene	0.16	0.10 J	0.67	0.45 J
m,p-Xylene	0.16	0.35	0.67	1.5
o-Xylene	0.16	0.12 J	0.67	0.51 J
Styrene	0.16	0.078 J	0.66	0.33 J
Propylbenzene	0.16	0.080 J	0.76	0.40 J
4-Ethyltoluene	0.16	0.048 J	0.76	0.24 J
1,2,4-Trimethylbenzene	0.16	0.058 J	0.76	0.28 J

Client Sample ID: MS1

Lab ID#: 1511291-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.79	0.45 J	3.9	2.2 J
Chloromethane	0.79	0.64 J	1.6	1.3 J
1,3-Butadiene	0.16	0.069 J	0.35	0.15 J

Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: MS1

Lab ID#: 1511291-03A

Freon 11	0.16	0.27	0.89	1.5
Ethanol	0.79	71 E	1.5	130 E
Freon 113	0.16	0.070 J	1.2	0.54 J
Acetone	0.79	17	1.9	40
2-Propanol	0.79	3.6	1.9	8.8
Methylene Chloride	0.32	0.30 J	1.1	1.0 J
Hexane	0.16	0.32	0.56	1.1
2-Butanone (Methyl Ethyl Ketone)	0.79	1.4	2.3	4.0
Carbon Tetrachloride	0.16	0.076 J	0.99	0.48 J
2,2,4-Trimethylpentane	0.79	0.19 J	3.7	0.91 J
Benzene	0.16	0.31	0.50	1.0
1,2-Dichloroethane	0.16	0.30	0.64	1.2
Heptane	0.16	0.19	0.65	0.77
Trichloroethene	0.16	0.077 J	0.85	0.42 J
4-Methyl-2-pentanone	0.16	0.083 J	0.65	0.34 J
Toluene	0.16	2.9	0.60	11
Tetrachloroethene	0.16	0.074 J	1.1	0.50 J
Ethyl Benzene	0.16	0.18	0.69	0.80
m,p-Xylene	0.16	0.33	0.69	1.4
o-Xylene	0.16	0.19	0.69	0.82
Styrene	0.16	0.13 J	0.67	0.54 J
Propylbenzene	0.16	0.035 J	0.78	0.17 J
4-Ethyltoluene	0.16	0.082 J	0.78	0.40 J
1,3,5-Trimethylbenzene	0.16	0.046 J	0.78	0.23 J
1,2,4-Trimethylbenzene	0.16	0.11 J	0.78	0.55 J

Client Sample ID: MS3

Lab ID#: 1511291-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.89	0.34 J	4.4	1.7 J
Chloromethane	0.89	0.59 J	1.8	1.2 J
1,3-Butadiene	0.18	0.053 J	0.39	0.12 J
Freon 11	0.18	0.31	1.0	1.7
Ethanol	0.89	71	1.7	130

Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: MS3

Lab ID#: 1511291-04A

Acetone	0.89	9.4	2.1	22
2-Propanol	0.89	4.6	2.2	11
Methylene Chloride	0.36	0.28 J	1.2	0.99 J
Hexane	0.18	0.28	0.63	1.0
2-Butanone (Methyl Ethyl Ketone)	0.89	0.73 J	2.6	2.2 J
Cyclohexane	0.18	0.18	0.61	0.61
Carbon Tetrachloride	0.18	0.076 J	1.1	0.48 J
2,2,4-Trimethylpentane	0.89	0.15 J	4.2	0.69 J
Benzene	0.18	0.28	0.57	0.90
1,2-Dichloroethane	0.18	0.17 J	0.72	0.69 J
Heptane	0.18	0.19	0.73	0.78
4-Methyl-2-pentanone	0.18	0.052 J	0.73	0.21 J
Toluene	0.18	1.9	0.67	7.0
Tetrachloroethene	0.18	0.10 J	1.2	0.70 J
Ethyl Benzene	0.18	0.16 J	0.77	0.71 J
m,p-Xylene	0.18	0.45	0.77	1.9
o-Xylene	0.18	0.24	0.77	1.0
Styrene	0.18	0.083 J	0.76	0.35 J
4-Ethyltoluene	0.18	0.11 J	0.88	0.53 J
1,3,5-Trimethylbenzene	0.18	0.052 J	0.88	0.26 J
1,2,4-Trimethylbenzene	0.18	0.094 J	0.88	0.46 J

Client Sample ID: MS4

Lab ID#: 1511291-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.80	0.50 J	4.0	2.5 J
Chloromethane	0.80	0.13 J	1.7	0.26 J
Freon 11	0.16	0.30	0.90	1.7
Ethanol	0.80	2.4	1.5	4.5
Freon 113	0.16	0.096 J	1.2	0.74 J
Acetone	0.80	5.1	1.9	12
2-Propanol	0.80	1.2	2.0	2.9
Carbon Disulfide	0.80	0.10 J	2.5	0.31 J
Methylene Chloride	0.32	0.57	1.1	2.0

Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: MS4

Lab ID#: 1511291-05A

Hexane	0.16	0.28	0.57	0.99
2-Butanone (Methyl Ethyl Ketone)	0.80	0.81	2.4	2.4
Chloroform	0.16	0.067 J	0.79	0.33 J
Cyclohexane	0.16	0.17	0.55	0.58
Carbon Tetrachloride	0.16	0.058 J	1.0	0.36 J
2,2,4-Trimethylpentane	0.80	0.056 J	3.8	0.26 J
Benzene	0.16	0.098 J	0.51	0.31 J
1,2-Dichloroethane	0.16	0.079 J	0.65	0.32 J
Heptane	0.16	0.12 J	0.66	0.51 J
Trichloroethene	0.16	0.054 J	0.86	0.29 J
1,2-Dichloropropane	0.16	0.076 J	0.74	0.35 J
1,4-Dioxane	0.16	0.092 J	0.58	0.33 J
4-Methyl-2-pentanone	0.16	0.049 J	0.66	0.20 J
Toluene	0.16	0.50	0.61	1.9
Tetrachloroethene	0.16	0.13 J	1.1	0.90 J
m,p-Xylene	0.16	0.17	0.70	0.73
o-Xylene	0.16	0.069 J	0.70	0.30 J
Styrene	0.16	0.048 J	0.68	0.21 J
4-Ethyltoluene	0.16	0.053 J	0.79	0.26 J
1,2,4-Trimethylbenzene	0.16	0.047 J	0.79	0.23 J

Client Sample ID: MS2

Lab ID#: 1511291-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112013	Date of Collection: 11/10/15 10:54:00 AM
Dil. Factor:	1.77	Date of Analysis: 11/20/15 06:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.88	0.50 J	4.4	2.5 J
Freon 114	0.18	Not Detected	1.2	Not Detected
Chloromethane	0.88	0.64 J	1.8	1.3 J
Vinyl Chloride	0.18	Not Detected	0.45	Not Detected
1,3-Butadiene	0.18	0.073 J	0.39	0.16 J
Bromomethane	0.88	Not Detected	3.4	Not Detected
Chloroethane	0.88	Not Detected	2.3	Not Detected
Freon 11	0.18	0.28	0.99	1.6
Ethanol	0.88	59	1.7	110
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Acetone	0.88	28	2.1	66
2-Propanol	0.88	4.4	2.2	11
Carbon Disulfide	0.88	Not Detected	2.8	Not Detected
3-Chloropropene	0.88	Not Detected	2.8	Not Detected
Methylene Chloride	0.35	0.58	1.2	2.0
Methyl tert-butyl ether	0.18	Not Detected	0.64	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Hexane	0.18	0.48	0.62	1.7
1,1-Dichloroethane	0.18	Not Detected	0.72	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.88	2.0	2.6	6.0
cis-1,2-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Tetrahydrofuran	0.88	Not Detected	2.6	Not Detected
Chloroform	0.18	Not Detected	0.86	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	0.96	Not Detected
Cyclohexane	0.18	0.25	0.61	0.87
Carbon Tetrachloride	0.18	0.076 J	1.1	0.48 J
2,2,4-Trimethylpentane	0.88	0.24 J	4.1	1.1 J
Benzene	0.18	0.36	0.56	1.1
1,2-Dichloroethane	0.18	0.29	0.72	1.2
Heptane	0.18	0.27	0.72	1.1
Trichloroethene	0.18	Not Detected	0.95	Not Detected
1,2-Dichloropropane	0.18	0.051 J	0.82	0.24 J
1,4-Dioxane	0.18	Not Detected	0.64	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.80	Not Detected
4-Methyl-2-pentanone	0.18	0.14 J	0.72	0.56 J
Toluene	0.18	3.0	0.67	11
trans-1,3-Dichloropropene	0.18	Not Detected	0.80	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	0.96	Not Detected
Tetrachloroethene	0.18	0.10 J	1.2	0.68 J
2-Hexanone	0.88	Not Detected	3.6	Not Detected

Client Sample ID: MS2

Lab ID#: 1511291-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

MODIFIED EXTRACT METHOD TO 15 CONCENTRATIONS				
File Name:	v112013	Date of Collection: 11/10/15 10:54:00 AM		
Dil. Factor:	1.77	Date of Analysis: 11/20/15 06:16 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.18	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.81	Not Detected
Ethyl Benzene	0.18	0.20	0.77	0.87
m,p-Xylene	0.18	0.61	0.77	2.7
o-Xylene	0.18	0.27	0.77	1.2
Styrene	0.18	0.25	0.75	1.1
Bromoform	0.18	Not Detected	1.8	Not Detected
Cumene	0.18	Not Detected	0.87	Not Detected
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
Propylbenzene	0.18	Not Detected	0.87	Not Detected
4-Ethyltoluene	0.18	0.15 J	0.87	0.75 J
1,3,5-Trimethylbenzene	0.18	0.097 J	0.87	0.48 J
1,2,4-Trimethylbenzene	0.18	0.18	0.87	0.87
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.88	Not Detected	4.6	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.88	Not Detected	6.6	Not Detected
Hexachlorobutadiene	0.88	Not Detected UJ	9.4	Not Detected UJ

J = Estimated value.

UJ = Analyte associated with low bias in the CCV and/or LCS.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	86	70-130

Client Sample ID: Duplicate

Lab ID#: 1511291-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

MODIFIED EXTRACTED TO 15 GC/MS FULL SCAN				
File Name:	v112014	Date of Collection: 11/10/15		
Dil. Factor:	1.55	Date of Analysis: 11/20/15 06:51 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.78	0.49 J	3.8	2.4 J
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.78	0.19 J	1.6	0.39 J
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	Not Detected	0.34	Not Detected
Bromomethane	0.78	Not Detected	3.0	Not Detected
Chloroethane	0.78	Not Detected	2.0	Not Detected
Freon 11	0.16	0.30	0.87	1.7
Ethanol	0.78	6.2	1.5	12
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Acetone	0.78	6.4	1.8	15
2-Propanol	0.78	1.4	1.9	3.6
Carbon Disulfide	0.78	0.14 J	2.4	0.44 J
3-Chloropropene	0.78	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	0.64	1.1	2.2
Methyl tert-butyl ether	0.16	Not Detected	0.56	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Hexane	0.16	0.25	0.55	0.89
1,1-Dichloroethane	0.16	Not Detected	0.63	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	0.64 J	2.3	1.9 J
cis-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Tetrahydrofuran	0.78	0.27 J	2.3	0.81 J
Chloroform	0.16	Not Detected	0.76	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Cyclohexane	0.16	0.28	0.53	0.98
Carbon Tetrachloride	0.16	0.063 J	0.98	0.40 J
2,2,4-Trimethylpentane	0.78	0.072 J	3.6	0.34 J
Benzene	0.16	0.13 J	0.50	0.42 J
1,2-Dichloroethane	0.16	0.14 J	0.63	0.55 J
Heptane	0.16	0.12 J	0.64	0.47 J
Trichloroethene	0.16	Not Detected	0.83	Not Detected
1,2-Dichloropropane	0.16	0.098 J	0.72	0.45 J
1,4-Dioxane	0.16	Not Detected	0.56	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.70	Not Detected
4-Methyl-2-pentanone	0.16	0.059 J	0.63	0.24 J
Toluene	0.16	1.4	0.58	5.1
trans-1,3-Dichloropropene	0.16	Not Detected	0.70	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Tetrachloroethene	0.16	0.14 J	1.0	0.97 J
2-Hexanone	0.78	Not Detected	3.2	Not Detected

Client Sample ID: Duplicate

Lab ID#: 1511291-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

MODIFIED EXTRACTED TO 15 CONCENTRATION				
File Name:	v112014	Date of Collection: 11/10/15		
Dil. Factor:	1.55	Date of Analysis: 11/20/15 06:51 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.71	Not Detected
Ethyl Benzene	0.16	0.10 J	0.67	0.45 J
m,p-Xylene	0.16	0.35	0.67	1.5
o-Xylene	0.16	0.12 J	0.67	0.51 J
Styrene	0.16	0.078 J	0.66	0.33 J
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.76	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	0.080 J	0.76	0.40 J
4-Ethyltoluene	0.16	0.048 J	0.76	0.24 J
1,3,5-Trimethylbenzene	0.16	Not Detected	0.76	Not Detected
1,2,4-Trimethylbenzene	0.16	0.058 J	0.76	0.28 J
1,3-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
alpha-Chlorotoluene	0.78	Not Detected	4.0	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
1,2,4-Trichlorobenzene	0.78	Not Detected	5.8	Not Detected
Hexachlorobutadiene	0.78	Not Detected UJ	8.3	Not Detected UJ

J = Estimated value.

UJ = Analyte associated with low bias in the CCV and/or LCS.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	90	70-130

Client Sample ID: MS1

Lab ID#: 1511291-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112015	Date of Collection: 11/10/15 10:46:00 AM
Dil. Factor:	1.58	Date of Analysis: 11/20/15 07:41 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.79	0.45 J	3.9	2.2 J
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.79	0.64 J	1.6	1.3 J
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	0.069 J	0.35	0.15 J
Bromomethane	0.79	Not Detected	3.1	Not Detected
Chloroethane	0.79	Not Detected	2.1	Not Detected
Freon 11	0.16	0.27	0.89	1.5
Ethanol	0.79	71 E	1.5	130 E
Freon 113	0.16	0.070 J	1.2	0.54 J
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.79	17	1.9	40
2-Propanol	0.79	3.6	1.9	8.8
Carbon Disulfide	0.79	Not Detected	2.5	Not Detected
3-Chloropropene	0.79	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	0.30 J	1.1	1.0 J
Methyl tert-butyl ether	0.16	Not Detected	0.57	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Hexane	0.16	0.32	0.56	1.1
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.79	1.4	2.3	4.0
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Tetrahydrofuran	0.79	Not Detected	2.3	Not Detected
Chloroform	0.16	Not Detected	0.77	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Cyclohexane	0.16	Not Detected	0.54	Not Detected
Carbon Tetrachloride	0.16	0.076 J	0.99	0.48 J
2,2,4-Trimethylpentane	0.79	0.19 J	3.7	0.91 J
Benzene	0.16	0.31	0.50	1.0
1,2-Dichloroethane	0.16	0.30	0.64	1.2
Heptane	0.16	0.19	0.65	0.77
Trichloroethene	0.16	0.077 J	0.85	0.42 J
1,2-Dichloropropane	0.16	Not Detected	0.73	Not Detected
1,4-Dioxane	0.16	Not Detected	0.57	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
4-Methyl-2-pentanone	0.16	0.083 J	0.65	0.34 J
Toluene	0.16	2.9	0.60	11
trans-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Tetrachloroethene	0.16	0.074 J	1.1	0.50 J
2-Hexanone	0.79	Not Detected	3.2	Not Detected

Client Sample ID: MS1

Lab ID#: 1511291-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112015	Date of Collection: 11/10/15 10:46:00 AM
Dil. Factor:	1.58	Date of Analysis: 11/20/15 07:41 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.73	Not Detected
Ethyl Benzene	0.16	0.18	0.69	0.80
m,p-Xylene	0.16	0.33	0.69	1.4
o-Xylene	0.16	0.19	0.69	0.82
Styrene	0.16	0.13 J	0.67	0.54 J
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.78	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	0.035 J	0.78	0.17 J
4-Ethyltoluene	0.16	0.082 J	0.78	0.40 J
1,3,5-Trimethylbenzene	0.16	0.046 J	0.78	0.23 J
1,2,4-Trimethylbenzene	0.16	0.11 J	0.78	0.55 J
1,3-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
alpha-Chlorotoluene	0.79	Not Detected	4.1	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,2,4-Trichlorobenzene	0.79	Not Detected	5.9	Not Detected
Hexachlorobutadiene	0.79	Not Detected UJ	8.4	Not Detected UJ

J = Estimated value.

E = Exceeds instrument calibration range.

UJ = Analyte associated with low bias in the CCV and/or LCS.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	87	70-130

Client Sample ID: MS3

Lab ID#: 1511291-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112016	Date of Collection: 11/10/15 11:12:00 AM
Dil. Factor:	1.78	Date of Analysis: 11/20/15 08:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.89	0.34 J	4.4	1.7 J
Freon 114	0.18	Not Detected	1.2	Not Detected
Chloromethane	0.89	0.59 J	1.8	1.2 J
Vinyl Chloride	0.18	Not Detected	0.46	Not Detected
1,3-Butadiene	0.18	0.053 J	0.39	0.12 J
Bromomethane	0.89	Not Detected	3.4	Not Detected
Chloroethane	0.89	Not Detected	2.3	Not Detected
Freon 11	0.18	0.31	1.0	1.7
Ethanol	0.89	71	1.7	130
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Acetone	0.89	9.4	2.1	22
2-Propanol	0.89	4.6	2.2	11
Carbon Disulfide	0.89	Not Detected	2.8	Not Detected
3-Chloropropene	0.89	Not Detected	2.8	Not Detected
Methylene Chloride	0.36	0.28 J	1.2	0.99 J
Methyl tert-butyl ether	0.18	Not Detected	0.64	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Hexane	0.18	0.28	0.63	1.0
1,1-Dichloroethane	0.18	Not Detected	0.72	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.89	0.73 J	2.6	2.2 J
cis-1,2-Dichloroethene	0.18	Not Detected	0.70	Not Detected
Tetrahydrofuran	0.89	Not Detected	2.6	Not Detected
Chloroform	0.18	Not Detected	0.87	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	0.97	Not Detected
Cyclohexane	0.18	0.18	0.61	0.61
Carbon Tetrachloride	0.18	0.076 J	1.1	0.48 J
2,2,4-Trimethylpentane	0.89	0.15 J	4.2	0.69 J
Benzene	0.18	0.28	0.57	0.90
1,2-Dichloroethane	0.18	0.17 J	0.72	0.69 J
Heptane	0.18	0.19	0.73	0.78
Trichloroethene	0.18	Not Detected	0.96	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.82	Not Detected
1,4-Dioxane	0.18	Not Detected	0.64	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.81	Not Detected
4-Methyl-2-pentanone	0.18	0.052 J	0.73	0.21 J
Toluene	0.18	1.9	0.67	7.0
trans-1,3-Dichloropropene	0.18	Not Detected	0.81	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	0.97	Not Detected
Tetrachloroethene	0.18	0.10 J	1.2	0.70 J
2-Hexanone	0.89	Not Detected	3.6	Not Detected

Client Sample ID: MS3

Lab ID#: 1511291-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112016	Date of Collection:	11/10/15 11:12:00 AM	
Dil. Factor:	1.78	Date of Analysis:	11/20/15 08:16 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.18	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.82	Not Detected
Ethyl Benzene	0.18	0.16 J	0.77	0.71 J
m,p-Xylene	0.18	0.45	0.77	1.9
o-Xylene	0.18	0.24	0.77	1.0
Styrene	0.18	0.083 J	0.76	0.35 J
Bromoform	0.18	Not Detected	1.8	Not Detected
Cumene	0.18	Not Detected	0.88	Not Detected
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
Propylbenzene	0.18	Not Detected	0.88	Not Detected
4-Ethyltoluene	0.18	0.11 J	0.88	0.53 J
1,3,5-Trimethylbenzene	0.18	0.052 J	0.88	0.26 J
1,2,4-Trimethylbenzene	0.18	0.094 J	0.88	0.46 J
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.89	Not Detected	4.6	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.89	Not Detected	6.6	Not Detected
Hexachlorobutadiene	0.89	Not Detected UJ	9.5	Not Detected UJ

J = Estimated value.

UJ = Analyte associated with low bias in the CCV and/or LCS.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	89	70-130

Client Sample ID: MS4

Lab ID#: 1511291-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112017	Date of Collection: 11/10/15 11:04:00 AM
Dil. Factor:	1.61	Date of Analysis: 11/20/15 08:53 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.80	0.50 J	4.0	2.5 J
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	0.13 J	1.7	0.26 J
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.30	0.90	1.7
Ethanol	0.80	2.4	1.5	4.5
Freon 113	0.16	0.096 J	1.2	0.74 J
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	5.1	1.9	12
2-Propanol	0.80	1.2	2.0	2.9
Carbon Disulfide	0.80	0.10 J	2.5	0.31 J
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	0.57	1.1	2.0
Methyl tert-butyl ether	0.16	Not Detected	0.58	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Hexane	0.16	0.28	0.57	0.99
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	0.81	2.4	2.4
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Tetrahydrofuran	0.80	Not Detected	2.4	Not Detected
Chloroform	0.16	0.067 J	0.79	0.33 J
1,1,1-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Cyclohexane	0.16	0.17	0.55	0.58
Carbon Tetrachloride	0.16	0.058 J	1.0	0.36 J
2,2,4-Trimethylpentane	0.80	0.056 J	3.8	0.26 J
Benzene	0.16	0.098 J	0.51	0.31 J
1,2-Dichloroethane	0.16	0.079 J	0.65	0.32 J
Heptane	0.16	0.12 J	0.66	0.51 J
Trichloroethene	0.16	0.054 J	0.86	0.29 J
1,2-Dichloropropane	0.16	0.076 J	0.74	0.35 J
1,4-Dioxane	0.16	0.092 J	0.58	0.33 J
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
4-Methyl-2-pentanone	0.16	0.049 J	0.66	0.20 J
Toluene	0.16	0.50	0.61	1.9
trans-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Tetrachloroethene	0.16	0.13 J	1.1	0.90 J
2-Hexanone	0.80	Not Detected	3.3	Not Detected

Client Sample ID: MS4

Lab ID#: 1511291-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112017	Date of Collection:	11/10/15 11:04:00 AM	
Dil. Factor:	1.61	Date of Analysis:	11/20/15 08:53 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.70	Not Detected
m,p-Xylene	0.16	0.17	0.70	0.73
o-Xylene	0.16	0.069 J	0.70	0.30 J
Styrene	0.16	0.048 J	0.68	0.21 J
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.79	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.79	Not Detected
4-Ethyltoluene	0.16	0.053 J	0.79	0.26 J
1,3,5-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,2,4-Trimethylbenzene	0.16	0.047 J	0.79	0.23 J
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
alpha-Chlorotoluene	0.80	Not Detected	4.2	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	6.0	Not Detected
Hexachlorobutadiene	0.80	Not Detected UJ	8.6	Not Detected UJ

J = Estimated value.

UJ = Analyte associated with low bias in the CCV and/or LCS.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	90	70-130

Client Sample ID: Lab Blank

Lab ID#: 1511291-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

MODIFIED EXTRACTED TO 15 GC/MS FULL SCAN				
File Name:	v112006a	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 11/20/15 11:23 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	0.10 J	1.2	0.24 J
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	0.11 J	0.69	0.40 J
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	0.045 J	0.35	0.16 J
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1511291-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112006a	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 11/20/15 11:23 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected UJ	5.3	Not Detected UJ

J = Estimated value.

UJ = Analyte associated with low bias in the CCV and/or LCS.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	87	70-130

Client Sample ID: CCV

Lab ID#: 1511291-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/20/15 08:11 AM

Compound	%Recovery
Freon 12	102
Freon 114	95
Chloromethane	100
Vinyl Chloride	109
1,3-Butadiene	98
Bromomethane	109
Chloroethane	114
Freon 11	93
Ethanol	89
Freon 113	90
1,1-Dichloroethene	95
Acetone	98
2-Propanol	93
Carbon Disulfide	109
3-Chloropropene	104
Methylene Chloride	99
Methyl tert-butyl ether	96
trans-1,2-Dichloroethene	100
Hexane	87
1,1-Dichloroethane	100
2-Butanone (Methyl Ethyl Ketone)	111
cis-1,2-Dichloroethene	92
Tetrahydrofuran	100
Chloroform	98
1,1,1-Trichloroethane	88
Cyclohexane	101
Carbon Tetrachloride	82
2,2,4-Trimethylpentane	94
Benzene	100
1,2-Dichloroethane	93
Heptane	90
Trichloroethene	83
1,2-Dichloropropane	100
1,4-Dioxane	93
Bromodichloromethane	98
cis-1,3-Dichloropropene	98
4-Methyl-2-pentanone	100
Toluene	93
trans-1,3-Dichloropropene	100
1,1,2-Trichloroethane	100
Tetrachloroethene	87
2-Hexanone	94



Air Toxics

Client Sample ID: CCV

Lab ID#: 1511291-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/20/15 08:11 AM

Compound	%Recovery
Dibromochloromethane	96
1,2-Dibromoethane (EDB)	99
Chlorobenzene	96
Ethyl Benzene	90
m,p-Xylene	89
o-Xylene	92
Styrene	81
Bromoform	85
Cumene	96
1,1,2,2-Tetrachloroethane	103
Propylbenzene	91
4-Ethyltoluene	81
1,3,5-Trimethylbenzene	84
1,2,4-Trimethylbenzene	86
1,3-Dichlorobenzene	82
1,4-Dichlorobenzene	76
alpha-Chlorotoluene	85
1,2-Dichlorobenzene	77
1,2,4-Trichlorobenzene	76
Hexachlorobutadiene	66 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	91	70-130

Client Sample ID: LCS

Lab ID#: 1511291-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/20/15 09:01 AM

Compound	%Recovery	Method Limits
Freon 12	109	70-130
Freon 114	104	70-130
Chloromethane	105	70-130
Vinyl Chloride	120	70-130
1,3-Butadiene	101	70-130
Bromomethane	122	70-130
Chloroethane	116	70-130
Freon 11	98	70-130
Ethanol	104	70-130
Freon 113	92	70-130
1,1-Dichloroethene	102	70-130
Acetone	95	70-130
2-Propanol	100	70-130
Carbon Disulfide	100	70-130
3-Chloropropene	102	70-130
Methylene Chloride	104	70-130
Methyl tert-butyl ether	100	70-130
trans-1,2-Dichloroethene	88	70-130
Hexane	90	70-130
1,1-Dichloroethane	102	70-130
2-Butanone (Methyl Ethyl Ketone)	103	70-130
cis-1,2-Dichloroethene	103	70-130
Tetrahydrofuran	105	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	94	70-130
Cyclohexane	105	70-130
Carbon Tetrachloride	65 O	70-130
2,2,4-Trimethylpentane	94	70-130
Benzene	103	70-130
1,2-Dichloroethane	96	70-130
Heptane	93	70-130
Trichloroethene	85	70-130
1,2-Dichloropropane	102	70-130
1,4-Dioxane	96	70-130
Bromodichloromethane	102	70-130
cis-1,3-Dichloropropene	93	70-130
4-Methyl-2-pentanone	101	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	102	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	92	70-130
2-Hexanone	101	70-130

Client Sample ID: LCS

Lab ID#: 1511291-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/20/15 09:01 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	95	70-130
1,2-Dibromoethane (EDB)	101	70-130
Chlorobenzene	94	70-130
Ethyl Benzene	86	70-130
m,p-Xylene	86	70-130
o-Xylene	91	70-130
Styrene	83	70-130
Bromoform	87	70-130
Cumene	91	70-130
1,1,2,2-Tetrachloroethane	104	70-130
Propylbenzene	88	70-130
4-Ethyltoluene	79	70-130
1,3,5-Trimethylbenzene	84	70-130
1,2,4-Trimethylbenzene	88	70-130
1,3-Dichlorobenzene	78	70-130
1,4-Dichlorobenzene	78	70-130
alpha-Chlorotoluene	91	70-130
1,2-Dichlorobenzene	77	70-130
1,2,4-Trichlorobenzene	75	70-130
Hexachlorobutadiene	60 Q	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	89	70-130

Client Sample ID: LCSD

Lab ID#: 1511291-08AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112004	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/20/15 09:36 AM

Compound	%Recovery	Method Limits
Freon 12	105	70-130
Freon 114	105	70-130
Chloromethane	106	70-130
Vinyl Chloride	117	70-130
1,3-Butadiene	100	70-130
Bromomethane	117	70-130
Chloroethane	116	70-130
Freon 11	100	70-130
Ethanol	107	70-130
Freon 113	92	70-130
1,1-Dichloroethene	98	70-130
Acetone	104	70-130
2-Propanol	104	70-130
Carbon Disulfide	103	70-130
3-Chloropropene	93	70-130
Methylene Chloride	102	70-130
Methyl tert-butyl ether	99	70-130
trans-1,2-Dichloroethene	90	70-130
Hexane	94	70-130
1,1-Dichloroethane	103	70-130
2-Butanone (Methyl Ethyl Ketone)	109	70-130
cis-1,2-Dichloroethene	111	70-130
Tetrahydrofuran	102	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	92	70-130
Cyclohexane	110	70-130
Carbon Tetrachloride	66 Q	70-130
2,2,4-Trimethylpentane	97	70-130
Benzene	108	70-130
1,2-Dichloroethane	98	70-130
Heptane	96	70-130
Trichloroethene	86	70-130
1,2-Dichloropropane	104	70-130
1,4-Dioxane	94	70-130
Bromodichloromethane	103	70-130
cis-1,3-Dichloropropene	93	70-130
4-Methyl-2-pentanone	103	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	101	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	91	70-130
2-Hexanone	103	70-130

Client Sample ID: LCSD

Lab ID#: 1511291-08AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v112004	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/20/15 09:36 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	98	70-130
1,2-Dibromoethane (EDB)	105	70-130
Chlorobenzene	98	70-130
Ethyl Benzene	90	70-130
m,p-Xylene	92	70-130
o-Xylene	95	70-130
Styrene	92	70-130
Bromoform	86	70-130
Cumene	98	70-130
1,1,2,2-Tetrachloroethane	112	70-130
Propylbenzene	101	70-130
4-Ethyltoluene	86	70-130
1,3,5-Trimethylbenzene	88	70-130
1,2,4-Trimethylbenzene	86	70-130
1,3-Dichlorobenzene	87	70-130
1,4-Dichlorobenzene	84	70-130
alpha-Chlorotoluene	101	70-130
1,2-Dichlorobenzene	86	70-130
1,2,4-Trichlorobenzene	72	70-130
Hexachlorobutadiene	74	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	94	70-130