KEVIN SCOTT
PROJECT MANAGER

December 22, 2014

Mr. Jeffrey Lippert
On-Scene Coordinator
U.S. Environmental Protection Agency Region 5
9311 Groh Road
Grosse Ile, MI 48138

Subject: **Addendum #1 to Final Trip Report for Indoor Ambient Air Monitoring, Vapor Intrusion Sampling, Soil Gas Sampling, and Assessment Activities Conducted at the Michigan Gas Utilities Site – Revision 2**
EPA Contract No. EP-S5-13-01
Technical Direction Document No. S05-0001-1405-006
Document Tracking No. 0086

Dear Mr. Lippert:

Tetra Tech, Inc. (Tetra Tech) is submitting the Addendum #1 to the Final Trip Report for the Indoor Ambient Air Monitoring, Vapor Intrusion Sampling, Soil Gas Sampling, and Assessment Activities conducted at the Michigan Gas Utilities (MGU) site in May 2014. This addendum summarizes the findings of field activities conducted on October 03, 2014 based on the Abbreviated Sampling and Analysis Plan for the site; specifically, the sampling at 78 W. Chicago Street, Coldwater, Michigan.

If you have any questions regarding this report, please contact me at (312) 201-7739.

Sincerely,

Kevin Scott,
Project Manager

Enclosure
cc: TDD File

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ADDENDUM #1 TO THE
FINAL TRIP REPORT
FOR
THE INDOOR AMBIENT AIR MONITORING, VAPOR INTRUSION SAMPLING, SOIL GAS SAMPLING, AND ASSESSMENT ACTIVITIES CONDUCTED AT THE
MICHIGAN GAS UTILITIES SITE
78 W. CHICAGO STREET,
COLDWATER, BRANCH COUNTY, MICHIGAN

REVISION 2

U.S. Environmental Protection Agency
Emergency Response Branch
Region 5
9311 Groh Road
Grosse Ile, MI 48138

Submitted by

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EPA Contract No. EP-S5-13-01

Technical Direction Document No. S05-0001-1405-006
Document Tracking No. 0086

December 2014

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1.0 SUMMARY

Under the Superfund Technical Assessment and Response Team 4 (START 4) Contract No. EP-S5-13-01, U.S. Environmental Protection Agency (EPA) Region 5 tasked Tetra Tech, Inc. (Tetra Tech) to conduct a screening assessment for vapor intrusion at the commercial building at 78 W. Chicago Street, Coldwater, Michigan, as part of the Michigan Gas Utilities (MGU) site, located in Coldwater Michigan.

On October 03, 2014, Tetra Tech conducted another round of sub-slab soil gas and indoor and outdoor air samples from the same locations that were identified in the initial round of sampling on May 15 and 16, 2014. The sample locations for the indoor and outdoor samples are shown on Figures 1 and 2 respectively. Appendix B contains the field data sheets from this event.

Analytical results from the sampling event were compared to EPA Risk-Based Screening Levels (RSL) for ambient air. Specifically, the results were compared to the EPA May 2014 RSL industrial and residential air supporting tables with a carcinogenic target risk (TR) equal to a one-in-a-million (10^{-6}) individual excess cancer risk for carcinogens and a hazard quotient (HQ) of 0.1 for non-carcinogens (TR=1E-6, HQ=0.1). These detections are summarized in Table 1.

Analytical results for the soil gas samples were compared to the RSL divided by a factor of 10, based on the EPA's Vapor Intrusion Screening Level calculator (EPA 2014). The target soil gas concentration corresponding to a chemical's target indoor air concentration at the selected target cancer risk or hazard quotient is calculated by dividing the indoor air concentration by the generic attenuation factor of 0.1. Therefore the sub-slab soil gas screening values are 10 times higher than the indoor air and ambient air RSLs due to the attenuation factor of 0.1. The calculated soil gas comparison values will be referenced as screening levels (SL) throughout this document. These detections are summarized in Table 1 and shown on Figure 3.

Bromodichloromethane, chloroform, tetrachloroethene and naphthalene were detected in sub-slab samples at concentrations exceeding the SLs for industrial soil gas. In addition, 1,2,4 - Trimethylbenzene was detected at concentrations exceeding the SLs for residential soil gas at two locations. The ambient air residential RSL in the indoor air samples exceeded methylene chloride, ethyl acetate, 1,2-dichloroethane, benzene, ethyl benzene, 1,2,4 – trimethylbenzene, chloroform, carbon tetrachloride, trichloroethene, tetrachloroethene, ethyl benzene and m-p-xylene. Chloroform, benzene, trichloroethene, methylene chloride, and 1,2-dichloroethane were also exceeded the SL for industrial in the indoor air samples. These detections are summarized in Table 1 and shown on Figure 3.

Benzene was the only outdoor air concentration that exceeded the SL for residential indoor air. These detections are summarized in Table 1 and shown on Figure 4.

Based on this round of analytical data, it appears that vapor intrusion from VOCs may be occurring. Of the compounds that were detected and exceeded below the slab, only chloroform, tetrachloroethene and 1,2,4-trimethylbenzeneme were detected in the ambient air. Bromodichloromethane and naphthalene were not detected in the indoor air.

The October 2014 analytical data results indicate a higher amount of VOC detections in comparison to the May 2014 analytical results specifically in the indoor air locations (MGU-IA-1 and MGU-IA-2). The adjacent remediation activities conducted through the summer appears to have improved soil gas conditions beneath the slab at 78 W. Chicago, Coldwater, Michigan. The two sampling events were conducted during two different seasons therefore the conditions were different. Another round of sampling will be conducted this winter to see if the differences are within normal variability or if removal actions worsened site conditions.

TABLES

1 – SUMMARY OF VOCS DETECTED IN SOIL GAS AND AMBIENT AIR SAMPLES

TABLE 1 – SUMMARY OF VOCS DETECTED IN SOIL GAS AND AMBIENT AIR SAMPLES

Sample Number :							MGU-IA-1		MGU-IA-2		MGU-OA-1		MGU-SG-1		MGU-SG-2		MGU-SG-3		MGU-SV-1	MGU-SV-3	MGU
Resident Address:																					
Matrix :							indoor ambient air	indoor ambient air	indoor ambient air	indoor ambient air	indoor/ambient air	indoor/ambient air	soil gas	soil gas	soil gas	soil gas	soil gas	soil gas	soil gas	soil gas	soil gas
Units :			US EPA Regional Screening Level (RSL) Resident Air Supporting Table (TR=1E-6, HQ=0.1) May 2014 (µg/m3)		US EPA Regional Screening Level (RSL) Industrial Air Supporting Table (TR=1E-6, HQ=0.1) May 2014 (µg/m3)		ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Laboratory							Spectrum Analytical, Inc.	Spectrum Analytical, Inc.	Spectrum Analytical, Inc.	Spectrum Analytical, Inc.	Spectrum Analytical, Inc.	Spectrum Analytical, Inc.	Spectrum Analytical, Inc.	Spectrum Analytical, Inc.	Spectrum Analytical, Inc.	Spectrum Analytical, Inc.	Spectrum Analytical, Inc.	Spectrum Analytical, Inc.	Spectrum Analytical, Inc.	Spectrum Analytical, Inc.	Spectrum Analytical, Inc.
Case #:																					
SDG:																					
Sample Date:							5/16/2014	10/3/2014	5/16/2014	10/3/2014	5/16/2014	10/3/2014	5/15/2014	10/3/2014	5/15/2014	10/3/2014	5/15/2014	10/3/2014	5/16/2014	10/3/2014	5/16/2014
Sample Time:							9:07	11:30	9:04	11:34	8:51	12:05	13:18	10:52	13:22	10:59	13:45	11:11	9:04	11:48	9:09
Dilution:							5		5											4	
Duplicate:													MGU-SG-2	MGU-SG-2	MGU-SG-1	MGU-SG-1					MGU-SV-3
Compound	**CAS #**	**Key**	**Soil Gas**	**Res. Air**	**Soil Gas**	**Ind. Air**															
Propene	115-07-1	n	3100	310	13000	1300															
Dichlorodifluoromethane (Freon12)	75-71-8	n	100	10	440	44		2.62			2.97	2.32	2.47	2.37		2.18			3.16		2.87
Chloromethane	74-87-3	n	94	9.4	390	39				2.77			1.57		1.38		1.36				
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2																				
Vinyl chloride	75-01-4	c	1.7	0.17	28	2.8															
1,3-Butadiene	106-99-0	c	0.94	0.094	4.1	0.41															
Bromomethane	74-83-9	n	5.2	0.52	22	2.2															
Chloroethane	75-00-3		10000	1000	44000	4400															
Acetone	67-64-1	n	32000	3200	140000	14000	52.75 D	48.95	36.83 D	45.39	10.48	9.91	16.97	33.27	20.58	10.81	19.60	21.74	43.01	46.34 D	38.73
Trichlorofluoromethane (Freon 11)	75-69-4	n	730	73	3100	310		1.46		1.74	1.35	1.40		1.46		1.4		1.29	1.40	2.70 D	1.46
Ethanol	64-17-5						43.74 D	12.63J+	44.12 D	10.26 J+	5.77	15.22 J+	14.99	10.46	17.04	5.03	28.09	7.18 J+	20.17	33.37 J+D	12.37
Acrylonitrile	107-13-1	c	0.41	0.041	1.8	0.18															
1,1-Dichloroethene	75-35-4	n	210	21	880	88															
Methylene chloride	75-09-2	n	630	63	2600	260	34.72 D	80.91	36.11 D	135.44	0.69		1.74		5.31		8.75		1.28	55.91 D	0.66
1,1,2-Trichlorotrifluoroethane (Freon 113)	76-13-1	n	31000	3100	130000	13000								0.77							
Carbon disulfide	75-15-0	n	730	73	3100	310															1.68
trans-1,2-Dichloroethene	156-60-5	n	63	6.3	260	26															
1,1-Dichloroethane	75-34-3	c	18	1.8	77	7.7															
Methyl tert-butyl ether	1634-04-4	c	110	11	470	47															
Isopropyl alcohol	67-63-0	n	7300	730	31000	3100		11.85		3.14	1.33	3.24	3.80	2.43	3.71	2.85	4.91	1.94	69.94	5.01 D	4.37
2-Butanone (MEK)	78-93-3	n	5200	520	22000	2200		7.11		7.28	1.15	1.62		6.34		1.68		4.07	3.04		3.86
cis-1,2-Dichloroethene	156-59-2																				
Hexane	110-54-3	n	730	73	3100	310	11.99 D	5.68	13.4 D	6.17		15.46			1.76	2.29	1.87		2.64	22.56 D	
Ethyl acetate	141-78-6	n	73	7.3	310	31		15.67		17.84	5.19								10.20	21.33 D	
Chloroform	67-66-3	c	1.2	0.12	5.3	0.53		0.62											18.79	2.73 D	0.58
Tetrahydrofuran	109-99-9	n	2100	210	8800	880		21.88		18.02										10.85 D	
1,2-Dichloroethane	107-06-2	c	1.1	0.11	4.7	0.47				0.52											
1,1,1-Trichloroethane	71-55-6	n	5200	520	22000	2200		3		2.84									1.91		1.31
Benzene	71-43-2	c	3.6	0.36	16	1.6		2.23		1.85	0.41	0.54		1.34		2.2		1.24	0.89	1.79 D	0.61
Carbon tetrachloride	56-23-5	c	4.7	0.47	20	2		0.63						0.63					0.94		
Cyclohexane	110-82-7	n	6300	630	26000	2600		0.79						0.93		0.62		1.55			1.17
1,2-Dichloropropane	78-87-5	c	2.8	0.28	12	1.2															
Bromodichloromethane	75-27-4	c	0.76	0.076	3.3	0.33													10.52		
Trichloroethene	79-01-6	n	2.1	0.21	8.8	0.88		1.07													
1,4-Dioxane	123-91-1	c	5.6	0.56	25	2.5													2.88		
n-Heptane	142-82-5							1.43		0.98				1.84				1.15			
4-Methyl-2-pentanone (MIBK)	108-10-1	n	3100	310	13000	1300				0.7				3.69		0.82		1.23			
cis-1,3-Dichloropropene	10061-01-5	c	7	0.7	31	3.1															
trans-1,3-Dichloropropene	10061-02-6	c	7	0.7	31	3.1															
1,1,2-Trichloroethane	79-00-5	n	0.21	0.021	0.88	0.088															
Toluene	108-88-3	n	5200	520	22000	2200		12.79		13.28	0.64	1.96	3.95	12.04	3.50	4.40	4.03	3.76	2.26	11.29 D	
2-Hexanone (MBK)	591-78-6	n	31	3.1	130	13															
Dibromochloromethane	124-48-1	c	1	0.1	4.5	0.45															
1,2-Dibromoethane (EDB)	106-93-4	c	0.047	0.0047	0.2	0.02															
Tetrachloroethene	127-18-4	n	42	4.2	180	18		4.34		3.46				1.36					230.56 D	96.97 D	8.82
Chlorobenzene	108-90-7	n	52	5.2	220	22															
1,1,1,2-Tetrachloroethane	630-20-6	c	3.8	0.38	17	1.7															
Ethylbenzene	100-41-4	c	11	1.1	49	4.9		1.13		1.26				2.43		1		0.87	0.52	1.73 D	
m,p-Xylene	179601-23-1	n	100	10	440	44		3.69		4.51				14.05		5.77			1.65	4.34 D	
Bromoform	75-25-2	c	26	2.6	110	11												4.6			
Styrene	100-42-5	n	1000	100	4400	440				1.19										3.74 D	
o-Xylene	95-47-6	n	100	10	440	44		0.82		1.13				6.63		2.51		2.17	0.56	2.25 D	
1,1,2,2-Tetrachloroethane	79-34-5	c	4.8	0.48	18	1.8															
Isopropylbenzene	98-82-8	n	420	42	1800	180														4.13 D	
1,3,5-Trimethylbenzene	108-67-8																			4.33 D	
4-Ethyltoluene	622-96-8																			2.95 D	
1,2,4-Trimethylbenzene	95-63-6	n	7.3	0.73	31	3.1		0.79		0.74									0.84	10.82 D	
Naphthalene	91-20-3	c	0.83	0.083	3.6	0.36								0.79						11.31 D	
1,3-Dichlorobenzene	541-73-1																				
Benzyl chloride	100-44-7	c	0.57	0.057	2.5	0.25															
1,4-Dichlorobenzene	106-46-7	c	2.6	0.26	11	1.1															
sec-Butylbenzene	135-98-8																				
4-Isopropyltoluene	99-87-6							1.18		1.56				1.93		0.86		0.91		3.65 D	
1,2-Dichlorobenzene	95-50-1	n	210	21	880	88															
n-Butylbenzene	104-51-8																			5.71 D	
1,2,4-Trichlorobenzene	120-82-1	n	2.1	0.21	8.8	0.88								0.97							
Hexachlorobutadiene	87-68-3	c	1.3	0.13	5.6	0.56															
Total VOCs																					
# of different VOCs detected in sample							**4**	**24**	**4**	**23**	**10**	**9**	**7**	**20**	**7**	**15**	**7**	**14**	**21**	**24**	**13**

Notes:

c = carcinogen
n = non-carcinogen
TIC = tenttitively identified compound
D = diluted sample

Color indicates highest RSL exceeded for appropriate matrix

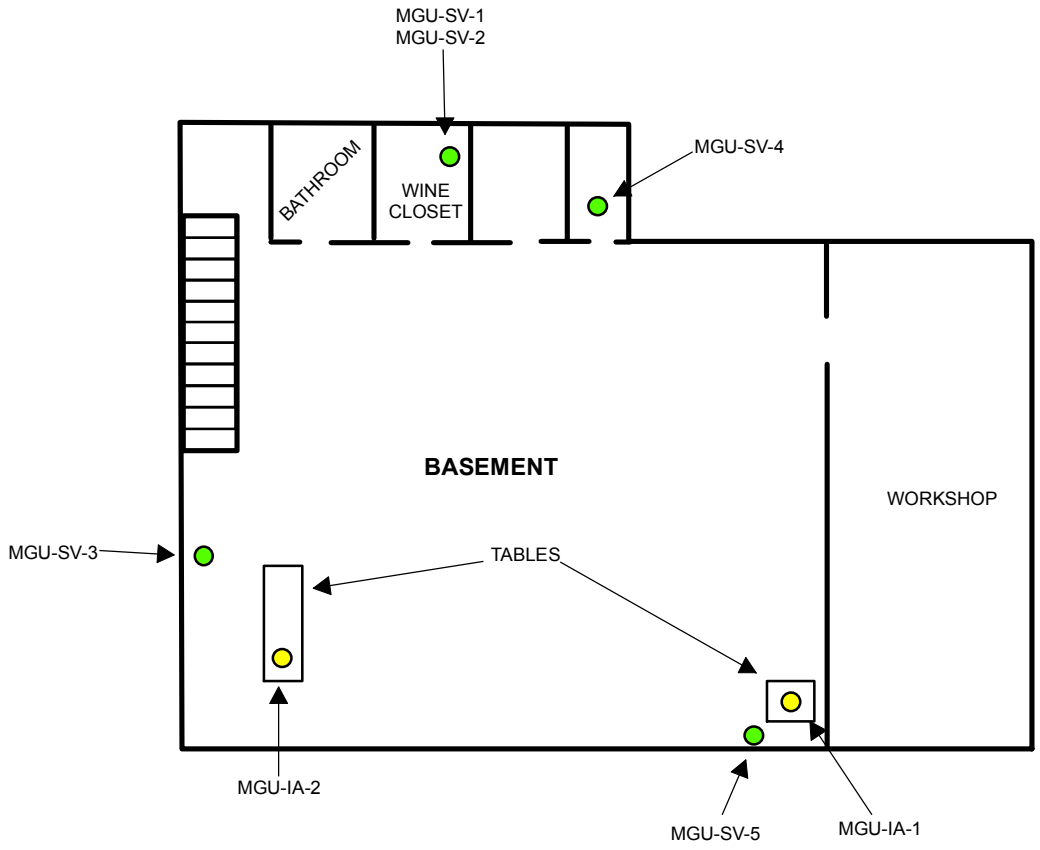
270	conc exceeds EPA screening level for resident soil gas (May 2014)
0.72	conc exceeds EPA RSL for resident air (May 2014)
270	conc exceeds EPA screening level for industrial soil gas (May 2014)
0.72	conc exceeds EPA RSL for industrial air (May 2014)

RSLs for carcinogens are calculated at 1E-06 risk and RSLs for non-carcinogens are adjusted to HI of 0.1
The sub-slab soil gas screening values are 10 times higher than the indoor air and ambient air RSLs due to the attenuation factor of 0.1.

APPENDIX A

FIGURES

1 – SAMPLING LOCATION MAP (INDOOR)
2 – SAMPLING LOCATION MAP (OUTDOOR)
3 – ANALYTICAL RESULTS MAP (INDOOR)
4 – ANALYTICAL RESULTS MAP (OUTDOOR)



LEGEND

- Ambient Air Sample
- Soil Gas Sample

NOTE: BUILDING/ROOM DIMENSIONS ARE APPROXIMATE.

N E S W

0 7.5 15 Feet

MICHIGAN GAS UTILITIES
78 WEST CHICAGO STREET
COLDWATER, BRANCH COUNTY, MICHIGAN

FIGURE 1
OCTOBER SAMPLE LOCATION MAP (INDOOR)

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LEGEND

Approximate Property Boundary

Ambient Air Sample

Soil Gas Sample

N
W E
S

0 12.5 25
Feet

SOURCE: MODIFIED FROM BING MAPS HYBRID, 2012.

MICHIGAN GAS UTILITIES
78 WEST CHICAGO STREET
COLDWATER, BRANCH COUNTY, MICHIGAN

FIGURE 2
OCTOBER SAMPLE LOCATION MAP (OUTDOOR)

TETRA TECH

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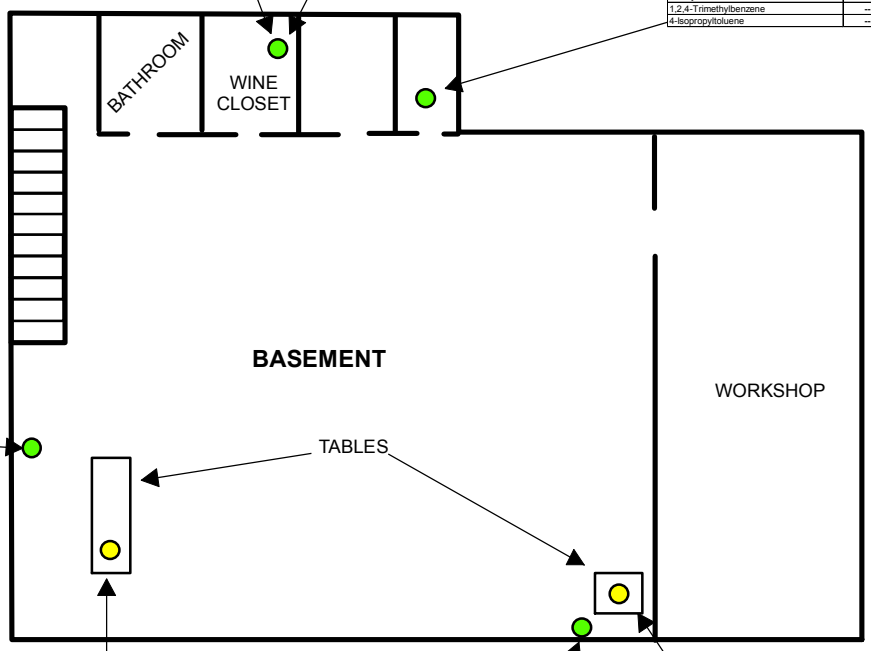
MGU-SV-2		
Analyte	May-14	Oct-14
Dichlorodifluoromethane (Freon12)	2.87	2.37
Acetone	38.73	26.61
Trichlorofluoromethane (Freon 11)	1.46	1.74
Ethanol	12.37	13.93 J+
Methylene chloride	0.66	63.20 E
Carbon disulfide	1.68	--
Isopropyl alcohol	4.37	4.69
2-Butanone (MEK)	3.86	3.77
Hexane	--	21.65
Ethyl acetate	--	10.77
Chloroform	0.58	0.54
Tetrahydrofuran	--	17.63
1,2-Dichloroethane	--	0.63
1,1,1-Trichloroethane	1.31	2.84
Benzene	0.61	1.63
Carbon tetrachloride	--	0.63
Cyclohexane	1.17	1.10
n-Heptane	--	1.43
Toluene	--	11.21
2-Hexanone (MBK)	--	0.66
Tetrachloroethene	8.82	16.95
m,p-Xylene	--	3.47
o-Xylene	--	1.04
Isopropylbenzene	--	0.88
1,3,5-Trimethylbenzene	--	0.49
Naphthalene	--	0.88
4-Isopropyltoluene	--	1.02

MGU-SV-3/MGU-SV-1		
Analyte	May-14	Oct-14
	MGU-SV-3	MGU-SV-1
Propene	32.53	--
Dichlorodifluoromethane (Freon12)	3.12	--
Acetone	43.01	26.14
Trichlorofluoromethane (Freon 11)	1.69	1.85
Ethanol	15.95	14.61 J+
Methylene chloride	0.73	72.23
1,1,2-Trichlorotrifluoroethane (Freon 113)	--	0.84
Carbon disulfide	2.24	--
Isopropyl alcohol	3.48	3.21
2-Butanone (MEK)	9.85	4.19
Hexane	4.30	9.94
Ethyl acetate	--	12.65
Chloroform	--	0.49
Tetrahydrofuran	--	19.58
1,1,1-Trichloroethane	2.07	3.33
Benzene	5.77	1.98
Carbon tetrachloride	--	0.63
Cyclohexane	2.51	1.55
n-Heptane	3.65	2.7
4-Methyl-2-pentanone (MIBK)	1.64	0.94
Toluene	18.78	12.98
Tetrachloroethene	309.90	42.92
Ethylbenzene	5.33	1.69
m,p-Xylene	9.80	5.07
o-Xylene	3.47	2.04
Isopropylbenzene	0.59	--
1,3,5-Trimethylbenzene	--	1.82
4-Ethyltoluene	--	1.62
1,2,4-Trimethylbenzene	0.59	3.49
4-Isopropyltoluene	--	2.59

MGU-SV-4		
Analyte	May-14	Oct-14
Propene	8.31	--
Dichlorodifluoromethane (Freon12)	1.19	2.77 D
Acetone	7.03	27.80 D
Trichlorofluoromethane (Freon 11)	0.73	2.26 D
Ethanol	13.05	10.03 J+D
Methylene chloride	5.80	17.78 D
2-Butanone (MEK)	--	4.01 D
Hexane	1.90	--
Ethyl acetate	14.02	13.40 D
1,1,1-Trichloroethane	0.55	2.84 D
Benzene	0.61	--
Toluene	2.11	3.91 D
Tetrachloroethene	1.83	412.30 D
o-Xylene	--	2.21 D
1,1,2,2-Tetrachloroethane	--	1.91 D
Isopropylbenzene	--	3.15 D
1,3,5-Trimethylbenzene	--	2.75 D
4-Ethyltoluene	--	2.16 D
1,2,4-Trimethylbenzene	--	7.08 D
4-Isopropyltoluene	--	2.58 D



MGU-SV-1/MGU-SV-3		
Analyte	May-14	Oct-14
	MGU-SV-1	MGU-SV-3
Dichlorodifluoromethane (Freon12)	3.16	--
Acetone	43.01	46.34 D
Trichlorofluoromethane (Freon 11)	1.40	2.70 D
Ethanol	20.17	33.37 J+D
Methylene chloride	1.28	55.91 D
Isopropyl alcohol	69.94	5.01 D
2-Butanone (MEK)	3.04	--
Hexane	2.64	22.56 D
Ethyl acetate	10.20	21.33 D
Chloroform	18.79	2.73 D
Tetrahydrofuran	--	10.85 D
1,1,1-Trichloroethane	1.91	
Benzene	0.89	1.79 D
Carbon tetrachloride	0.94	
Bromodichloromethane	10.52	
1,4-Dioxane	2.88	
Toluene	2.26	11.29 D
Tetrachloroethene	230.56 D	96.97 D
Ethylbenzene	0.52	1.73 D
m,p-Xylene	1.65	4.34 D
Styrene	--	3.74 D
o-Xylene	0.56	2.25 D
Isopropylbenzene	--	4.13 D
1,3,5-Trimethylbenzene	--	4.33 D
4-Ethyltoluene	--	2.95 D
1,2,4-Trimethylbenzene	0.84	10.82 D
Naphthalene	--	11.31 D
4-Isopropyltoluene	--	3.65 D
n-Butylbenzene	--	5.71 D

MGU-IA-1		
Analyte	May-14	Oct-14
Dichlorodifluoromethane (Freon12)	--	2.62
Acetone	52.75 D	48.95
Trichlorofluoromethane (Freon 11)	--	1.46
Ethanol	43.74 D	12.63J+
Methylene chloride	34.72 D	80.91
Isopropyl alcohol	--	11.85
2-Butanone (MEK)	--	7.11
Hexane	11.99 D	5.68
Ethyl acetate	--	15.67
Chloroform	--	0.52
Tetrahydrofuran	--	21.88
1,1,1-Trichloroethane	--	3
Benzene	--	2.21
Carbon tetrachloride	--	0.63
Cyclohexane	--	0.79
Trichloroethene	--	0.57
n-Heptane	--	1.43
Toluene	--	12.79
Tetrachloroethene	--	4.34
Ethylbenzene	--	1.13
m,p-Xylene	--	3.69
o-Xylene	--	0.82
1,2,4-Trimethylbenzene	--	0.78
4-Isopropyltoluene	--	1.18

MGU-SV-5		
Analyte	May-14	Oct-14
Dichlorodifluoromethane (Freon12)	2.87	--
Acetone	12.02	45.16 D
Trichlorofluoromethane (Freon 11)	1.40	--
Ethanol	16.59	9.05 J+D
Methylene chloride	0.59	59.73 D
Isopropyl alcohol	3.51	--
2-Butanone (MEK)	2.65	--
Hexane	1.87	--
Ethyl acetate	10.92	13.69 D
Chloroform	38.99	0.98 D
Tetrahydrofuran	--	12.68 D
1,1,1-Trichloroethane	1.58	3.55 D
Benzene	0.38	1.91 D
Carbon tetrachloride	2.01	--
Cyclohexane	--	2.24 D
Bromodichloromethane	24.12	6.62 D
Toluene	1.28	11.29 D
Tetrachloroethene	233.27 D	67.81 D
Ethylbenzene	--	2.38 D
m,p-Xylene	--	6.07 D
Styrene	--	4.89 D
o-Xylene	--	3.9 D
Isopropylbenzene	--	4.67 D
1,3,5-Trimethylbenzene	--	5.41 D
4-Ethyltoluene	--	4.18 D
1,2,4-Trimethylbenzene	--	14.01 D
Naphthalene	--	21.98 D
4-Isopropyltoluene	--	3.49 D

MGU-IA-2		
Analyte	May-14	Oct-14
Chloromethane	--	2.77
Acetone	36.83 D	45.39
Trichlorofluoromethane (Freon 11)	--	1.74
Ethanol	44.12 D	10.26 J+
Methylene chloride	36.11 D	119.95
Isopropyl alcohol	--	3.14
2-Butanone (MEK)	--	7.28
Hexane	13.4 D	6.17
Ethyl acetate	--	17.84
Tetrahydrofuran	--	18.02
1,2-Dichloroethane	--	0.67
1,1,1-Trichloroethane	--	2.84
Benzene	--	1.48
n-Heptane	--	0.98
4-Methyl-2-pentanone (MIBK)	--	0.7
Toluene	--	13.28
Tetrachloroethene	--	3.46
Ethylbenzene	--	1.26
m,p-Xylene	--	4.51
Styrene	--	1.19
o-Xylene	--	1.13
1,2,4-Trimethylbenzene	--	0.74
4-Isopropyltoluene	--	1.56

LEGEND

- Ambient Air Sample
- Soil Gas Sample
- 160 Concentration exceeds EPA RSL for residential air soil gas (May 2014).
- 160 Concentration exceeds EPA RSL for residential indoor air (May 2014).
- 160 Concentration exceeds EPA RSL for industrial air soil gas (May 2014).
- 160 Concentration exceeds EPA RSL for industrial indoor air (May 2014).
- D Diluted Sample

NOTE: BUILDING/ROOM DIMENSIONS ARE APPROXIMATE.

IF CELL CONTENTS CONTAIN MULTIPLE COLORS, THE SAMPLE EXCEEDS MULTIPLE RSLS.

ALL RESULTS ARE PRESENTED IN MICROGRAMS PER CUBIC METER.

N E S W

0 7.5 15 Feet

MICHIGAN GAS UTILITIES
78 WEST CHICAGO STREET
COLDWATER, BRANCH COUNTY, MICHIGAN

FIGURE 3
ANALYTICAL RESULTS MAP (INDOOR)

TETRA TECH

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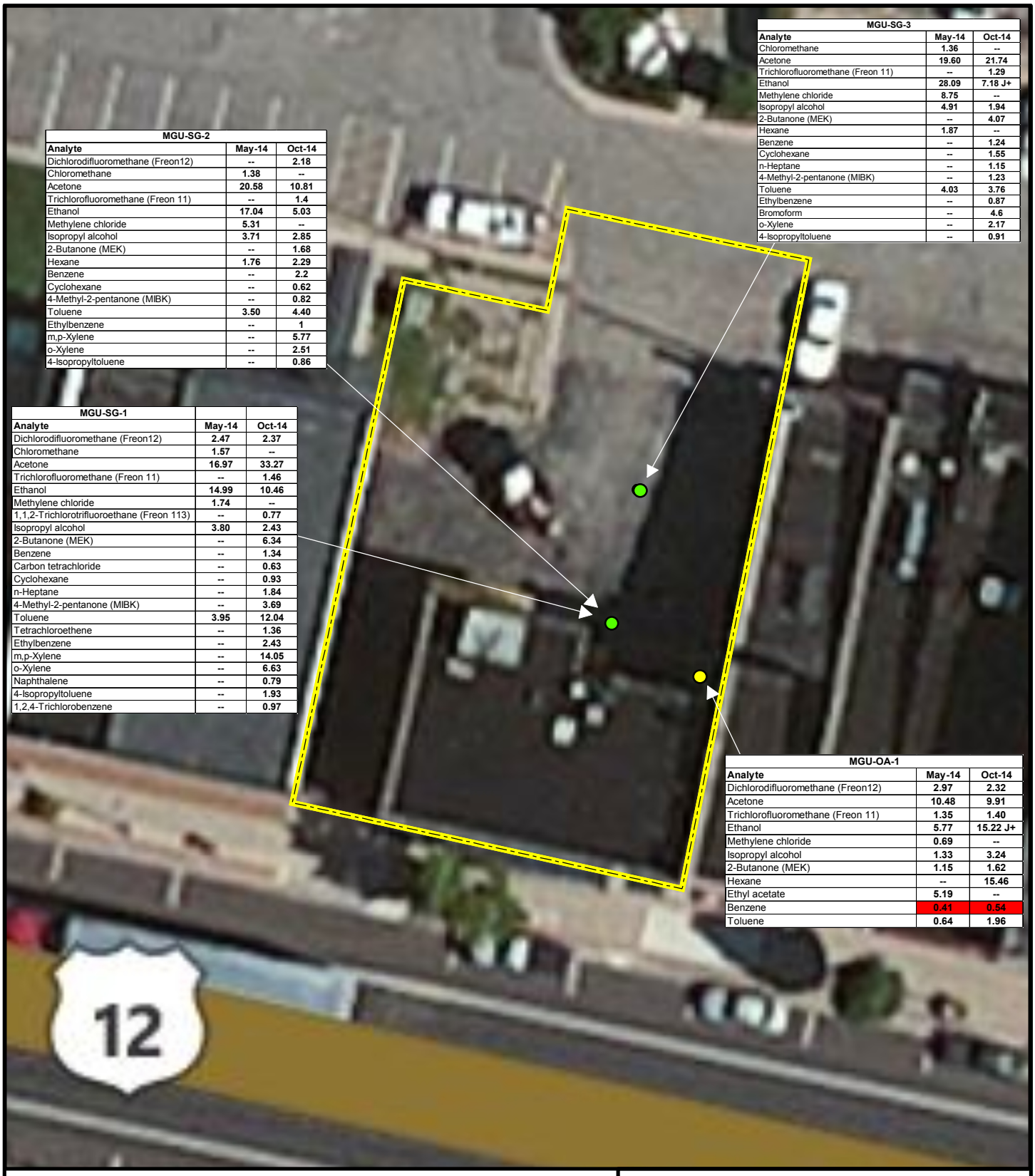

MGU-SG-3		
Analyte	May-14	Oct-14
Chloromethane	1.36	--
Acetone	19.60	21.74
Trichlorofluoromethane (Freon 11)	--	1.29
Ethanol	28.09	7.18 J+
Methylene chloride	8.75	--
Isopropyl alcohol	4.91	1.94
2-Butanone (MEK)	--	4.07
Hexane	1.87	--
Benzene	--	1.24
Cyclohexane	--	1.55
n-Heptane	--	1.15
4-Methyl-2-pentanone (MIBK)	--	1.23
Toluene	4.03	3.76
Ethylbenzene	--	0.87
Bromoform	--	4.6
o-Xylene	--	2.17
4-Isopropyltoluene	--	0.91

MGU-SG-2		
Analyte	May-14	Oct-14
Dichlorodifluoromethane (Freon12)	--	2.18
Chloromethane	1.38	--
Acetone	20.58	10.81
Trichlorofluoromethane (Freon 11)	--	1.4
Ethanol	17.04	5.03
Methylene chloride	5.31	--
Isopropyl alcohol	3.71	2.85
2-Butanone (MEK)	--	1.68
Hexane	1.76	2.29
Benzene	--	2.2
Cyclohexane	--	0.62
4-Methyl-2-pentanone (MIBK)	--	0.82
Toluene	3.50	4.40
Ethylbenzene	--	1
m,p-Xylene	--	5.77
o-Xylene	--	2.51
4-Isopropyltoluene	--	0.86

MGU-SG-1		
Analyte	May-14	Oct-14
Dichlorodifluoromethane (Freon12)	2.47	2.37
Chloromethane	1.57	--
Acetone	16.97	33.27
Trichlorofluoromethane (Freon 11)	--	1.46
Ethanol	14.99	10.46
Methylene chloride	1.74	--
1,1,2-Trichlorotrifluoroethane (Freon 113)	--	0.77
Isopropyl alcohol	3.80	2.43
2-Butanone (MEK)	--	6.34
Benzene	--	1.34
Carbon tetrachloride	--	0.63
Cyclohexane	--	0.93
n-Heptane	--	1.84
4-Methyl-2-pentanone (MIBK)	--	3.69
Toluene	3.95	12.04
Tetrachloroethene	--	1.36
Ethylbenzene	--	2.43
m,p-Xylene	--	14.05
o-Xylene	--	6.63
Naphthalene	--	0.79
4-Isopropyltoluene	--	1.93
1,2,4-Trichlorobenzene	--	0.97

MGU-OA-1		
Analyte	May-14	Oct-14
Dichlorodifluoromethane (Freon12)	2.97	2.32
Acetone	10.48	9.91
Trichlorofluoromethane (Freon 11)	1.35	1.40
Ethanol	5.77	15.22 J+
Methylene chloride	0.69	--
Isopropyl alcohol	1.33	3.24
2-Butanone (MEK)	1.15	1.62
Hexane	--	15.46
Ethyl acetate	5.19	--
Benzene	0.41	0.54
Toluene	0.64	1.96

LEGEND

- Approximate Property Boundary
- Ambient Air Sample
- Soil Gas Sample
- 160 Concentration exceeds EPA RSL for residential indoor air (May 2014).

NOTE: ALL RESULTS ARE PRESENTED IN MICROGRAMS PER CUBIC METER.

SOURCE: MODIFIED FROM BING MAPS HYBRID, 2012.

N W E S

0 12.5 25 Feet

MICHIGAN GAS UTILITIES
78 WEST CHICAGO STREET
COLDWATER, BRANCH COUNTY, MICHIGAN

FIGURE 4
OCTOBER ANALYTICAL RESULTS MAP (OUTDOOR)

TETRA TECH

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APPENDIX B
FIELD DATA SHEETS

Air Sampling Data Sheet

Site Name: Mich Gas Util

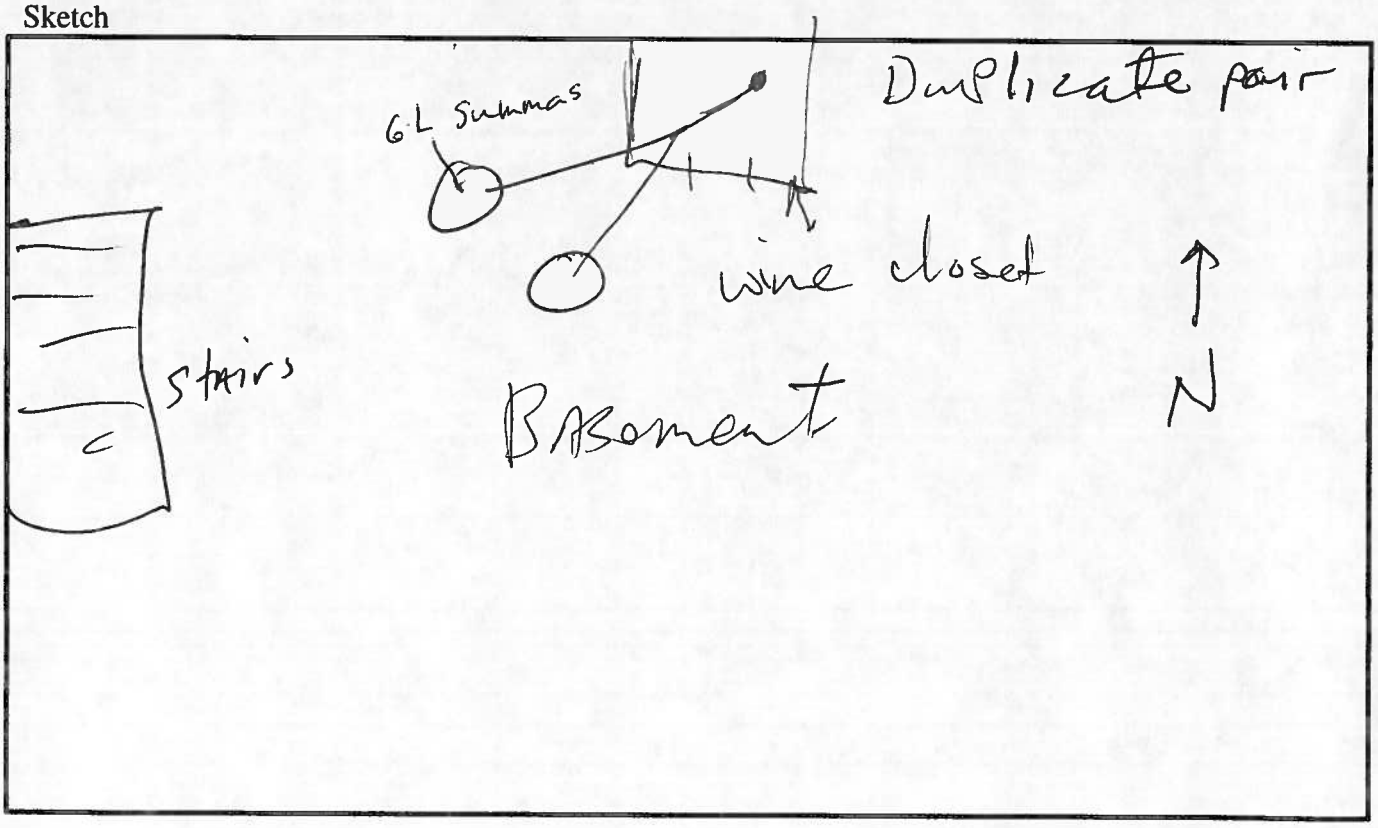
Company: ***Tetra Tech EMI***

Client: ***U.S. EPA Region 5***

Resident Address: 78 W. Chicago.

Location:	Indoor Outdoor	Matrix:	(SV) AA
Sample ID No.:	MGU-SV-1+2	Floor/Level	Basement
Canister ID No.:	7631 + 0242	Regulator ID No.	1309 + 2851
Start Date / Time	10/2 ; 1404	End Date / Time	10/3 11:24 & 11:22
Starting Vacuum (in Hg)	-30 + -29.5	End Vacuum	-2 + -7
Temp – In (start)	68° F	Temp – In (stop)	68
Temp – Out (start)	70	Temp – Out (stop	72
Baro. Press.- In (start)		B.P. – In (stop)	
Baro. Press. – Out (start)		B.P. – Out (stop)	
Sampler(s)	Kevin Scott + Andy Kleist		

Sketch



Comments:

Air Sampling Data Sheet

10/2

Site Name: Mich Gas Util.

Company: ***Tetra Tech EMI***

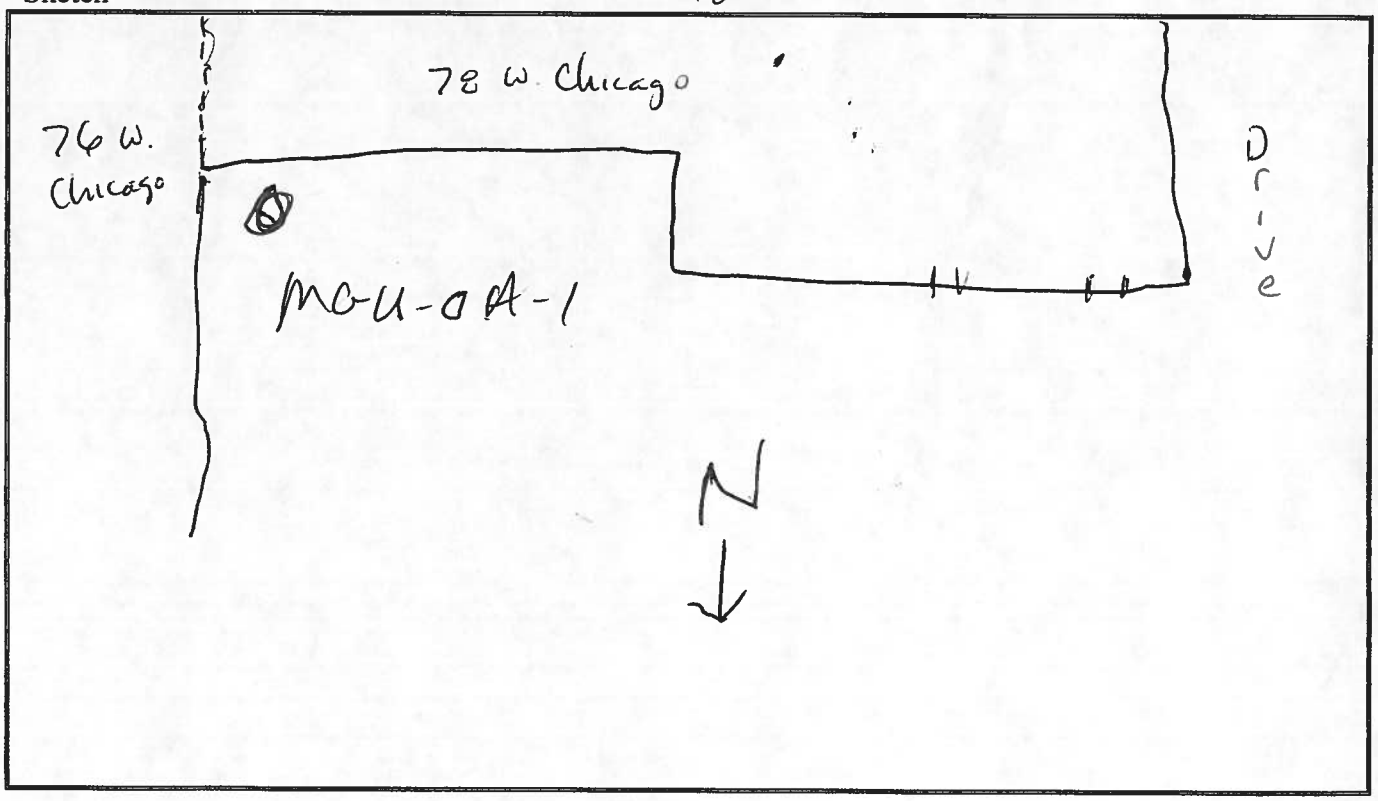
Client: ***U.S. EPA Region 5***

Resident Address: 78 W. Chicago

Location:	Indoor (Outdoor)	Matrix:	SV (AA)
Sample ID No.:	MGU-OA-1	Floor/Level	
Canister ID No.:	1867	Regulator ID No.	2889
Start Date / Time	10/2 ; 12:00	End Date / Time	10/3 ; 12:05
Starting Vacuum (in Hg)	-29 Hg.	End Vacuum	-8.5
Temp – In (start)	NA	Temp – In (stop)	NA
Temp – Out (start)	70°F	Temp – Out (stop	72
Baro. Press.- In (start)		B.P. – In (stop)	
Baro. Press. – Out (start)		B.P. – Out (stop)	
Sampler(s)	K Scott		

Humid. 59%

Sketch



Comments:

Air Sampling Data Sheet

Site Name: Mich Gas Util

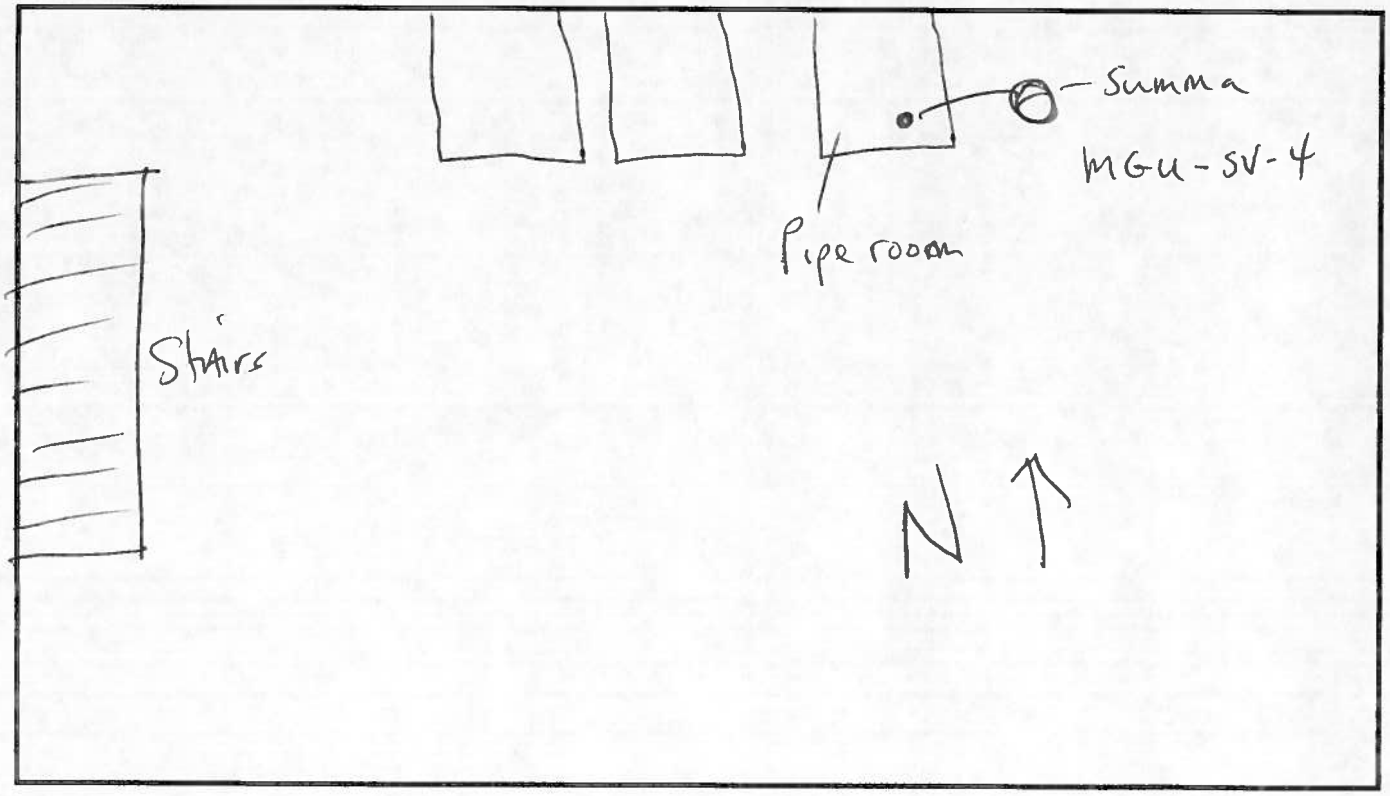
Company: ***Tetra Tech EMI***

Client: ***U.S. EPA Region 5***

Resident Address: 78 W. Chicago Ave

Location:	Indoor Outdoor	Matrix:	SV AA
Sample ID No.:	MGU-SV-04	Floor/Level	Basement
Canister ID No.:	0493	Regulator ID No.	1315
Start Date / Time	10/2 ; 1405	End Date / Time	10/3 ; 1128
Starting Vacuum (in Hg)	-32	End Vacuum	-6
Temp – In (start)	68	Temp – In (stop)	68
Temp – Out (start)	70	Temp – Out (stop	72
Baro. Press.- In (start)		B.P. – In (stop)	
Baro. Press. – Out (start)		B.P. – Out (stop)	
Sampler(s)	Kevin Scott; Andy Kleist		

Sketch



Comments:

Air Sampling Data Sheet

Site Name: Mich Gas Util

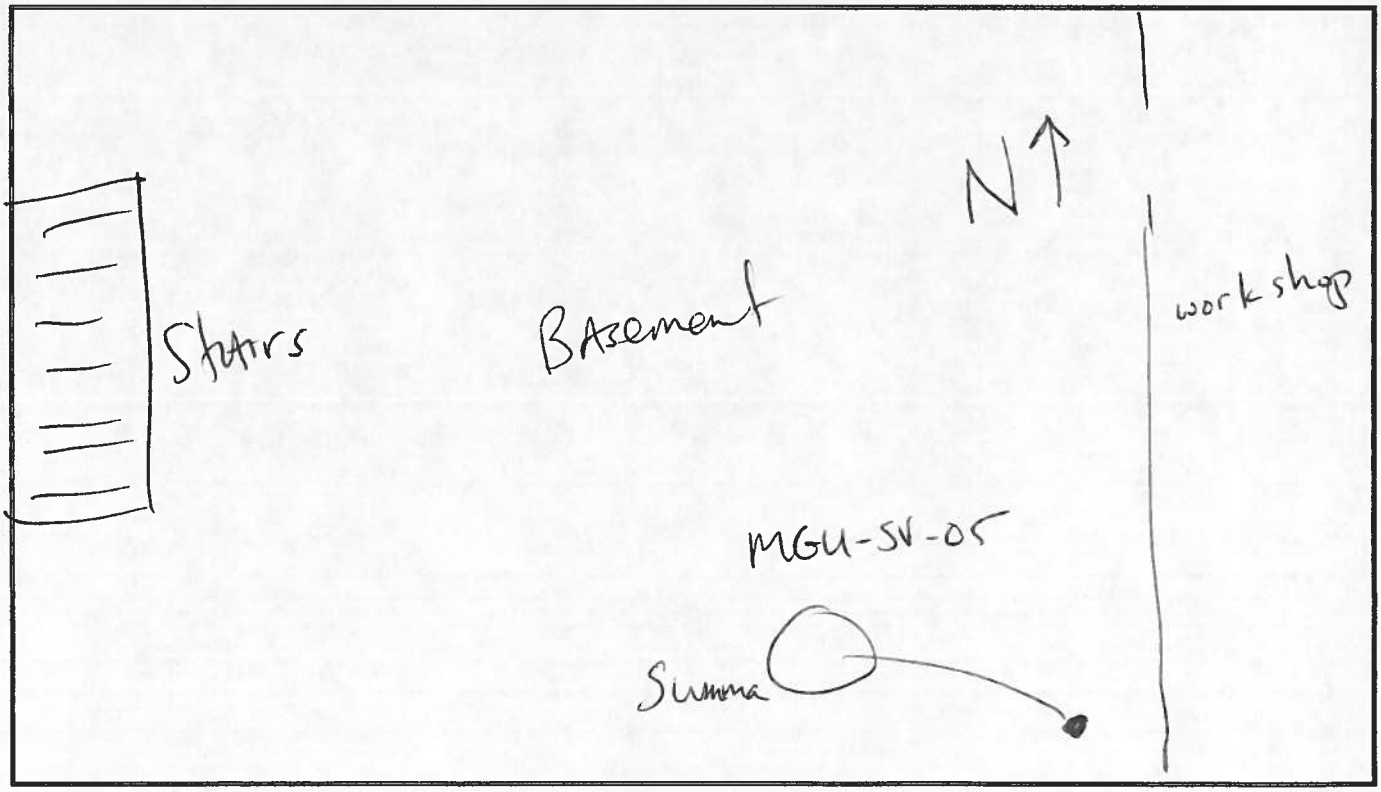
Company: ***Tetra Tech EMI***

Client: ***U.S. EPA Region 5***

Resident Address: 78 W. Chicago Ave

Location:	Indoor / Outdoor	Matrix:	SV / AA
Sample ID No.:	MGU-SV-05	Floor/Level	Basement
Canister ID No.:	16011	Regulator ID No.	2887
Start Date / Time	10/2, 1407	End Date / Time	10/3, 1131
Starting Vacuum (in Hg)	-27.5	End Vacuum	0
Temp – In (start)	68	Temp – In (stop)	69
Temp – Out (start)	70	Temp – Out (stop	72
Baro. Press.- In (start)		B.P. – In (stop)	
Baro. Press. – Out (start)		B.P. – Out (stop)	
Sampler(s)	Kevin Scott, Andy Kleist		

Sketch



Comments:

Air Sampling Data Sheet

Site Name: Mich Gas Util

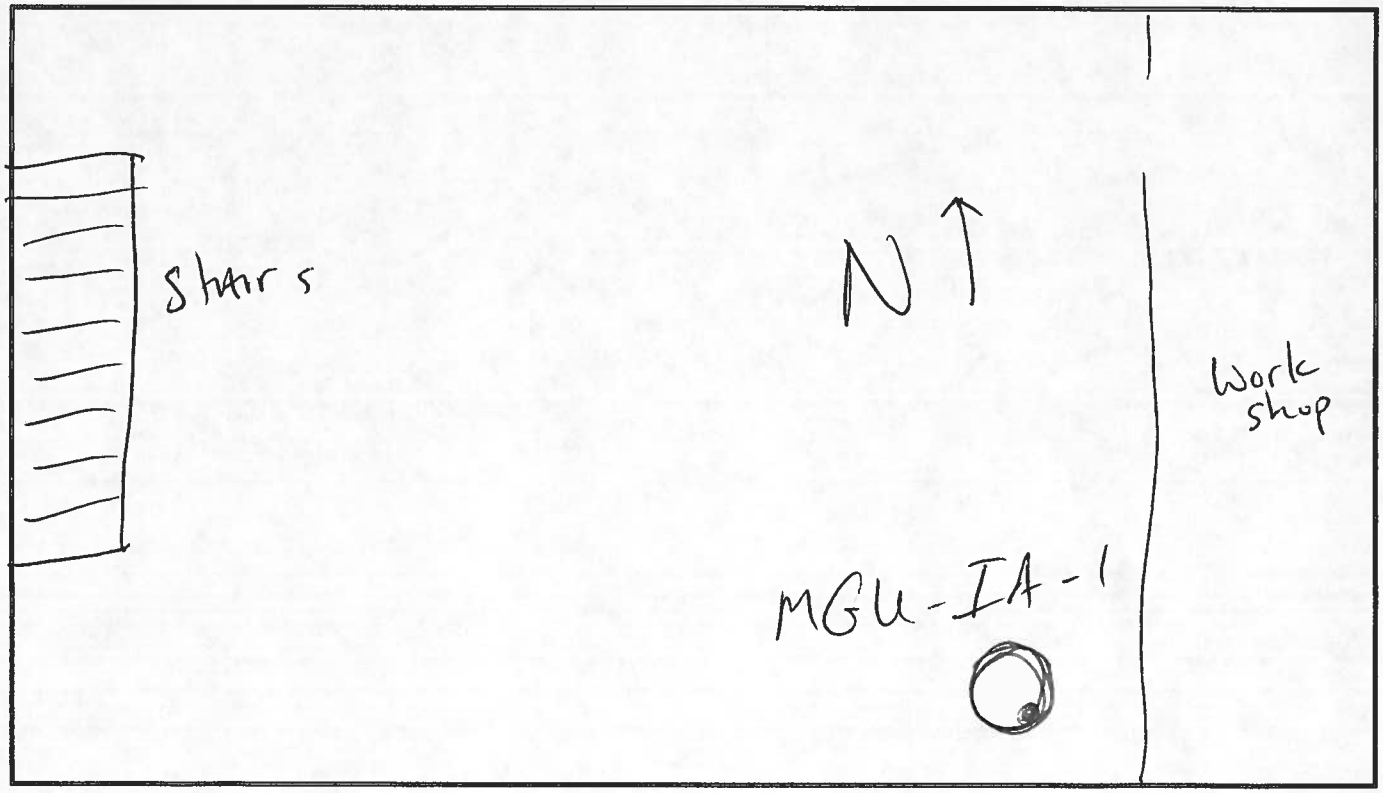
Company: ***Tetra Tech EMI***

Client: ***U.S. EPA Region 5***

Resident Address: 78 W. Chicago Av.

Location:	Indoor Outdoor	Matrix:	SV AA
Sample ID No.:	MGU-IA-01	Floor/Level	Basement
Canister ID No.:	0186	Regulator ID No.	2987
Start Date / Time	10/2 ; 1406	End Date / Time	10/3 ; 1130
Starting Vacuum (in Hg)	-30	End Vacuum	-0.5
Temp – In (start)	68	Temp – In (stop)	68
Temp – Out (start)	70	Temp – Out (stop	72
Baro. Press.- In (start)		B.P. – In (stop)	
Baro. Press. – Out (start)		B.P. – Out (stop)	
Sampler(s)	Kevin Scott , Andy Kleist		

Sketch



Comments:

Air Sampling Data Sheet

Site Name: Mich GAS Util

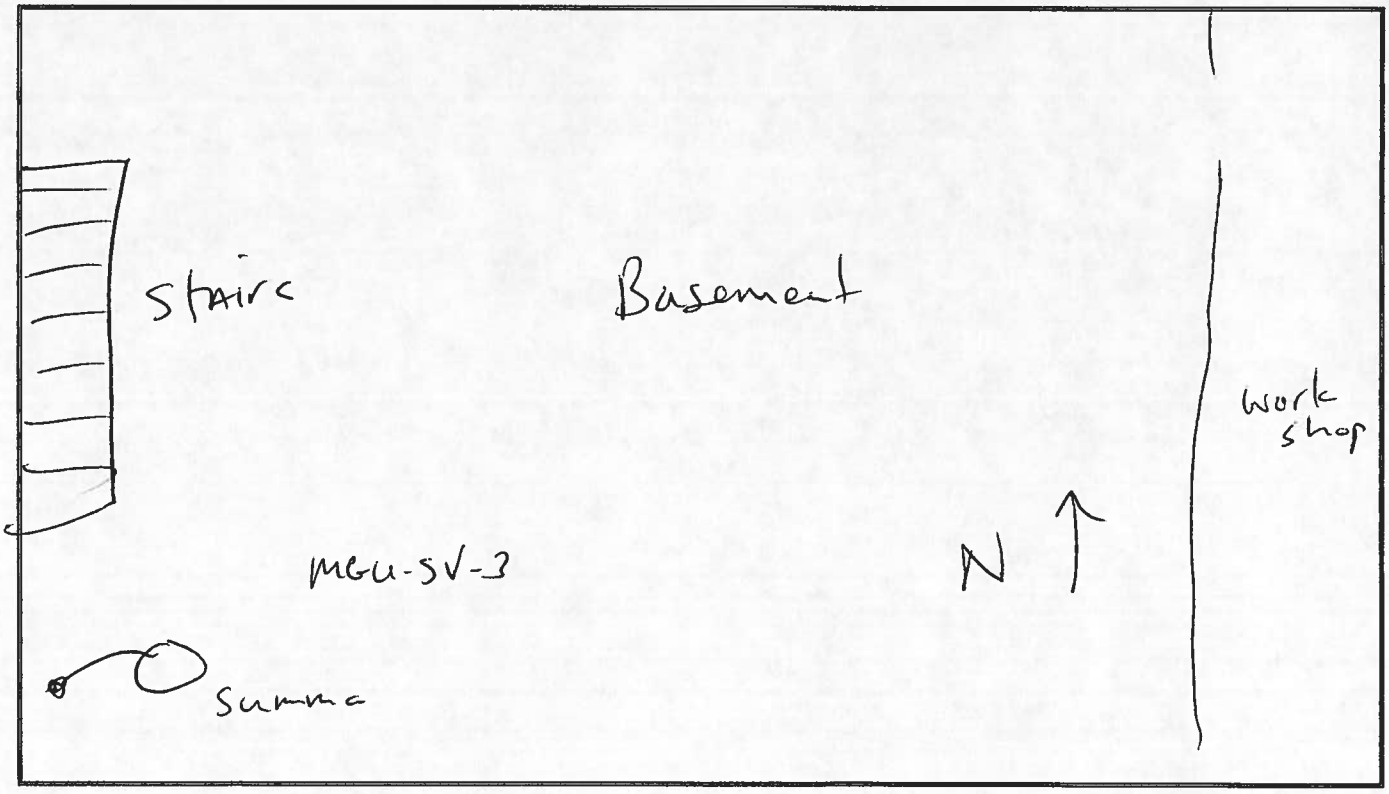
Company: ***Tetra Tech EMI***

Client: ***U.S. EPA Region 5***

Resident Address: 78. W. Chicago

Location:	Indoor Outdoor	Matrix:	SV AA
Sample ID No.:	MGU-SV-3	Floor/Level	Basement
Canister ID No.:	1346	Regulator ID No.	0267
Start Date / Time	10/2 ; 1408	End Date / Time	10/3 ; 1148
Starting Vacuum (in Hg)	-31	End Vacuum	-8.5
Temp – In (start)	68	Temp – In (stop)	68
Temp – Out (start)	70	Temp – Out (stop	72
Baro. Press.- In (start)		B.P. – In (stop)	
Baro. Press. – Out (start)		B.P. – Out (stop)	
Sampler(s)	Kevin Scott		Andy Kleist

Sketch



Comments:

Air Sampling Data Sheet

Site Name: Mich Gas Util

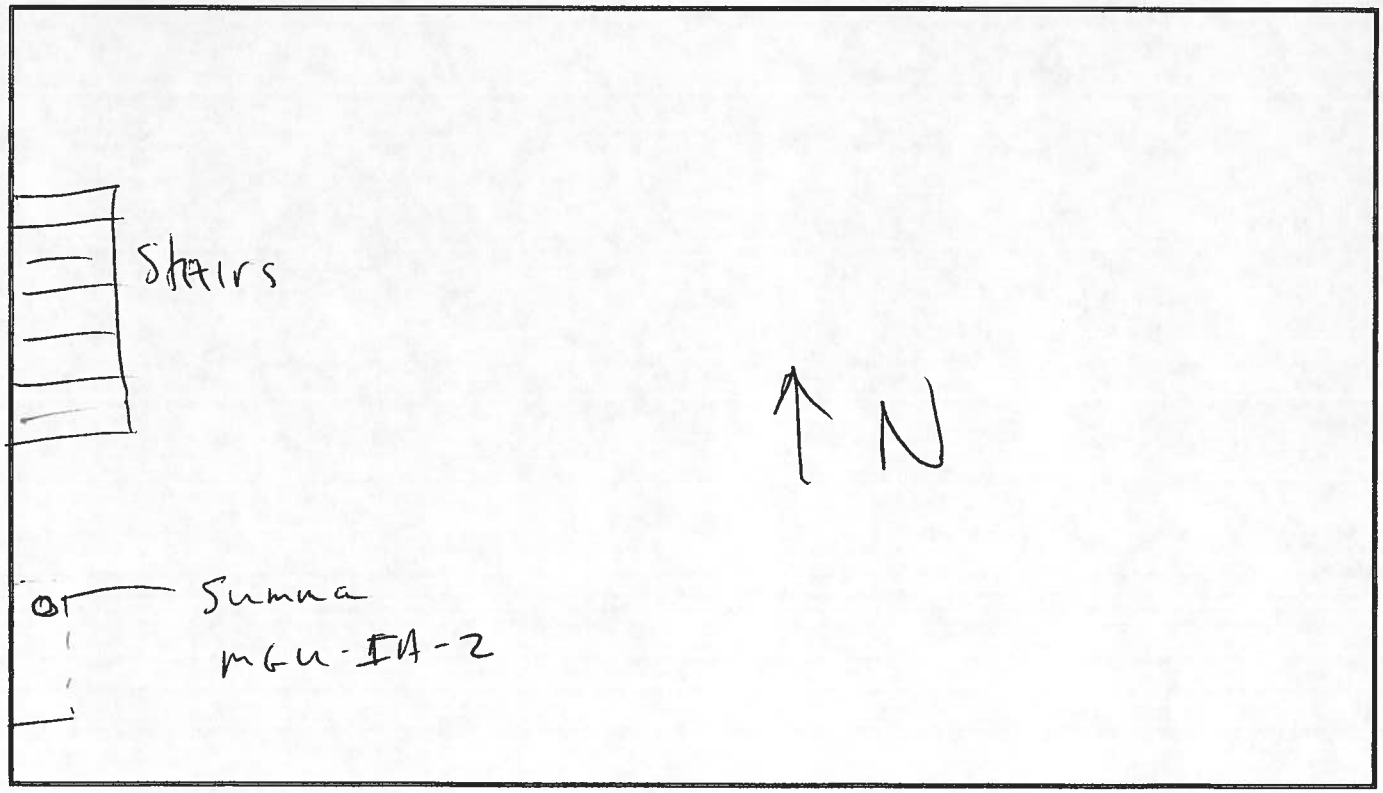
Company: ***Tetra Tech EMI***

Client: ***U.S. EPA Region 5***

Resident Address: 78 W. Chicago

Location:	Indoor Outdoor	Matrix:	SV AA
Sample ID No.:	MGU-IA-2	Floor/Level	Basement
Canister ID No.:	0255	Regulator ID No.	2877
Start Date / Time	10/2 ; 1407	End Date / Time	10/3 ; 1134
Starting Vacuum (in Hg)	-27.5	End Vacuum	-6.5
Temp – In (start)	68	Temp – In (stop)	68
Temp – Out (start)	70	Temp – Out (stop	72
Baro. Press.- In (start)		B.P. – In (stop)	
Baro. Press. – Out (start)		B.P. – Out (stop)	
Sampler(s)	Kevin Scott,	Andy Kleist	

Sketch



Comments:

ATTACHMENT C

DATA VALIDATION REPORT AND LABORATORY ANALYTICAL DATA PACKAGE

DATA VERIFICATION REPORT

Michigan Gas Utilities Site, Coldwater, Michigan

This report presents a data verification for the analytical report on air samples collected form the Michigan Gas Utilities Site in Coldwater, Michigan, on 3 October 2014 by Tetra Tech START personnel as part of a removal assessment. The samples including eight soil gas samples, two indoor air samples, and one ambient air sample, were sent by overnight courier to the Spectrum Analytical, Inc. (Spectrum), facility in Agawam, Massachusetts for analysis for volatile organic compounds (VOC) by U.S. Environmental Protection Agency (EPA) Method TO-15. Spectrum identified the samples as Report No. SB97588. The following paragraphs discuss the results of the analyses, with emphasis on irregularities, and provide an overall assessment of the results. Spectrum's reported analytical results are included following this report.

The most significant irregularities were some continuing calibration recoveries slightly outside of quality control (QC) limits. Most involved analytes, such as chloromethane and hexachlorobutadiene, were not detected in any field samples so no qualifications were applied. However, the continuing calibration response for ethanol exceeded its QC limit, so the ethanol concentrations reported for all samples are qualified as estimated, possibly biased high, and flagged "J+". In addition, the continuing calibration response for naphthalene was below its QC limit, so the detected naphthalene concentrations in two samples are qualified as estimated, possibly biased low, and flagged "J-".

The concentrations of the common laboratory contaminant methylene chloride in samples MGU-SV-01, MGU-SV-02, MGU-IA-01, and MGU-IA-02 (and of the common laboratory contaminant acetone in sample MGU-IA-01) exceeded the analytical instrument's calibration range, as indicated by Spectrum's "E" flag. Spectrum re-analyzed these samples at a dilution and the latter results should be used, without qualification.

Samples MGU-SV-03, MGU-SV-04, and MGU-SV-05 had relatively high concentrations of total VOC. Therefore Spectrum analyzed them at 4-, 5-, and 4-fold dilutions, respectively, which resulted in increased reporting limits for all undetected analytes. Data users should note that the nondetected results for these samples are not fully comparable with the results for the other samples.

On the whole, the analyses went well with no results rejected and relatively few qualifications. All results may be used, as qualified, for any purpose.

Report Date:
21-Oct-14 13:48

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Tetra Tech, Inc
1 S. Wacker Drive 37th Floor
Chicago, IL 60606
Attn: Kevin Scott

Project: Mich. Gas Util - Coldwater, MI
Project #: 103X9026 1405 006

Laboratory ID	Client Sample ID	Container	Matrix	Date Sampled	Date Received
SB97588-01	MGU-SV-02	Summa canister 6 liter	Soil Gas	03-Oct-14 11:22	06-Oct-14 10:00
SB97588-02	MGU-OA-01	Summa canister 6 liter	Ambient Air	03-Oct-14 12:05	06-Oct-14 10:00
SB97588-03	MGU-SG-01	Summa canister 6 liter	Soil Gas	03-Oct-14 10:52	06-Oct-14 10:00
SB97588-04	MGU-SG-03	Summa canister 6 liter	Soil Gas	03-Oct-14 11:11	06-Oct-14 10:00
SB97588-05	MGU-IA-01	Summa canister 6 liter	Indoor Air	03-Oct-14 11:30	06-Oct-14 10:00
SB97588-06	MGU-SV-01	Summa canister 6 liter	Soil Gas	03-Oct-14 11:24	06-Oct-14 10:00
SB97588-07	MGU-SG-02	Summa canister 6 liter	Soil Gas	03-Oct-14 10:59	06-Oct-14 10:00
SB97588-08	MGU-SV-03	Summa canister 6 liter	Soil Gas	03-Oct-14 11:48	06-Oct-14 10:00
SB97588-09	MGU-SV-05	Summa canister 6 liter	Soil Gas	03-Oct-14 11:31	06-Oct-14 10:00
SB97588-10	MGU-SV-04	Summa canister 6 liter	Soil Gas	03-Oct-14 11:28	06-Oct-14 10:00
SB97588-11	MGU-IA-02	Summa canister 6 liter	Indoor Air	03-Oct-14 11:34	06-Oct-14 10:00

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 36 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, NJ-MA012, PA-68-04426 and FL-E87936).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

Samples are received and the pressure is recorded from the gauge on the canister. If a canister does not have a gauge, a vacuum gauge is attached to the valve and pressure is recorded. If the canister is below -10 psig, the can must be pressurized to 0 psig. Tedlar bags do not have the pressure recorded. The can pressure can be located within this report in the sample header information.

If a Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

EPA TO-15L

Calibration:

1409041

Analyte quantified by quadratic equation type calibration.

Chloroethane
Methylene chloride
Naphthalene

This affected the following samples:

1423954-BLK1
1423954-BS1
1424455-BLK1
1424455-BS1
MGU-IA-01
MGU-IA-02
MGU-OA-01
MGU-SG-01
MGU-SG-02
MGU-SG-03
MGU-SV-01
MGU-SV-02
MGU-SV-03
MGU-SV-04
MGU-SV-05
S410143-ICV1
S411528-CCV1
S411813-CCV1

S410143-ICV1

Analyte percent recovery is outside individual acceptance criteria (70-130).

Ethanol (134%)
Naphthalene (66%)

EPA TO-15L

Calibration:

S410143-ICV1

This affected the following samples:

1423954-BLK1
1423954-BS1
1424455-BLK1
1424455-BS1
MGU-IA-01
MGU-IA-02
MGU-OA-01
MGU-SG-01
MGU-SG-02
MGU-SG-03
MGU-SV-01
MGU-SV-02
MGU-SV-03
MGU-SV-04
MGU-SV-05
S411528-CCV1
S411813-CCV1

Laboratory Control Samples:

1423954 BS

1,1,1,2-Tetrachloroethane percent recovery 153 (50-150) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

MGU-IA-01
MGU-OA-01
MGU-SG-01
MGU-SG-02
MGU-SG-03
MGU-SV-01
MGU-SV-02

1423954-BS1

analyte passes in CCV1

1,1,1,2-Tetrachloroethane

Samples:

S411528-CCV1

Analyte percent difference is outside individual acceptance criteria (30), but within overall method allowances.

1,2,4-Trichlorobenzene (41.2%)
1,3-Butadiene (-31.0%)
Chloromethane (-32.6%)
Hexachlorobutadiene (54.4%)

EPA TO-15L

Samples:

S411528-CCV1

This affected the following samples:

1423954-BLK1
1423954-BS1
MGU-IA-01
MGU-OA-01
MGU-SG-01
MGU-SG-02
MGU-SG-03
MGU-SV-01
MGU-SV-02

S411813-CCV1

Analyte percent difference is outside individual acceptance criteria (30), but within overall method allowances.

1,1,1,2-Tetrachloroethane (36.5%)
Cyclohexane (-34.4%)

This affected the following samples:

1424455-BLK1
1424455-BS1
MGU-IA-02
MGU-SV-03
MGU-SV-04
MGU-SV-05

SB97588-01 *MGU-SV-02*

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Methylene chloride

SB97588-01RE1 *MGU-SV-02*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SB97588-05 *MGU-IA-01*

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Acetone
Methylene chloride

SB97588-05RE1 *MGU-IA-01*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SB97588-06 *MGU-SV-01*

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Methylene chloride

SB97588-06RE1 *MGU-SV-01*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SB97588-08 *MGU-SV-03*

EPA TO-15L

Samples:

SB97588-08 *MGU-SV-03*

Elevated Reporting Limits due to the presence of high levels of non-target analytes; sample may not meet client requested reporting limit for this reason.

SB97588-09 *MGU-SV-05*

Elevated Reporting Limits due to the presence of high levels of non-target analytes; sample may not meet client requested reporting limit for this reason.

SB97588-10 *MGU-SV-04*

This sample was not able to be analyzed for client requested reporting limits due to high concentrations of target analytes in the sample.

SB97588-11 *MGU-IA-02*

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Methylene chloride

SB97588-11RE1 *MGU-IA-02*

Data confirmed with duplicate analysis.

Methylene chloride

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Sample Acceptance Check Form

Client:	Tetra Tech, Inc - Chicago, IL
Project:	Mich. Gas Util - Coldwater, MI / 103X9026 1405 006
Work Order:	SB97588
Sample(s) received on:	10/6/2014

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
1. Were custody seals present?	☑	☐	☐
2. Were custody seals intact?	☑	☐	☐
3. Were samples received at a temperature of ≤ 6°C?	☐	☐	☑
4. Were samples cooled on ice upon transfer to laboratory representative?	☐	☐	☑
5. Were samples refrigerated upon transfer to laboratory representative?	☐	☐	☑
6. Were sample containers received intact?	☑	☐	☐
7. Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
8. Were samples accompanied by a Chain of Custody document?	☑	☐	☐
9. Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
10. Did sample container labels agree with Chain of Custody document?	☑	☐	☐
11. Were samples received within method-specific holding times?	☑	☐	☐

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SV-02	103X9026 1405 006	Soil Gas	03-Oct-14 11:22	06-Oct-14
SB97588-01				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 10-Oct-14, Dilution: 1 — Can pressure: -8, Can ID: 0242

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	< 0.100	0.100	< 0.17	0.17		EPA TO-15L	10-Oct-14	BRF	1423954	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.480**	0.100	**2.37**	0.49		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.21	0.21		"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.70	0.70		"	"	"	"	X
75-01-4	Vinyl chloride	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.39	0.39		"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
67-64-1	Acetone	**11.2**	0.500	**26.61**	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.310**	0.100	**1.74**	0.56		"	"	"	"	X
64-17-5	Ethanol	**7.39**	0.500	**13.93**	0.94		"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-09-2	Methylene chloride	**18.2**	0.100	**63.20**	0.35	E	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.77	0.77		"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.36	0.36		"	"	"	"	X
67-63-0	Isopropyl alcohol	**1.91**	0.500	**4.69**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**1.28**	0.100	**3.77**	0.29		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
110-54-3	Hexane	**6.14**	0.500	**21.65**	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	**2.99**	0.100	**10.77**	0.36		"	"	"	"	
67-66-3	Chloroform	**0.110**	0.100	**0.54**	0.49		"	"	"	"	X
109-99-9	Tetrahydrofuran	**5.98**	0.100	**17.63**	0.29		"	"	"	"	
107-06-2	1,2-Dichloroethane	**0.130**	0.100	**0.53**	0.40		"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	**0.520**	0.100	**2.84**	0.55		"	"	"	"	X
71-43-2	Benzene	**0.510**	0.100	**1.63**	0.32		"	"	"	"	X
56-23-5	Carbon tetrachloride	**0.100**	0.100	**0.63**	0.63		"	"	"	"	X
110-82-7	Cyclohexane	**0.320**	0.100	**1.10**	0.34		"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.100	0.100	< 0.67	0.67		"	"	"	"	X
79-01-6	Trichloroethene	< 0.100	0.100	< 0.54	0.54		"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80		"	"	"	"	X
142-82-5	n-Heptane	**0.350**	0.100	**1.43**	0.41		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.100	0.100	< 0.41	0.41		"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.100	0.100	< 0.55	0.55		"	"	"	"	X
108-88-3	Toluene	**2.98**	0.100	**11.21**	0.38		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	**0.160**	0.100	**0.66**	0.41		"	"	"	"	
124-48-1	Dibromochloromethane	< 0.100	0.100	< 0.85	0.85		"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SV-02	103X9026 1405 006	Soil Gas	03-Oct-14 11:22	06-Oct-14
SB97588-01				

CAS No.	*Analyte(s)*	*Result/Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Air Quality Analyses											
Volatile Organics in Air Low Level		ppbv	Prepared 10-Oct-14 Dilution: 1				Can pressure: -8 Can ID: 0242				
106-93-4	1,2-Dibromoethane (EDB)	< 0.100	0.100	< 0.77	0.77		EPA TO-15L	10-Oct-14	BRF	1423954	X
127-18-4	Tetrachloroethene	**2.50**	0.100	**16.95**	0.68		"	"	"	"	X
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	
100-41-4	Ethylbenzene	< 0.100	0.100	< 0.43	0.43		"	"	"	"	X
179601-23-1	m,p-Xylene	**0.800**	0.200	**3.47**	0.87		"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03		"	"	"	"	X
100-42-5	Styrene	< 0.100	0.100	< 0.43	0.43		"	"	"	"	X
95-47-6	o-Xylene	**0.240**	0.100	**1.04**	0.43		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	X
98-82-8	Isopropylbenzene	**0.180**	0.100	**0.88**	0.49		"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	**0.100**	0.100	**0.49**	0.49		"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	**0.180**	0.100	**0.88**	0.49		"	"	"	"	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62		"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
100-44-7	Benzyl chloride	< 0.100	0.100	< 0.52	0.52		"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
99-87-6	4-Isopropyltoluene	**0.190**	0.100	**1.02**	0.54		"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.100	0.100	< 0.74	0.74		"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.100	0.100	< 1.07	1.07		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*104*		*70-130 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 2			GS1					
75-09-2	Methylene chloride	**14.6**	0.200	**50.70**	0.69	D	EPA TO-15L	16-Oct-14	KRL	1424455	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*108*		*70-130 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-OA-01	103X9026 1405 006	Ambient Air	03-Oct-14 12:05	06-Oct-14
SB97588-02				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 10-Oct-14, Dilution: 1 — Can pressure: -9, Can ID: 1867

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	< 0.100	0.100	< 0.17	0.17		EPA TO-15L	10-Oct-14	BRF	1423954	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.470**	0.100	**2.32**	0.49		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.21	0.21		"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.70	0.70		"	"	"	"	X
75-01-4	Vinyl chloride	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.39	0.39		"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
67-64-1	Acetone	**4.17**	0.500	**9.91**	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.250**	0.100	**1.40**	0.56		"	"	"	"	X
64-17-5	Ethanol	**8.07**	0.500	**15.22**	0.94		"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-09-2	Methylene chloride	< 0.100	0.100	< 0.35	0.35		"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.77	0.77		"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.36	0.36		"	"	"	"	X
67-63-0	Isopropyl alcohol	**1.32**	0.500	**3.24**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**0.550**	0.100	**1.62**	0.29		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
110-54-3	Hexane	< 0.500	0.500	< 1.76	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	**4.29**	0.100	**15.46**	0.36		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.100	0.100	< 0.29	0.29		"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.100	0.100	< 0.55	0.55		"	"	"	"	X
71-43-2	Benzene	**0.170**	0.100	**0.54**	0.32		"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.100	0.100	< 0.63	0.63		"	"	"	"	X
110-82-7	Cyclohexane	< 0.100	0.100	< 0.34	0.34		"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.100	0.100	< 0.67	0.67		"	"	"	"	X
79-01-6	Trichloroethene	< 0.100	0.100	< 0.54	0.54		"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80		"	"	"	"	X
142-82-5	n-Heptane	< 0.100	0.100	< 0.41	0.41		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.100	0.100	< 0.41	0.41		"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.100	0.100	< 0.55	0.55		"	"	"	"	X
108-88-3	Toluene	**0.520**	0.100	**1.96**	0.38		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.100	0.100	< 0.41	0.41		"	"	"	"	
124-48-1	Dibromochloromethane	< 0.100	0.100	< 0.85	0.85		"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-OA-01	103X9026 1405 006	Ambient Air	03-Oct-14 12:05	06-Oct-14
SB97588-02				

CAS No.	*Analyte(s)*	*Result/Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Air Quality Analyses											
Volatile Organics in Air Low Level		ppbv	Prepared 10-Oct-14 Dilution: 1				Can pressure: -9 Can ID: 1867				
106-93-4	1,2-Dibromoethane (EDB)	< 0.100	0.100	< 0.77	0.77		EPA TO-15L	10-Oct-14	BRF	1423954	X
127-18-4	Tetrachloroethene	< 0.100	0.100	< 0.68	0.68		"	"	"	"	X
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	
100-41-4	Ethylbenzene	< 0.100	0.100	< 0.43	0.43		"	"	"	"	X
179601-23-1	m,p-Xylene	< 0.200	0.200	< 0.87	0.87		"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03		"	"	"	"	X
100-42-5	Styrene	< 0.100	0.100	< 0.43	0.43		"	"	"	"	X
95-47-6	o-Xylene	< 0.100	0.100	< 0.43	0.43		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62		"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
100-44-7	Benzyl chloride	< 0.100	0.100	< 0.52	0.52		"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.100	0.100	< 0.54	0.54		"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.100	0.100	< 0.74	0.74		"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.100	0.100	< 1.07	1.07		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*98*		*70-130 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SG-01	103X9026 1405 006	Soil Gas	03-Oct-14 10:52	06-Oct-14
SB97588-03				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 10-Oct-14, Dilution: 1 — Can pressure: -2, Can ID: 0206

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	< 0.100	0.100	< 0.17	0.17		EPA TO-15L	10-Oct-14	BRF	1423954	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.480**	0.100	**2.37**	0.49		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.21	0.21		"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.70	0.70		"	"	"	"	X
75-01-4	Vinyl chloride	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.39	0.39		"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
67-64-1	Acetone	**14.0**	0.500	**33.27**	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.260**	0.100	**1.46**	0.56		"	"	"	"	X
64-17-5	Ethanol	**5.55**	0.500	**10.46**	0.94		"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-09-2	Methylene chloride	< 0.100	0.100	< 0.35	0.35		"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.100**	0.100	**0.77**	0.77		"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.36	0.36		"	"	"	"	X
67-63-0	Isopropyl alcohol	**0.990**	0.500	**2.43**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**2.15**	0.100	**6.34**	0.29		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
110-54-3	Hexane	< 0.500	0.500	< 1.76	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	< 0.100	0.100	< 0.36	0.36		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.100	0.100	< 0.29	0.29		"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.100	0.100	< 0.55	0.55		"	"	"	"	X
71-43-2	Benzene	**0.420**	0.100	**1.34**	0.32		"	"	"	"	X
56-23-5	Carbon tetrachloride	**0.100**	0.100	**0.63**	0.63		"	"	"	"	X
110-82-7	Cyclohexane	**0.270**	0.100	**0.93**	0.34		"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.100	0.100	< 0.67	0.67		"	"	"	"	X
79-01-6	Trichloroethene	< 0.100	0.100	< 0.54	0.54		"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80		"	"	"	"	X
142-82-5	n-Heptane	**0.450**	0.100	**1.84**	0.41		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	**0.900**	0.100	**3.69**	0.41		"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.100	0.100	< 0.55	0.55		"	"	"	"	X
108-88-3	Toluene	**3.20**	0.100	**12.04**	0.38		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.100	0.100	< 0.41	0.41		"	"	"	"	
124-48-1	Dibromochloromethane	< 0.100	0.100	< 0.85	0.85		"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SG-01	103X9026 1405 006	Soil Gas	03-Oct-14 10:52	06-Oct-14
SB97588-03				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 10-Oct-14, Dilution: 1 — Can pressure: -2, Can ID: 0206

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
106-93-4	1,2-Dibromoethane (EDB)	< 0.100	0.100	< 0.77	0.77		EPA TO-15L	10-Oct-14	BRF	1423954	X
127-18-4	Tetrachloroethene	**0.200**	0.100	**1.36**	0.68		"	"	"	"	X
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	
100-41-4	Ethylbenzene	**0.560**	0.100	**2.43**	0.43		"	"	"	"	X
179601-23-1	m,p-Xylene	**3.24**	0.200	**14.05**	0.87		"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03		"	"	"	"	X
100-42-5	Styrene	< 0.100	0.100	< 0.43	0.43		"	"	"	"	X
95-47-6	o-Xylene	**1.53**	0.100	**6.63**	0.43		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	**0.160**	0.100	**0.79**	0.49		"	"	"	"	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62		"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
100-44-7	Benzyl chloride	< 0.100	0.100	< 0.52	0.52		"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
99-87-6	4-Isopropyltoluene	**0.360**	0.100	**1.93**	0.54		"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	**0.130**	0.100	**0.97**	0.74		"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.100	0.100	< 1.07	1.07		"	"	"	"	X

Surrogate recoveries:

460-00-4	*4-Bromofluorobenzene*	*99*		*70-130 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SG-03	103X9026 1405 006	Soil Gas	03-Oct-14 11:11	06-Oct-14
SB97588-04				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 10-Oct-14, Dilution: 1 — Can pressure: -2, Can ID: 4623

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	< 0.100	0.100	< 0.17	0.17		EPA TO-15L	10-Oct-14	BRF	1423954	
75-71-8	Dichlorodifluoromethane (Freon12)	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.21	0.21		"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.70	0.70		"	"	"	"	X
75-01-4	Vinyl chloride	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.39	0.39		"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
67-64-1	Acetone	**9.15**	0.500	**21.74**	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.230**	0.100	**1.29**	0.56		"	"	"	"	X
64-17-5	Ethanol	**3.81**	0.500	**7.18**	0.94		"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-09-2	Methylene chloride	< 0.100	0.100	< 0.35	0.35		"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.77	0.77		"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.36	0.36		"	"	"	"	X
67-63-0	Isopropyl alcohol	**0.790**	0.500	**1.94**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**1.38**	0.100	**4.07**	0.29		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
110-54-3	Hexane	< 0.500	0.500	< 1.76	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	< 0.100	0.100	< 0.36	0.36		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.100	0.100	< 0.29	0.29		"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.100	0.100	< 0.55	0.55		"	"	"	"	X
71-43-2	Benzene	**0.390**	0.100	**1.24**	0.32		"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.100	0.100	< 0.63	0.63		"	"	"	"	X
110-82-7	Cyclohexane	**0.450**	0.100	**1.55**	0.34		"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.100	0.100	< 0.67	0.67		"	"	"	"	X
79-01-6	Trichloroethene	< 0.100	0.100	< 0.54	0.54		"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80		"	"	"	"	X
142-82-5	n-Heptane	**0.280**	0.100	**1.15**	0.41		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	**0.300**	0.100	**1.23**	0.41		"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.100	0.100	< 0.55	0.55		"	"	"	"	X
108-88-3	Toluene	**1.00**	0.100	**3.76**	0.38		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.100	0.100	< 0.41	0.41		"	"	"	"	
124-48-1	Dibromochloromethane	< 0.100	0.100	< 0.85	0.85		"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SG-03	103X9026 1405 006	Soil Gas	03-Oct-14 11:11	06-Oct-14
SB97588-04				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 10-Oct-14, Dilution: 1 — Can pressure: -2, Can ID: 4623

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
106-93-4	1,2-Dibromoethane (EDB)	< 0.100	0.100	< 0.77	0.77		EPA TO-15L	10-Oct-14	BRF	1423954	X
127-18-4	Tetrachloroethene	< 0.100	0.100	< 0.68	0.68		"	"	"	"	X
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	
100-41-4	Ethylbenzene	**0.200**	0.100	**0.87**	0.43		"	"	"	"	X
179601-23-1	m,p-Xylene	**1.06**	0.200	**4.60**	0.87		"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03		"	"	"	"	X
100-42-5	Styrene	< 0.100	0.100	< 0.43	0.43		"	"	"	"	X
95-47-6	o-Xylene	**0.500**	0.100	**2.17**	0.43		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62		"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
100-44-7	Benzyl chloride	< 0.100	0.100	< 0.52	0.52		"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
99-87-6	4-Isopropyltoluene	**0.170**	0.100	**0.91**	0.54		"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.100	0.100	< 0.74	0.74		"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.100	0.100	< 1.07	1.07		"	"	"	"	X

Surrogate recoveries:

460-00-4	*4-Bromofluorobenzene*	*105*		*70-130 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-IA-01	103X9026 1405 006	Indoor Air	03-Oct-14 11:30	06-Oct-14
SB97588-05				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 10-Oct-14, Dilution: 1 — Can pressure: -1, Can ID: 0186

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	< 0.100	0.100	< 0.17	0.17		EPA TO-15L	10-Oct-14	BRF	1423954	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.530**	0.100	**2.62**	0.49		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.21	0.21		"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.70	0.70		"	"	"	"	X
75-01-4	Vinyl chloride	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.39	0.39		"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
67-64-1	Acetone	**20.6**	0.500	**48.95**	1.19	E	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.260**	0.100	**1.46**	0.56		"	"	"	"	X
64-17-5	Ethanol	**6.70**	0.500	**12.63**	0.94		"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-09-2	Methylene chloride	**23.3**	0.100	**80.91**	0.35	E	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.77	0.77		"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.36	0.36		"	"	"	"	X
67-63-0	Isopropyl alcohol	**4.83**	0.500	**11.85**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**2.41**	0.100	**7.11**	0.29		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
110-54-3	Hexane	**1.61**	0.500	**5.68**	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	**4.35**	0.100	**15.67**	0.36		"	"	"	"	
67-66-3	Chloroform	**0.140**	0.100	**0.68**	0.49		"	"	"	"	X
109-99-9	Tetrahydrofuran	**7.42**	0.100	**21.88**	0.29		"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	**0.550**	0.100	**3.00**	0.55		"	"	"	"	X
71-43-2	Benzene	**0.700**	0.100	**2.23**	0.32		"	"	"	"	X
56-23-5	Carbon tetrachloride	**0.100**	0.100	**0.63**	0.63		"	"	"	"	X
110-82-7	Cyclohexane	**0.230**	0.100	**0.79**	0.34		"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.100	0.100	< 0.67	0.67		"	"	"	"	X
79-01-6	Trichloroethene	**0.200**	0.100	**1.07**	0.54		"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80		"	"	"	"	X
142-82-5	n-Heptane	**0.350**	0.100	**1.43**	0.41		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.100	0.100	< 0.41	0.41		"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.100	0.100	< 0.55	0.55		"	"	"	"	X
108-88-3	Toluene	**3.40**	0.100	**12.79**	0.38		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.100	0.100	< 0.41	0.41		"	"	"	"	
124-48-1	Dibromochloromethane	< 0.100	0.100	< 0.85	0.85		"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-IA-01	103X9026 1405 006	Indoor Air	03-Oct-14 11:30	06-Oct-14
SB97588-05				

CAS No.	*Analyte(s)*	*Result/Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Air Quality Analyses											
Volatile Organics in Air Low Level		ppbv	Prepared 10-Oct-14 Dilution: 1				Can pressure: -1 Can ID: 0186				
106-93-4	1,2-Dibromoethane (EDB)	< 0.100	0.100	< 0.77	0.77		EPA TO-15L	10-Oct-14	BRF	1423954	X
127-18-4	Tetrachloroethene	**0.640**	0.100	**4.34**	0.68		"	"	"	"	X
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	
100-41-4	Ethylbenzene	**0.260**	0.100	**1.13**	0.43		"	"	"	"	X
179601-23-1	m,p-Xylene	**0.850**	0.200	**3.69**	0.87		"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03		"	"	"	"	X
100-42-5	Styrene	< 0.100	0.100	< 0.43	0.43		"	"	"	"	X
95-47-6	o-Xylene	**0.190**	0.100	**0.82**	0.43		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	**0.160**	0.100	**0.79**	0.49		"	"	"	"	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62		"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
100-44-7	Benzyl chloride	< 0.100	0.100	< 0.52	0.52		"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
99-87-6	4-Isopropyltoluene	**0.220**	0.100	**1.18**	0.54		"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.100	0.100	< 0.74	0.74		"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.100	0.100	< 1.07	1.07		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*98*		*70-130 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 4			GS1					
67-64-1	Acetone	**25.2**	2.00	**59.88**	4.75	D	EPA TO-15L	16-Oct-14	KRL	1424455	X
75-09-2	Methylene chloride	**19.3**	0.400	**67.02**	1.39	D	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*106*		*70-130 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SV-01	103X9026 1405 006	Soil Gas	03-Oct-14 11:24	06-Oct-14
SB97588-06				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 10-Oct-14, Dilution: 1 — Can pressure: -1, Can ID: 7631

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	< 0.100	0.100	< 0.17	0.17		EPA TO-15L	10-Oct-14	BRF	1423954	
75-71-8	Dichlorodifluoromethane (Freon12)	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.21	0.21		"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.70	0.70		"	"	"	"	X
75-01-4	Vinyl chloride	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.39	0.39		"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
67-64-1	Acetone	**11.0**	0.500	**26.14**	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.330**	0.100	**1.85**	0.56		"	"	"	"	X
64-17-5	Ethanol	**7.75**	0.500	**14.61**	0.94		"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-09-2	Methylene chloride	**20.8**	0.100	**72.23**	0.35	E	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.110**	0.100	**0.84**	0.77		"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.36	0.36		"	"	"	"	X
67-63-0	Isopropyl alcohol	**1.31**	0.500	**3.21**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**1.42**	0.100	**4.19**	0.29		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
110-54-3	Hexane	**2.82**	0.500	**9.94**	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	**3.51**	0.100	**12.65**	0.36		"	"	"	"	
67-66-3	Chloroform	**0.100**	0.100	**0.49**	0.49		"	"	"	"	X
109-99-9	Tetrahydrofuran	**6.64**	0.100	**19.58**	0.29		"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	**0.610**	0.100	**3.33**	0.55		"	"	"	"	X
71-43-2	Benzene	**0.620**	0.100	**1.98**	0.32		"	"	"	"	X
56-23-5	Carbon tetrachloride	**0.100**	0.100	**0.63**	0.63		"	"	"	"	X
110-82-7	Cyclohexane	**0.450**	0.100	**1.55**	0.34		"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.100	0.100	< 0.67	0.67		"	"	"	"	X
79-01-6	Trichloroethene	< 0.100	0.100	< 0.54	0.54		"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80		"	"	"	"	X
142-82-5	n-Heptane	**0.660**	0.100	**2.70**	0.41		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	**0.230**	0.100	**0.94**	0.41		"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.100	0.100	< 0.55	0.55		"	"	"	"	X
108-88-3	Toluene	**3.45**	0.100	**12.98**	0.38		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.100	0.100	< 0.41	0.41		"	"	"	"	
124-48-1	Dibromochloromethane	< 0.100	0.100	< 0.85	0.85		"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SV-01	103X9026 1405 006	Soil Gas	03-Oct-14 11:24	06-Oct-14
SB97588-06				

Air Quality Analyses

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
Volatile Organics in Air Low Level		ppbv	Prepared 10-Oct-14 Dilution: 1				Can pressure: -1 Can ID: 7631				
106-93-4	1,2-Dibromoethane (EDB)	< 0.100	0.100	< 0.77	0.77		EPA TO-15L	10-Oct-14	BRF	1423954	X
127-18-4	Tetrachloroethene	**6.33**	0.100	**42.92**	0.68		"	"	"	"	X
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	
100-41-4	Ethylbenzene	**0.390**	0.100	**1.69**	0.43		"	"	"	"	X
179601-23-1	m,p-Xylene	**1.17**	0.200	**5.07**	0.87		"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03		"	"	"	"	X
100-42-5	Styrene	< 0.100	0.100	< 0.43	0.43		"	"	"	"	X
95-47-6	o-Xylene	**0.470**	0.100	**2.04**	0.43		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	**0.370**	0.100	**1.82**	0.49		"	"	"	"	X
622-96-8	4-Ethyltoluene	**0.330**	0.100	**1.62**	0.49		"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	**0.710**	0.100	**3.49**	0.49		"	"	"	"	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62		"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
100-44-7	Benzyl chloride	< 0.100	0.100	< 0.52	0.52		"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
99-87-6	4-Isopropyltoluene	**0.480**	0.100	**2.58**	0.54		"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.100	0.100	< 0.74	0.74		"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.100	0.100	< 1.07	1.07		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*100*		*70-130 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 4			GS1					
75-09-2	Methylene chloride	**17.0**	0.400	**59.03**	1.39	D	EPA TO-15L	16-Oct-14	KRL	1424455	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*107*		*70-130 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SG-02	103X9026 1405 006	Soil Gas	03-Oct-14 10:59	06-Oct-14
SB97588-07				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 10-Oct-14, Dilution: 1 — Can pressure: -2, Can ID: 16001

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	< 0.100	0.100	< 0.17	0.17		EPA TO-15L	10-Oct-14	BRF	1423954	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.440**	0.100	**2.18**	0.49		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.21	0.21		"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.70	0.70		"	"	"	"	X
75-01-4	Vinyl chloride	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.39	0.39		"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
67-64-1	Acetone	**4.55**	0.500	**10.81**	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.250**	0.100	**1.40**	0.56		"	"	"	"	X
64-17-5	Ethanol	**2.67**	0.500	**5.03**	0.94		"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-09-2	Methylene chloride	< 0.100	0.100	< 0.35	0.35		"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.77	0.77		"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.36	0.36		"	"	"	"	X
67-63-0	Isopropyl alcohol	**1.16**	0.500	**2.85**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**0.570**	0.100	**1.68**	0.29		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
110-54-3	Hexane	**0.650**	0.500	**2.29**	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	< 0.100	0.100	< 0.36	0.36		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.100	0.100	< 0.29	0.29		"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.100	0.100	< 0.55	0.55		"	"	"	"	X
71-43-2	Benzene	**0.690**	0.100	**2.20**	0.32		"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.100	0.100	< 0.63	0.63		"	"	"	"	X
110-82-7	Cyclohexane	**0.180**	0.100	**0.62**	0.34		"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.100	0.100	< 0.67	0.67		"	"	"	"	X
79-01-6	Trichloroethene	< 0.100	0.100	< 0.54	0.54		"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80		"	"	"	"	X
142-82-5	n-Heptane	< 0.100	0.100	< 0.41	0.41		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	**0.200**	0.100	**0.82**	0.41		"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.100	0.100	< 0.55	0.55		"	"	"	"	X
108-88-3	Toluene	**1.17**	0.100	**4.40**	0.38		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.100	0.100	< 0.41	0.41		"	"	"	"	
124-48-1	Dibromochloromethane	< 0.100	0.100	< 0.85	0.85		"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SG-02	103X9026 1405 006	Soil Gas	03-Oct-14 10:59	06-Oct-14
SB97588-07				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 10-Oct-14, Dilution: 1 — Can pressure: -2, Can ID: 16001

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
106-93-4	1,2-Dibromoethane (EDB)	< 0.100	0.100	< 0.77	0.77		EPA TO-15L	10-Oct-14	BRF	1423954	X
127-18-4	Tetrachloroethene	< 0.100	0.100	< 0.68	0.68		"	"	"	"	X
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	
100-41-4	Ethylbenzene	**0.230**	0.100	**1.00**	0.43		"	"	"	"	X
179601-23-1	m,p-Xylene	**1.33**	0.200	**5.77**	0.87		"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03		"	"	"	"	X
100-42-5	Styrene	< 0.100	0.100	< 0.43	0.43		"	"	"	"	X
95-47-6	o-Xylene	**0.580**	0.100	**2.51**	0.43		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62		"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
100-44-7	Benzyl chloride	< 0.100	0.100	< 0.52	0.52		"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
99-87-6	4-Isopropyltoluene	**0.160**	0.100	**0.86**	0.54		"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.100	0.100	< 0.74	0.74		"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.100	0.100	< 1.07	1.07		"	"	"	"	X

Surrogate recoveries:

460-00-4	*4-Bromofluorobenzene*	*99*		*70-130 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SV-03	103X9026 1405 006	Soil Gas	03-Oct-14 11:48	06-Oct-14
SB97588-08				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 16-Oct-14 — Dilution: 4 — R05 — Can pressure: -7 — Can ID: 1346

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	< 0.400	0.400	< 0.69	0.69	D	EPA TO-15L	16-Oct-14	KRL	1424455	
75-71-8	Dichlorodifluoromethane (Freon12)	< 0.400	0.400	< 1.98	1.98	D	"	"	"	"	X
74-87-3	Chloromethane	< 0.400	0.400	< 0.83	0.83	D	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.400	0.400	< 2.80	2.80	D	"	"	"	"	X
75-01-4	Vinyl chloride	< 0.400	0.400	< 1.02	1.02	D	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.400	0.400	< 0.88	0.88	D	"	"	"	"	X
74-83-9	Bromomethane	< 0.400	0.400	< 1.55	1.55	D	"	"	"	"	X
75-00-3	Chloroethane	< 0.400	0.400	< 1.06	1.06	D	"	"	"	"	X
67-64-1	Acetone	**19.5**	2.00	**46.34**	4.75	D	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.480**	0.400	**2.70**	2.25	D	"	"	"	"	X
64-17-5	Ethanol	**17.7**	2.00	**33.37**	3.77	D	"	"	"	"	
107-13-1	Acrylonitrile	< 0.400	0.400	< 0.87	0.87	D	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.400	0.400	< 1.59	1.59	D	"	"	"	"	X
75-09-2	Methylene chloride	**16.1**	0.400	**55.91**	1.39	D	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.400	0.400	< 3.07	3.07	D	"	"	"	"	X
75-15-0	Carbon disulfide	< 2.00	2.00	< 6.22	6.22	D	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.400	0.400	< 1.59	1.59	D	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.400	0.400	< 1.62	1.62	D	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.400	0.400	< 1.44	1.44	D	"	"	"	"	X
67-63-0	Isopropyl alcohol	**2.04**	2.00	**5.01**	4.91	D	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 0.400	0.400	< 1.18	1.18	D	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.400	0.400	< 1.59	1.59	D	"	"	"	"	X
110-54-3	Hexane	**6.40**	2.00	**22.56**	7.05	D	"	"	"	"	X
141-78-6	Ethyl acetate	**5.92**	0.400	**21.33**	1.44	D	"	"	"	"	
67-66-3	Chloroform	**0.560**	0.400	**2.73**	1.95	D	"	"	"	"	X
109-99-9	Tetrahydrofuran	**3.68**	0.400	**10.85**	1.18	D	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.400	0.400	< 1.62	1.62	D	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.400	0.400	< 2.18	2.18	D	"	"	"	"	X
71-43-2	Benzene	**0.560**	0.400	**1.79**	1.28	D	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.400	0.400	< 2.52	2.52	D	"	"	"	"	X
110-82-7	Cyclohexane	< 0.400	0.400	< 1.38	1.38	D	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.400	0.400	< 1.85	1.85	D	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.400	0.400	< 2.68	2.68	D	"	"	"	"	X
79-01-6	Trichloroethene	< 0.400	0.400	< 2.15	2.15	D	"	"	"	"	X
123-91-1	1,4-Dioxane	< 2.00	2.00	< 7.20	7.20	D	"	"	"	"	X
142-82-5	n-Heptane	< 0.400	0.400	< 1.64	1.64	D	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.400	0.400	< 1.64	1.64	D	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.400	0.400	< 1.82	1.82	D	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.400	0.400	< 1.82	1.82	D	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.400	0.400	< 2.18	2.18	D	"	"	"	"	X
108-88-3	Toluene	**3.00**	0.400	**11.29**	1.51	D	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.400	0.400	< 1.64	1.64	D	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.400	0.400	< 3.41	3.41	D	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SV-03	103X9026 1405 006	Soil Gas	03-Oct-14 11:48	06-Oct-14
SB97588-08				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 16-Oct-14, Dilution: 4 — R05 — Can pressure: -7, Can ID: 1346

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
106-93-4	1,2-Dibromoethane (EDB)	< 0.400	0.400	< 3.07	3.07	D	EPA TO-15L	16-Oct-14	KRL	1424455	X
127-18-4	Tetrachloroethene	**14.3**	0.400	**96.97**	2.71	D	"	"	"	"	X
108-90-7	Chlorobenzene	< 0.400	0.400	< 1.84	1.84	D	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.400	0.400	< 2.75	2.75	D	"	"	"	"	
100-41-4	Ethylbenzene	**0.400**	0.400	**1.73**	1.73	D	"	"	"	"	X
179601-23-1	m,p-Xylene	**1.00**	0.800	**4.34**	3.47	D	"	"	"	"	X
75-25-2	Bromoform	< 0.400	0.400	< 4.13	4.13	D	"	"	"	"	X
100-42-5	Styrene	**0.880**	0.400	**3.74**	1.70	D	"	"	"	"	X
95-47-6	o-Xylene	**0.520**	0.400	**2.25**	1.73	D	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.400	0.400	< 2.75	2.75	D	"	"	"	"	X
98-82-8	Isopropylbenzene	**0.840**	0.400	**4.13**	1.97	D	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	**0.880**	0.400	**4.33**	1.97	D	"	"	"	"	X
622-96-8	4-Ethyltoluene	**0.600**	0.400	**2.95**	1.97	D	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	**2.20**	0.400	**10.82**	1.97	D	"	"	"	"	X
91-20-3	Naphthalene	**2.16**	2.00	**11.31**	10.47	D	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.400	0.400	< 2.40	2.40	D	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.400	0.400	< 2.06	2.06	D	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.400	0.400	< 2.40	2.40	D	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.400	0.400	< 2.20	2.20	D	"	"	"	"	
99-87-6	4-Isopropyltoluene	**0.680**	0.400	**3.65**	2.15	D	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.400	0.400	< 2.40	2.40	D	"	"	"	"	X
104-51-8	n-Butylbenzene	**1.04**	0.400	**5.71**	2.20	D	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.400	0.400	< 2.97	2.97	D	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.400	0.400	< 4.27	4.27	D	"	"	"	"	X

Surrogate recoveries:

460-00-4	*4-Bromofluorobenzene*	*108*		*70-130 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SV-05	103X9026 1405 006	Soil Gas	03-Oct-14 11:31	06-Oct-14
SB97588-09				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 16-Oct-14, Dilution: 5 — R05 — Can pressure: -1, Can ID: 16011

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	< 0.500	0.500	< 0.86	0.86	D	EPA TO-15L	16-Oct-14	KRL	1424455	
75-71-8	Dichlorodifluoromethane (Freon12)	< 0.500	0.500	< 2.47	2.47	D	"	"	"	"	X
74-87-3	Chloromethane	< 0.500	0.500	< 1.03	1.03	D	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.500	0.500	< 3.49	3.49	D	"	"	"	"	X
75-01-4	Vinyl chloride	< 0.500	0.500	< 1.28	1.28	D	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.500	0.500	< 1.10	1.10	D	"	"	"	"	X
74-83-9	Bromomethane	< 0.500	0.500	< 1.94	1.94	D	"	"	"	"	X
75-00-3	Chloroethane	< 0.500	0.500	< 1.32	1.32	D	"	"	"	"	X
67-64-1	Acetone	**19.0**	2.50	**45.15**	5.94	D	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 0.500	0.500	< 2.81	2.81	D	"	"	"	"	X
64-17-5	Ethanol	**4.80**	2.50	**9.05**	4.71	D	"	"	"	"	
107-13-1	Acrylonitrile	< 0.500	0.500	< 1.08	1.08	D	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.500	0.500	< 1.98	1.98	D	"	"	"	"	X
75-09-2	Methylene chloride	**17.2**	0.500	**59.73**	1.74	D	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.500	0.500	< 3.83	3.83	D	"	"	"	"	X
75-15-0	Carbon disulfide	< 2.50	2.50	< 7.78	7.78	D	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.500	0.500	< 1.98	1.98	D	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.500	0.500	< 2.02	2.02	D	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.500	0.500	< 1.80	1.80	D	"	"	"	"	X
67-63-0	Isopropyl alcohol	< 2.50	2.50	< 6.13	6.13	D	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 0.500	0.500	< 1.47	1.47	D	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.500	0.500	< 1.98	1.98	D	"	"	"	"	X
110-54-3	Hexane	< 2.50	2.50	< 8.81	8.81	D	"	"	"	"	X
141-78-6	Ethyl acetate	**3.80**	0.500	**13.69**	1.80	D	"	"	"	"	
67-66-3	Chloroform	**1.15**	0.500	**5.60**	2.43	D	"	"	"	"	X
109-99-9	Tetrahydrofuran	**4.30**	0.500	**12.68**	1.47	D	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.500	0.500	< 2.02	2.02	D	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	**0.650**	0.500	**3.55**	2.73	D	"	"	"	"	X
71-43-2	Benzene	**0.600**	0.500	**1.91**	1.60	D	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.500	0.500	< 3.15	3.15	D	"	"	"	"	X
110-82-7	Cyclohexane	**0.650**	0.500	**2.24**	1.72	D	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.500	0.500	< 2.31	2.31	D	"	"	"	"	X
75-27-4	Bromodichloromethane	**0.750**	0.500	**5.02**	3.35	D	"	"	"	"	X
79-01-6	Trichloroethene	< 0.500	0.500	< 2.69	2.69	D	"	"	"	"	X
123-91-1	1,4-Dioxane	< 2.50	2.50	< 9.00	9.00	D	"	"	"	"	X
142-82-5	n-Heptane	< 0.500	0.500	< 2.05	2.05	D	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.500	0.500	< 2.05	2.05	D	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.500	0.500	< 2.27	2.27	D	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.500	0.500	< 2.27	2.27	D	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.500	0.500	< 2.73	2.73	D	"	"	"	"	X
108-88-3	Toluene	**3.00**	0.500	**11.29**	1.88	D	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.500	0.500	< 2.05	2.05	D	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.500	0.500	< 4.26	4.26	D	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SV-05	103X9026 1405 006	Soil Gas	03-Oct-14 11:31	06-Oct-14
SB97588-09				

Air Quality Analyses

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
Volatile Organics in Air Low Level		ppbv	Prepared 16-Oct-14 Dilution: 5			R05	Can pressure: -1 Can ID: 16011				
106-93-4	1,2-Dibromoethane (EDB)	< 0.500	0.500	< 3.84	3.84	D	EPA TO-15L	16-Oct-14	KRL	1424455	X
127-18-4	Tetrachloroethene	**10.0**	0.500	**67.81**	3.39	D	"	"	"	"	X
108-90-7	Chlorobenzene	< 0.500	0.500	< 2.30	2.30	D	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.500	0.500	< 3.44	3.44	D	"	"	"	"	
100-41-4	Ethylbenzene	**0.550**	0.500	**2.38**	2.17	D	"	"	"	"	X
179601-23-1	m,p-Xylene	**1.40**	1.00	**6.07**	4.34	D	"	"	"	"	X
75-25-2	Bromoform	< 0.500	0.500	< 5.17	5.17	D	"	"	"	"	X
100-42-5	Styrene	**1.15**	0.500	**4.89**	2.13	D	"	"	"	"	X
95-47-6	o-Xylene	**0.900**	0.500	**3.90**	2.17	D	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.500	0.500	< 3.43	3.43	D	"	"	"	"	X
98-82-8	Isopropylbenzene	**0.950**	0.500	**4.67**	2.46	D	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	**1.10**	0.500	**5.41**	2.46	D	"	"	"	"	X
622-96-8	4-Ethyltoluene	**0.850**	0.500	**4.18**	2.46	D	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	**2.85**	0.500	**14.01**	2.46	D	"	"	"	"	X
91-20-3	Naphthalene	**4.20**	2.50	**21.99**	13.09	D	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.500	0.500	< 3.01	3.01	D	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.500	0.500	< 2.58	2.58	D	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.500	0.500	< 3.01	3.01	D	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.500	0.500	< 2.74	2.74	D	"	"	"	"	
99-87-6	4-Isopropyltoluene	**0.650**	0.500	**3.49**	2.68	D	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.500	0.500	< 3.01	3.01	D	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.500	0.500	< 2.74	2.74	D	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.500	0.500	< 3.71	3.71	D	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.500	0.500	< 5.33	5.33	D	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*109*		*70-130 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SV-04	103X9026 1405 006	Soil Gas	03-Oct-14 11:28	06-Oct-14
SB97588-10				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 16-Oct-14, Dilution: 4 — GS — Can pressure: -3, Can ID: 0493

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	< 0.400	0.400	< 0.69	0.69	D	EPA TO-15L	16-Oct-14	KRL	1424455	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.560**	0.400	**2.77**	1.98	D	"	"	"	"	X
74-87-3	Chloromethane	< 0.400	0.400	< 0.83	0.83	D	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.400	0.400	< 2.80	2.80	D	"	"	"	"	X
75-01-4	Vinyl chloride	< 0.400	0.400	< 1.02	1.02	D	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.400	0.400	< 0.88	0.88	D	"	"	"	"	X
74-83-9	Bromomethane	< 0.400	0.400	< 1.55	1.55	D	"	"	"	"	X
75-00-3	Chloroethane	< 0.400	0.400	< 1.06	1.06	D	"	"	"	"	X
67-64-1	Acetone	**11.7**	2.00	**27.80**	4.75	D	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.400**	0.400	**2.25**	2.25	D	"	"	"	"	X
64-17-5	Ethanol	**5.32**	2.00	**10.03**	3.77	D	"	"	"	"	
107-13-1	Acrylonitrile	< 0.400	0.400	< 0.87	0.87	D	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.400	0.400	< 1.59	1.59	D	"	"	"	"	X
75-09-2	Methylene chloride	**5.12**	0.400	**17.78**	1.39	D	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.400	0.400	< 3.07	3.07	D	"	"	"	"	X
75-15-0	Carbon disulfide	< 2.00	2.00	< 6.22	6.22	D	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.400	0.400	< 1.59	1.59	D	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.400	0.400	< 1.62	1.62	D	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.400	0.400	< 1.44	1.44	D	"	"	"	"	X
67-63-0	Isopropyl alcohol	< 2.00	2.00	< 4.91	4.91	D	"	"	"	"	X
78-93-3	2-Butanone (MEK)	**1.36**	0.400	**4.01**	1.18	D	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.400	0.400	< 1.59	1.59	D	"	"	"	"	X
110-54-3	Hexane	< 2.00	2.00	< 7.05	7.05	D	"	"	"	"	X
141-78-6	Ethyl acetate	**3.72**	0.400	**13.40**	1.44	D	"	"	"	"	
67-66-3	Chloroform	< 0.400	0.400	< 1.95	1.95	D	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.400	0.400	< 1.18	1.18	D	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.400	0.400	< 1.62	1.62	D	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	**0.520**	0.400	**2.84**	2.18	D	"	"	"	"	X
71-43-2	Benzene	< 0.400	0.400	< 1.28	1.28	D	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.400	0.400	< 2.52	2.52	D	"	"	"	"	X
110-82-7	Cyclohexane	< 0.400	0.400	< 1.38	1.38	D	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.400	0.400	< 1.85	1.85	D	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.400	0.400	< 2.68	2.68	D	"	"	"	"	X
79-01-6	Trichloroethene	< 0.400	0.400	< 2.15	2.15	D	"	"	"	"	X
123-91-1	1,4-Dioxane	< 2.00	2.00	< 7.20	7.20	D	"	"	"	"	X
142-82-5	n-Heptane	< 0.400	0.400	< 1.64	1.64	D	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.400	0.400	< 1.64	1.64	D	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.400	0.400	< 1.82	1.82	D	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.400	0.400	< 1.82	1.82	D	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.400	0.400	< 2.18	2.18	D	"	"	"	"	X
108-88-3	Toluene	**1.04**	0.400	**3.91**	1.51	D	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.400	0.400	< 1.64	1.64	D	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.400	0.400	< 3.41	3.41	D	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-SV-04	103X9026 1405 006	Soil Gas	03-Oct-14 11:28	06-Oct-14
SB97588-10				

Air Quality Analyses

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
Volatile Organics in Air Low Level		ppbv	Prepared 16-Oct-14 Dilution: 4			GS	Can pressure: -3 Can ID: 0493				
106-93-4	1,2-Dibromoethane (EDB)	< 0.400	0.400	< 3.07	3.07	D	EPA TO-15L	16-Oct-14	KRL	1424455	X
127-18-4	Tetrachloroethene	**60.8**	0.400	**412.30**	2.71	D	"	"	"	"	X
108-90-7	Chlorobenzene	< 0.400	0.400	< 1.84	1.84	D	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.400	0.400	< 2.75	2.75	D	"	"	"	"	
100-41-4	Ethylbenzene	< 0.400	0.400	< 1.73	1.73	D	"	"	"	"	X
179601-23-1	m,p-Xylene	< 0.800	0.800	< 3.47	3.47	D	"	"	"	"	X
75-25-2	Bromoform	< 0.400	0.400	< 4.13	4.13	D	"	"	"	"	X
100-42-5	Styrene	**0.520**	0.400	**2.21**	1.70	D	"	"	"	"	X
95-47-6	o-Xylene	**0.440**	0.400	**1.91**	1.73	D	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.400	0.400	< 2.75	2.75	D	"	"	"	"	X
98-82-8	Isopropylbenzene	**0.640**	0.400	**3.15**	1.97	D	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	**0.560**	0.400	**2.75**	1.97	D	"	"	"	"	X
622-96-8	4-Ethyltoluene	**0.440**	0.400	**2.16**	1.97	D	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	**1.44**	0.400	**7.08**	1.97	D	"	"	"	"	X
91-20-3	Naphthalene	< 2.00	2.00	< 10.47	10.47	D	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.400	0.400	< 2.40	2.40	D	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.400	0.400	< 2.06	2.06	D	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.400	0.400	< 2.40	2.40	D	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.400	0.400	< 2.20	2.20	D	"	"	"	"	
99-87-6	4-Isopropyltoluene	**0.480**	0.400	**2.58**	2.15	D	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.400	0.400	< 2.40	2.40	D	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.400	0.400	< 2.20	2.20	D	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.400	0.400	< 2.97	2.97	D	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.400	0.400	< 4.27	4.27	D	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*105*		*70-130 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-IA-02	103X9026 1405 006	Indoor Air	03-Oct-14 11:34	06-Oct-14
SB97588-11				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 16-Oct-14 — Dilution: 1 — Can pressure: -9 — Can ID: 0255

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	< 0.100	0.100	< 0.17	0.17		EPA TO-15L	16-Oct-14	KRL	1424455	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.560**	0.100	**2.77**	0.49		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.21	0.21		"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.70	0.70		"	"	"	"	X
75-01-4	Vinyl chloride	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.39	0.39		"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.26	0.26		"	"	"	"	X
67-64-1	Acetone	**19.1**	0.500	**45.39**	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.310**	0.100	**1.74**	0.56		"	"	"	"	X
64-17-5	Ethanol	**5.44**	0.500	**10.26**	0.94		"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.22	0.22		"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-09-2	Methylene chloride	**40.3**	0.100	**139.94**	0.35	E	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.77	0.77		"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.36	0.36		"	"	"	"	X
67-63-0	Isopropyl alcohol	**1.28**	0.500	**3.14**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**2.47**	0.100	**7.28**	0.29		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.40	0.40		"	"	"	"	X
110-54-3	Hexane	**1.75**	0.500	**6.17**	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	**4.95**	0.100	**17.84**	0.36		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
109-99-9	Tetrahydrofuran	**6.11**	0.100	**18.02**	0.29		"	"	"	"	
107-06-2	1,2-Dichloroethane	**0.140**	0.100	**0.57**	0.40		"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	**0.520**	0.100	**2.84**	0.55		"	"	"	"	X
71-43-2	Benzene	**0.580**	0.100	**1.85**	0.32		"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.100	0.100	< 0.63	0.63		"	"	"	"	X
110-82-7	Cyclohexane	< 0.100	0.100	< 0.34	0.34		"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.100	0.100	< 0.67	0.67		"	"	"	"	X
79-01-6	Trichloroethene	< 0.100	0.100	< 0.54	0.54		"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80		"	"	"	"	X
142-82-5	n-Heptane	**0.240**	0.100	**0.98**	0.41		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	**0.170**	0.100	**0.70**	0.41		"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.100	0.100	< 0.45	0.45		"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.100	0.100	< 0.55	0.55		"	"	"	"	X
108-88-3	Toluene	**3.53**	0.100	**13.28**	0.38		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.100	0.100	< 0.41	0.41		"	"	"	"	
124-48-1	Dibromochloromethane	< 0.100	0.100	< 0.85	0.85		"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MGU-IA-02	103X9026 1405 006	Indoor Air	03-Oct-14 11:34	06-Oct-14
SB97588-11				

CAS No.	*Analyte(s)*	*Result/Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Air Quality Analyses											
Volatile Organics in Air Low Level		ppbv	Prepared 16-Oct-14 Dilution: 1					Can pressure: -9 Can ID: 0255			
106-93-4	1,2-Dibromoethane (EDB)	< 0.100	0.100	< 0.77	0.77		EPA TO-15L	16-Oct-14	KRL	1424455	X
127-18-4	Tetrachloroethene	**0.510**	0.100	**3.46**	0.68		"	"	"	"	X
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.46	0.46		"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	
100-41-4	Ethylbenzene	**0.290**	0.100	**1.26**	0.43		"	"	"	"	X
179601-23-1	m,p-Xylene	**1.04**	0.200	**4.51**	0.87		"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03		"	"	"	"	X
100-42-5	Styrene	**0.280**	0.100	**1.19**	0.43		"	"	"	"	X
95-47-6	o-Xylene	**0.260**	0.100	**1.13**	0.43		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.69	0.69		"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.100	0.100	< 0.49	0.49		"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	**0.150**	0.100	**0.74**	0.49		"	"	"	"	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62		"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
100-44-7	Benzyl chloride	< 0.100	0.100	< 0.52	0.52		"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
99-87-6	4-Isopropyltoluene	**0.290**	0.100	**1.56**	0.54		"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.100	0.100	< 0.60	0.60		"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.100	0.100	< 0.55	0.55		"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.100	0.100	< 0.74	0.74		"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.100	0.100	< 1.07	1.07		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*104*		*70-130 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 5			GS1					
75-09-2	Methylene chloride	**18.4**	0.500	**63.89**	1.74	V11, D	EPA TO-15L	20-Oct-14	KRL	1424557	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*99*		*70-130 %*			"	"	"	"	

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1423954 - General Air Prep										
Blank (1423954-BLK1)					Prepared & Analyzed: 10-Oct-14					
Propene	< 0.100		ppbv	0.100						
Dichlorodifluoromethane (Freon12)	< 0.100		ppbv	0.100						
Chloromethane	< 0.100		ppbv	0.100						
1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100		ppbv	0.100						
Vinyl chloride	< 0.100		ppbv	0.100						
1,3-Butadiene	< 0.100		ppbv	0.100						
Bromomethane	< 0.100		ppbv	0.100						
Chloroethane	< 0.100		ppbv	0.100						
Acetone	< 0.500		ppbv	0.500						
Trichlorofluoromethane (Freon 11)	< 0.100		ppbv	0.100						
Ethanol	< 0.500		ppbv	0.500						
Acrylonitrile	< 0.100		ppbv	0.100						
1,1-Dichloroethene	< 0.100		ppbv	0.100						
Methylene chloride	< 0.100		ppbv	0.100						
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100		ppbv	0.100						
Carbon disulfide	< 0.500		ppbv	0.500						
trans-1,2-Dichloroethene	< 0.100		ppbv	0.100						
1,1-Dichloroethane	< 0.100		ppbv	0.100						
Methyl tert-butyl ether	< 0.100		ppbv	0.100						
Isopropyl alcohol	< 0.500		ppbv	0.500						
2-Butanone (MEK)	< 0.100		ppbv	0.100						
cis-1,2-Dichloroethene	< 0.100		ppbv	0.100						
Hexane	< 0.500		ppbv	0.500						
Ethyl acetate	< 0.100		ppbv	0.100						
Chloroform	< 0.100		ppbv	0.100						
Tetrahydrofuran	< 0.100		ppbv	0.100						
1,2-Dichloroethane	< 0.100		ppbv	0.100						
1,1,1-Trichloroethane	< 0.100		ppbv	0.100						
Benzene	< 0.100		ppbv	0.100						
Carbon tetrachloride	< 0.100		ppbv	0.100						
Cyclohexane	< 0.100		ppbv	0.100						
1,2-Dichloropropane	< 0.100		ppbv	0.100						
Bromodichloromethane	< 0.100		ppbv	0.100						
Trichloroethene	< 0.100		ppbv	0.100						
1,4-Dioxane	< 0.500		ppbv	0.500						
n-Heptane	< 0.100		ppbv	0.100						
4-Methyl-2-pentanone (MIBK)	< 0.100		ppbv	0.100						
cis-1,3-Dichloropropene	< 0.100		ppbv	0.100						
trans-1,3-Dichloropropene	< 0.100		ppbv	0.100						
1,1,2-Trichloroethane	< 0.100		ppbv	0.100						
Toluene	< 0.100		ppbv	0.100						
2-Hexanone (MBK)	< 0.100		ppbv	0.100						
Dibromochloromethane	< 0.100		ppbv	0.100						
1,2-Dibromoethane (EDB)	< 0.100		ppbv	0.100						
Tetrachloroethene	< 0.100		ppbv	0.100						
Chlorobenzene	< 0.100		ppbv	0.100						
1,1,1,2-Tetrachloroethane	< 0.100		ppbv	0.100						
Ethylbenzene	< 0.100		ppbv	0.100						
m,p-Xylene	< 0.200		ppbv	0.200						
Bromoform	< 0.100		ppbv	0.100						
Styrene	< 0.100		ppbv	0.100						
o-Xylene	< 0.100		ppbv	0.100						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1423954 - General Air Prep										
Blank (1423954-BLK1)					Prepared & Analyzed: 10-Oct-14					
1,1,2,2-Tetrachloroethane	< 0.100		ppbv	0.100						
Isopropylbenzene	< 0.100		ppbv	0.100						
1,3,5-Trimethylbenzene	< 0.100		ppbv	0.100						
4-Ethyltoluene	< 0.100		ppbv	0.100						
1,2,4-Trimethylbenzene	< 0.100		ppbv	0.100						
Naphthalene	< 0.500		ppbv	0.500						
1,3-Dichlorobenzene	< 0.100		ppbv	0.100						
Benzyl chloride	< 0.100		ppbv	0.100						
1,4-Dichlorobenzene	< 0.100		ppbv	0.100						
sec-Butylbenzene	< 0.100		ppbv	0.100						
4-Isopropyltoluene	< 0.100		ppbv	0.100						
1,2-Dichlorobenzene	< 0.100		ppbv	0.100						
n-Butylbenzene	< 0.100		ppbv	0.100						
1,2,4-Trichlorobenzene	< 0.100		ppbv	0.100						
Hexachlorobutadiene	< 0.100		ppbv	0.100						
Surrogate: 4-Bromofluorobenzene	*10.4*		ppbv		*10.0*		*104*	*70-130*		
LCS (1423954-BS1)					Prepared & Analyzed: 10-Oct-14					
Propene	**2.01**		ppbv		2.00		100	70-130		
Dichlorodifluoromethane (Freon12)	**1.49**		ppbv		2.00		74	70-130		
Chloromethane	**1.45**		ppbv		2.00		72	70-130		
1,2-Dichlorotetrafluoroethane (Freon 114)	**1.88**		ppbv		2.00		94	70-130		
Vinyl chloride	**1.52**		ppbv		2.00		76	70-130		
1,3-Butadiene	**1.60**		ppbv		2.00		80	70-130		
Bromomethane	**1.67**		ppbv		2.00		84	70-130		
Chloroethane	**1.77**		ppbv		2.00		88	70-130		
Acetone	**1.62**		ppbv		2.00		81	70-130		
Trichlorofluoromethane (Freon 11)	**1.81**		ppbv		2.00		90	70-130		
Ethanol	**2.11**		ppbv		2.00		106	70-130		
Acrylonitrile	**1.80**		ppbv		2.00		90	50-150		
1,1-Dichloroethene	**1.75**		ppbv		2.00		88	70-130		
Methylene chloride	**1.64**		ppbv		2.00		82	70-130		
1,1,2-Trichlorotrifluoroethane (Freon 113)	**1.67**		ppbv		2.00		84	70-130		
Carbon disulfide	**1.62**		ppbv		2.00		81	70-130		
trans-1,2-Dichloroethene	**1.87**		ppbv		2.00		94	70-130		
1,1-Dichloroethane	**1.51**		ppbv		2.00		76	70-130		
Methyl tert-butyl ether	**2.21**		ppbv		2.00		110	70-130		
Isopropyl alcohol	**1.69**		ppbv		2.00		84	70-130		
2-Butanone (MEK)	**1.91**		ppbv		2.00		96	70-130		
cis-1,2-Dichloroethene	**1.96**		ppbv		2.00		98	70-130		
Hexane	**1.63**		ppbv		2.00		82	70-130		
Ethyl acetate	**1.78**		ppbv		2.00		89	70-130		
Chloroform	**1.62**		ppbv		2.00		81	70-130		
Tetrahydrofuran	**2.18**		ppbv		2.00		109	70-130		
1,2-Dichloroethane	**1.57**		ppbv		2.00		78	70-130		
1,1,1-Trichloroethane	**1.96**		ppbv		2.00		98	70-130		
Benzene	**1.82**		ppbv		2.00		91	70-130		
Carbon tetrachloride	**1.84**		ppbv		2.00		92	70-130		
Cyclohexane	**1.73**		ppbv		2.00		86	70-130		
1,2-Dichloropropane	**1.48**		ppbv		2.00		74	70-130		
Bromodichloromethane	**1.61**		ppbv		2.00		80	70-130		
Trichloroethene	**1.65**		ppbv		2.00		82	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1423954 - General Air Prep										
LCS (1423954-BS1)					Prepared & Analyzed: 10-Oct-14					
1,4-Dioxane	**2.07**		ppbv		2.00		104	50-150		
n-Heptane	**1.70**		ppbv		2.00		85	70-130		
4-Methyl-2-pentanone (MIBK)	**1.54**		ppbv		2.00		77	70-130		
cis-1,3-Dichloropropene	**1.76**		ppbv		2.00		88	70-130		
trans-1,3-Dichloropropene	**1.82**		ppbv		2.00		91	70-130		
1,1,2-Trichloroethane	**1.64**		ppbv		2.00		82	70-130		
Toluene	**1.81**		ppbv		2.00		90	70-130		
2-Hexanone (MBK)	**1.81**		ppbv		2.00		90	70-130		
Dibromochloromethane	**1.78**		ppbv		2.00		89	70-130		
1,2-Dibromoethane (EDB)	**1.65**		ppbv		2.00		82	70-130		
Tetrachloroethene	**2.08**		ppbv		2.00		104	70-130		
Chlorobenzene	**1.86**		ppbv		2.00		93	70-130		
1,1,1,2-Tetrachloroethane	**3.06**	Z-2	ppbv		2.00		153	50-150		
Ethylbenzene	**2.09**		ppbv		2.00		104	70-130		
m,p-Xylene	**4.37**		ppbv		4.00		109	70-130		
Bromoform	**2.11**		ppbv		2.00		106	70-130		
Styrene	**2.13**		ppbv		2.00		106	70-130		
o-Xylene	**2.11**		ppbv		2.00		106	70-130		
1,1,2,2-Tetrachloroethane	**1.65**		ppbv		2.00		82	70-130		
Isopropylbenzene	**2.88**		ppbv		2.00		144	50-150		
1,3,5-Trimethylbenzene	**2.04**		ppbv		2.00		102	70-130		
4-Ethyltoluene	**2.18**		ppbv		2.00		109	70-130		
1,2,4-Trimethylbenzene	**1.86**		ppbv		2.00		93	70-130		
Naphthalene	**1.89**		ppbv		2.00		94	50-150		
1,3-Dichlorobenzene	**1.98**		ppbv		2.00		99	70-130		
Benzyl chloride	**2.00**		ppbv		2.00		100	70-130		
1,4-Dichlorobenzene	**1.94**		ppbv		2.00		97	70-130		
sec-Butylbenzene	**2.78**		ppbv		2.00		139	50-150		
4-Isopropyltoluene	**2.82**		ppbv		2.00		141	50-150		
1,2-Dichlorobenzene	**2.08**		ppbv		2.00		104	70-130		
n-Butylbenzene	**2.59**		ppbv		2.00		130	50-150		
1,2,4-Trichlorobenzene	**1.93**		ppbv		2.00		96	70-130		
Hexachlorobutadiene	**2.60**		ppbv		2.00		130	70-130		
Surrogate: 4-Bromofluorobenzene	*9.87*		ppbv		*10.0*		*99*	*70-130*		
Batch 1424455 - General Air Prep										
Blank (1424455-BLK1)					Prepared & Analyzed: 16-Oct-14					
Propene	< 0.100		ppbv	0.100						
Dichlorodifluoromethane (Freon12)	< 0.100		ppbv	0.100						
Chloromethane	< 0.100		ppbv	0.100						
1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100		ppbv	0.100						
Vinyl chloride	< 0.100		ppbv	0.100						
1,3-Butadiene	< 0.100		ppbv	0.100						
Bromomethane	< 0.100		ppbv	0.100						
Chloroethane	< 0.100		ppbv	0.100						
Acetone	< 0.500		ppbv	0.500						
Trichlorofluoromethane (Freon 11)	< 0.100		ppbv	0.100						
Ethanol	< 0.500		ppbv	0.500						
Acrylonitrile	< 0.100		ppbv	0.100						
1,1-Dichloroethene	< 0.100		ppbv	0.100						
Methylene chloride	< 0.100		ppbv	0.100						
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100		ppbv	0.100						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1424455 - General Air Prep										
Blank (1424455-BLK1)					Prepared & Analyzed: 16-Oct-14					
Carbon disulfide	< 0.500		ppbv	0.500						
trans-1,2-Dichloroethene	< 0.100		ppbv	0.100						
1,1-Dichloroethane	< 0.100		ppbv	0.100						
Methyl tert-butyl ether	< 0.100		ppbv	0.100						
Isopropyl alcohol	< 0.500		ppbv	0.500						
2-Butanone (MEK)	< 0.100		ppbv	0.100						
cis-1,2-Dichloroethene	< 0.100		ppbv	0.100						
Hexane	< 0.500		ppbv	0.500						
Ethyl acetate	< 0.100		ppbv	0.100						
Chloroform	< 0.100		ppbv	0.100						
Tetrahydrofuran	< 0.100		ppbv	0.100						
1,2-Dichloroethane	< 0.100		ppbv	0.100						
1,1,1-Trichloroethane	< 0.100		ppbv	0.100						
Benzene	< 0.100		ppbv	0.100						
Carbon tetrachloride	< 0.100		ppbv	0.100						
Cyclohexane	< 0.100		ppbv	0.100						
1,2-Dichloropropane	< 0.100		ppbv	0.100						
Bromodichloromethane	< 0.100		ppbv	0.100						
Trichloroethene	< 0.100		ppbv	0.100						
1,4-Dioxane	< 0.500		ppbv	0.500						
n-Heptane	< 0.100		ppbv	0.100						
4-Methyl-2-pentanone (MIBK)	< 0.100		ppbv	0.100						
cis-1,3-Dichloropropene	< 0.100		ppbv	0.100						
trans-1,3-Dichloropropene	< 0.100		ppbv	0.100						
1,1,2-Trichloroethane	< 0.100		ppbv	0.100						
Toluene	< 0.100		ppbv	0.100						
2-Hexanone (MBK)	< 0.100		ppbv	0.100						
Dibromochloromethane	< 0.100		ppbv	0.100						
1,2-Dibromoethane (EDB)	< 0.100		ppbv	0.100						
Tetrachloroethene	< 0.100		ppbv	0.100						
Chlorobenzene	< 0.100		ppbv	0.100						
1,1,1,2-Tetrachloroethane	< 0.100		ppbv	0.100						
Ethylbenzene	< 0.100		ppbv	0.100						
m,p-Xylene	< 0.200		ppbv	0.200						
Bromoform	< 0.100		ppbv	0.100						
Styrene	< 0.100		ppbv	0.100						
o-Xylene	< 0.100		ppbv	0.100						
1,1,2,2-Tetrachloroethane	< 0.100		ppbv	0.100						
Isopropylbenzene	< 0.100		ppbv	0.100						
1,3,5-Trimethylbenzene	< 0.100		ppbv	0.100						
4-Ethyltoluene	< 0.100		ppbv	0.100						
1,2,4-Trimethylbenzene	< 0.100		ppbv	0.100						
Naphthalene	< 0.500		ppbv	0.500						
1,3-Dichlorobenzene	< 0.100		ppbv	0.100						
Benzyl chloride	< 0.100		ppbv	0.100						
1,4-Dichlorobenzene	< 0.100		ppbv	0.100						
sec-Butylbenzene	< 0.100		ppbv	0.100						
4-Isopropyltoluene	< 0.100		ppbv	0.100						
1,2-Dichlorobenzene	< 0.100		ppbv	0.100						
n-Butylbenzene	< 0.100		ppbv	0.100						
1,2,4-Trichlorobenzene	< 0.100		ppbv	0.100						
Hexachlorobutadiene	< 0.100		ppbv	0.100						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1424455 - General Air Prep										
Blank (1424455-BLK1)						Prepared & Analyzed: 16-Oct-14				
Surrogate: 4-Bromofluorobenzene	*10.1*		ppbv		*10.0*		*101*	*70-130*		
LCS (1424455-BS1)						Prepared & Analyzed: 16-Oct-14				
Propene	**2.11**		ppbv		2.00		106	70-130		
Dichlorodifluoromethane (Freon12)	**1.97**		ppbv		2.00		98	70-130		
Chloromethane	**1.56**		ppbv		2.00		78	70-130		
1,2-Dichlorotetrafluoroethane (Freon 114)	**1.95**		ppbv		2.00		98	70-130		
Vinyl chloride	**1.48**		ppbv		2.00		74	70-130		
1,3-Butadiene	**1.50**		ppbv		2.00		75	70-130		
Bromomethane	**1.51**		ppbv		2.00		76	70-130		
Chloroethane	**1.85**		ppbv		2.00		92	70-130		
Acetone	**1.48**		ppbv		2.00		74	70-130		
Trichlorofluoromethane (Freon 11)	**2.22**		ppbv		2.00		111	70-130		
Ethanol	**2.11**		ppbv		2.00		106	70-130		
Acrylonitrile	**1.63**		ppbv		2.00		82	50-150		
1,1-Dichloroethene	**1.81**		ppbv		2.00		90	70-130		
Methylene chloride	**1.53**		ppbv		2.00		76	70-130		
1,1,2-Trichlorotrifluoroethane (Freon 113)	**1.68**		ppbv		2.00		84	70-130		
Carbon disulfide	**1.67**		ppbv		2.00		84	70-130		
trans-1,2-Dichloroethene	**1.80**		ppbv		2.00		90	70-130		
1,1-Dichloroethane	**1.61**		ppbv		2.00		80	70-130		
Methyl tert-butyl ether	**1.81**		ppbv		2.00		90	70-130		
Isopropyl alcohol	**1.56**		ppbv		2.00		78	70-130		
2-Butanone (MEK)	**1.68**		ppbv		2.00		84	70-130		
cis-1,2-Dichloroethene	**1.62**		ppbv		2.00		81	70-130		
Hexane	**1.46**		ppbv		2.00		73	70-130		
Ethyl acetate	**1.59**		ppbv		2.00		80	70-130		
Chloroform	**1.75**		ppbv		2.00		88	70-130		
Tetrahydrofuran	**1.83**		ppbv		2.00		92	70-130		
1,2-Dichloroethane	**1.82**		ppbv		2.00		91	70-130		
1,1,1-Trichloroethane	**2.14**		ppbv		2.00		107	70-130		
Benzene	**1.61**		ppbv		2.00		80	70-130		
Carbon tetrachloride	**2.10**		ppbv		2.00		105	70-130		
Cyclohexane	**1.44**		ppbv		2.00		72	70-130		
1,2-Dichloropropane	**1.53**		ppbv		2.00		76	70-130		
Bromodichloromethane	**1.88**		ppbv		2.00		94	70-130		
Trichloroethene	**1.98**		ppbv		2.00		99	70-130		
1,4-Dioxane	**2.03**		ppbv		2.00		102	50-150		
n-Heptane	**1.73**		ppbv		2.00		86	70-130		
4-Methyl-2-pentanone (MIBK)	**1.53**		ppbv		2.00		76	70-130		
cis-1,3-Dichloropropene	**1.60**		ppbv		2.00		80	70-130		
trans-1,3-Dichloropropene	**1.88**		ppbv		2.00		94	70-130		
1,1,2-Trichloroethane	**1.75**		ppbv		2.00		88	70-130		
Toluene	**1.72**		ppbv		2.00		86	70-130		
2-Hexanone (MBK)	**1.77**		ppbv		2.00		88	70-130		
Dibromochloromethane	**2.07**		ppbv		2.00		104	70-130		
1,2-Dibromoethane (EDB)	**1.82**		ppbv		2.00		91	70-130		
Tetrachloroethene	**2.14**		ppbv		2.00		107	70-130		
Chlorobenzene	**1.86**		ppbv		2.00		93	70-130		
1,1,1,2-Tetrachloroethane	**3.00**		ppbv		2.00		150	50-150		
Ethylbenzene	**1.80**		ppbv		2.00		90	70-130		
m,p-Xylene	**3.57**		ppbv		4.00		89	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1424455 - General Air Prep										
LCS (1424455-BS1)					Prepared & Analyzed: 16-Oct-14					
Bromoform	**2.06**		ppbv		2.00		103	70-130		
Styrene	**1.72**		ppbv		2.00		86	70-130		
o-Xylene	**1.70**		ppbv		2.00		85	70-130		
1,1,2,2-Tetrachloroethane	**1.60**		ppbv		2.00		80	70-130		
Isopropylbenzene	**2.30**		ppbv		2.00		115	50-150		
1,3,5-Trimethylbenzene	**1.90**		ppbv		2.00		95	70-130		
4-Ethyltoluene	**1.83**		ppbv		2.00		92	70-130		
1,2,4-Trimethylbenzene	**1.54**		ppbv		2.00		77	70-130		
Naphthalene	**1.30**		ppbv		2.00		65	50-150		
1,3-Dichlorobenzene	**1.78**		ppbv		2.00		89	70-130		
Benzyl chloride	**1.90**		ppbv		2.00		95	70-130		
1,4-Dichlorobenzene	**1.74**		ppbv		2.00		87	70-130		
sec-Butylbenzene	**2.34**		ppbv		2.00		117	50-150		
4-Isopropyltoluene	**2.29**		ppbv		2.00		114	50-150		
1,2-Dichlorobenzene	**1.75**		ppbv		2.00		88	70-130		
n-Butylbenzene	**2.12**		ppbv		2.00		106	50-150		
1,2,4-Trichlorobenzene	**1.86**		ppbv		2.00		93	70-130		
Hexachlorobutadiene	**2.42**		ppbv		2.00		121	70-130		
Surrogate: 4-Bromofluorobenzene	*10.6*		ppbv		*10.0*		*106*	*70-130*		
Batch 1424557 - General Air Prep										
Blank (1424557-BLK1)					Prepared: 17-Oct-14 Analyzed: 20-Oct-14					
Methylene chloride	< 0.100		ppbv	0.100						
Surrogate: 4-Bromofluorobenzene	*8.17*		ppbv		*10.0*		*82*	*70-130*		
LCS (1424557-BS1)					Prepared: 17-Oct-14 Analyzed: 20-Oct-14					
Methylene chloride	**1.70**		ppbv		2.00		85	70-130		
Surrogate: 4-Bromofluorobenzene	*8.86*		ppbv		*10.0*		*89*	*70-130*		

Certificate of Analysis

Container Type: Summa canister 6 liter **Date of Analysis:** 10/1/2014

Canister ID: 1657 **Analyst's Initials:** BRF

The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.

Analyte	*Quantitation Limit (ppbv)*	*Analyte*	*Quantitation Limit (ppbv)*
Acetone	<0.2	Ethanol	<0.2
Acrylonitrile	<0.2	4-Isopropyl Toluene	<0.2
Benzene	<0.2	Ethyl acetate	<0.2
Benzyl chloride	<0.2	Ethylbenzene	<0.2
Bromodichloromethane	<0.2	4-Ethyltoluene	<0.2
Bromoform	<0.2	n-Heptane	<0.2
Bromomethane	<0.2	Hexachlorobutadiene	<0.2
1,3-Butadiene	<0.2	Hexane	<0.2
2-Butanone (MEK)	<0.2	2-Hexanone (MBK)	<0.2
Carbon disulfide	<0.2	Isopropyl alcohol	<0.2
Carbon tetrachloride	<0.2	4-Methyl-2-pentanone (MIBK)	<0.2
Chlorobenzene	<0.2	Methyl tert-butyl ether	<0.2
Chloroethane	<0.2	Methylene chloride	<0.2
1,4-Dioxane	<0.2	Naphthalene	<0.2
n-Butylbenzene	<0.2	1,1,1,2-Tetrachlorethane	<0.2
Chloroform	<0.2	Propene	<0.2
Chloromethane	<0.2	Styrene	<0.2
Cyclohexane	<0.2	1,1,2,2-Tetrachloroethane	<0.2
Dibromochloromethane	<0.2	Tetrachloroethene	<0.2
1,2-Dibromoethane (EDB)	<0.2	Tetrahydrofuran	<0.2
1,2-Dichlorobenzene	<0.2	Toluene	<0.2
1,3-Dichlorobenzene	<0.2	1,2,4-Trichlorobenzene	<0.2
1,4-Dichlorobenzene	<0.2	1,1,1-Trichloroethane	<0.2
Dichlorodifluoromethane (Freon12)	<0.2	1,1,2-Trichloroethane	<0.2
1,1-Dichloroethane	<0.2	Trichloroethene	<0.2
1,2-Dichloroethane	<0.2	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.2
1,1-Dichloroethene	<0.2	Trichlorofluoromethane (Freon 11)	<0.2
cis-1,2-Dichloroethene	<0.2	1,2,4-Trimethylbenzene	<0.2
trans-1,2-Dichloroethene	<0.2	1,3,5-Trimethylbenzene	<0.2
1,2-Dichloropropane	<0.2	Vinyl chloride	<0.2
cis-1,3-Dichloropropene	<0.2	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.2	o-Xylene	<0.2
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.2	sec-Butylbenzene	<0.2
Isopropylbenzene	<0.2		

This certification applies to the following sampling devices:

0186

0206

0242

0255

0493

1346

16001

16011

1867

4623

7631

Notes and Definitions

D	Data reported from a dilution
E	This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.
GS	This sample was not able to be analyzed for client requested reporting limits due to high concentrations of target analytes in the sample.
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
R05	Elevated Reporting Limits due to the presence of high levels of non-target analytes; sample may not meet client requested reporting limit for this reason.
V11	Data confirmed with duplicate analysis.
Z-2	analyte passes in CCV1
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
June O'Connor

SB97588AME

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page 1 of 2

Special Handling:
☑ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____

- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.

Report To: Tetra Tech, Inc	**Invoice To:** Tetra Tech		
1 S. Wacker Dr.	1 S. Wacker Dr.	**Project No.:** 103X9026 1405 006	
37th Floor	37th Floor	**Site Name:** MGU	
Chicago, IL 60606	Chicago, IL 60606	**Location:** Coldwater **State:** MI	
Tel #: 312.201 7739	**Attn:** Kevin Scott	**Sampler(s):** Kevin Scott	
Project Manager: Kevin Scott	**P.O. No.:** **RQN:**	Andy Kleist	

Can ID	Can Size (L)	Outgoing Canister Pressure ("Hg) (Lab)	Incoming Canister Pressure ("Hg) (Lab)	Flow Reg. ID	Flow Controller Readout (ml/min)	Lab Id:	Sample Id:	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Analysis: TO 15 Low Level				Matrix: Indoor /Ambient Air	Soil Gas		Check box if canister is returned unused
LABORATORY USE ONLY																						
0242	6	-30		2851	3.16	B97588-01	MGU-SV-02	10/2 - 10/3	14:04	1122	-29.5	-7	68	68	✓							
1867	6	-30		2889	3.18	-02	MGU-OA-01	10/2 - 10/3	12:10	1205	-29	-8.5	68	68	✓							
0206	6	-30		[redacted]	3.18	-03	MGU-SG-01	10/3/14	10:47	1052					✓					✓		
4623	6	-30		[redacted]	3.19	-04	MGU SG-03	10/3/14	11:06	11:11					✓					✓		
0186	6	-30		2987	3.18	-05	MGU-IA-01	10/2 - 10/3	14:06	11:30	-30	0.5	68	68	✓							
7631	6	-30		1309	3.19	-06	MGU-SV-01	10/2 - 10/3	14:04	11:24	-30	-2	68	68	✓							
1604	6	-30		[redacted]	~~3.12~~	-07	MGU-SG 02	10/3/14	1054	1059					✓					✓		
1346	6	-30		0267	3.16	-08	MGU-SV-03	10/2 - 10/3	1408	1148	-31	8.5	68	68	✓							
1600	6	-30		2887	~~3.18~~	-09	MGU-SV-05	10/2 - 10/3	1407	1131	-27.5	0	68	68	✓							
0493	6	-30		~~2887~~ 1315	3.14	-10	MGU-SV-04	10/2 - 10/3	1405	1128	-32	6	68	68	✓							

Date of Request: 9/30/14	Total # Canisters: 11		
Requested by: Andy Kliest	# LL Canisters: —		
Company: Tetra tech	# Flow Controllers: 11		
Location: Coldwater, MI	Flow Rate/Setting: 24h15		
Date Needed: 10/3/14	Order #: 37788	Prepared by: BRR	

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: K Scott Date: 10/3/14

Printed: KEVIN SCOTT

QA/QC Reporting Level:

☑ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
☐ NO QC ☐ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
☑ DQA* * additional charges may apply contact SA's QA Department for further info.

Client Use	Ambient Temperature (Fahrenheit)	Ambient Pressure (inches of Hg)
Start	70	[redacted]
Stop	72	

Special Instructions/QC Requirements & Comments:

MGU-SG01, MGU-SG-02 + SG-03 (5 min grab samples)
no flow restrictor used.

Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.

Relinquished by:	Received by:	Date:	Time:
K Scott	Fed Ex	10/3/14	
Fed Ex	AME	10/6/14	1000

☑ EDD Format EPA Region 2
☑ E-mail Results to Kevin.scott@tetratech.com

Revised Feb 2014

A 4154

193/0/193 IR 02

Ambient * AME 10/6

SB97588 AME

SPECTRUM ANALYTICAL, INC.
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HANIBAL TECHNOLOGY

Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page 1 of 2

Special Handling:
☑ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____

- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.

Report To:	Kevin Scott	**Invoice To:**	Tetra Tech Inc
	Tetra Tech Inc		1 S. Wacker Dr.
	1 S. Wacker Dr.		37th Floor
	Chicago IL 60606		Chicago, IL 60606
Tel #:	312. 201. 7739	**Attn:**	Kevin Scott
Project Manager:	Kevin Scott	**P.O. No.:**	**RQN:**

Project No.: 103X9026-1405.006
Site Name: MGU
Location: Coldwater, **State:** MI
Sampler(s): Kevin Scott, Andy Kleist

Can ID	Can Size (L.)	Outgoing Canister Pressure ("Hg) (Lab)	Incoming Canister Pressure ("Hg) (Lab)	Flow Reg. ID	Flow Controller Readout (ml/min)	Lab Id:	Sample Id:	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Analysis: TO15 Low Level				Matrix: Indoor /Ambient Air	Soil Gas		Check box if canister is returned unused
				LABORATORY USE ONLY																		
0255	6	-30		~~1315~~ 2877	3.195	897588-11	MGU-IA-02	10/2-10/3	1407	1134	-27.5	-6.5	68	68	✓				✓			

Date of Request:	9/30/14	Total # Canisters:	11
Requested by:	Andy Kliest	# LL Canisters:	—
Company:	Tetra Tech	# Flow Controllers:	11
Location:	Coldwater, MI	Flow Rate/Setting:	24hrs
Date Needed:	10/2/14	Order #: 32788	Prepared by: BRF

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

QA/QC Reporting Level:

☑ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
☐ NO QC ☐ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
☑ DQA*

* additional charges may apply contact SA's QA Department for further info.

Client Use	Ambient Temperature (Fahrenheit)	Ambient Pressure (inches of Hg)
Start		
Stop		

Special Instructions/QC Requirements & Comments:

Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.

Relinquished by:	Received by:	Date:	Time:
FedEX	AME	10/6/14	1000

☑ EDD Format
☑ E-mail Results to

19.3/0/19.3 R02

A 4155

Ambient * AME 10/6

ORIGIN ID:CHIA (312) 201-7700
MAILROOM
TETRA TECH INC - EMI DIVISION
1 S. WACKER DR
37TH FLOOR
CHICAGO, IL 60606
UNITED STATES US

SHIP DATE: 030CT14
ACTWGT: 33.0 LB MAN
CAD: 778146/CAFE2704
DIMS: 18x18x18 IN

BILL SENDER

TO SAMPLE RECIEVING
SPECTRUM ANALYTICAL
11 ALMGREN DRIVE

AGAWAM MA 01001
(413) 789-9018
REF: 103X90260001S051405006

FedEx 1 of 3
TRK# 0201 5987 5142 1068
MASTER

MON - 06 OCT 10
PRIORITY OVERN

K7 EHTA

FID 794890 030CT14 GYYA 522C1/DF64/65DD

ORIGIN ID:CHIA (312) 201-7700
MAILROOM
TETRA TECH INC - EMI DIVISION
1 S. WACKER DR
37TH FLOOR
CHICAGO, IL 60606
UNITED STATES US

SHIP
ACTWG
CAD:
DIMS:
BILL

TO SAMPLE RECIEVING
SPECTRUM ANALYTICAL
11 ALMGREN DRIVE

AGAWAM MA 01001
(413) 789-9018
REF: 103X90260001S051405006

FedEx 2 of 3
MPS# 0263 5987 5142 1079
Mstr# 5987 5142 1068 0201

MON - 06 OCT
PRIORITY OVER

K7 EHTA

01001
MA-US
BDL

FID 794890 030CT14 GYYA 522C1/DF64/65DD

SHIP DATE: 030CT14
ACTWGT: 33.0 LB MAN

DIMS: 18x18x18 IN

BILL SENDER

SAMPLE RECIEVING
SPECTRUM ANALYTICAL

(413) 789-9018
REF: 103X90260001S051405006

FedEx Express

J131113052301 26

FedEx 3 of 3
MPS# 0263 5987 5142 1080
Mstr# 5987 5142 1068 0201

MON - 06 OCT 10:30A
PRIORITY OVERNIGHT

01001
MA-US
BDL

K7 EHTA

FID 794890 030CT14 GYYA 522C1/DF64/65DD

SB97588AME

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page 1 of 2

Special Handling:
☑ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____

- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.

Report To:	Tetra Tech, Inc	**Invoice To:**	Tetra Tech
	1 S. Wacker Dr.		1 S. Wacker Dr.
	37th Floor		37th Floor
	Chicago, IL 60606		Chicago, IL 60606
Tel #:	312.201 7739	**Attn:**	Kevin Scott
Project Manager:	Kevin Scott	**P.O. No.:**	**RQN:**

Project No.:	103X9026 1405 006
Site Name:	MGU
Location:	Coldwater **State:** MI
Sampler(s):	Kevin Scott
	Andy Kleist

Can ID	Can Size (L.)	Outgoing Canister Pressure ("Hg) (Lab)	Incoming Canister Pressure ("Hg) (Lab)	Flow Reg. ID	Flow Controller Readout (ml/min)	Lab Id:	Sample Id:	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Analysis: TO 15 Low Level	Matrix: Indoor /Ambient Air	Matrix: Soil Gas	Check box if canister is returned unused
LABORATORY USE ONLY																		
0242	6	-30		2851	3.16	SB97588-01	MGU-SV-02	10/2 - 10/3	1404	1122	-29.5	-7	68	68	✓		✓	
1867	6	-30		2889	3.18	-02	MGU-OA-01	10/2 - 10/3	1210	1205	-29	-8.5	68	68	✓	AA		
0206	6	-30		[redacted]	3.18	-03	MGU-SG-01	10/3/14	1047	1052					✓		✓	
4623	6	-30		[redacted]	3.19	-04	MGU SG-03	10/3/14	1106	1111					✓		✓	
0186	6	-30		2987	3.18	-05	MGU-IA-01	10/2 - 10/3	1406	1130	-30	0.5	68	68	✓	IA		
7631	6	-30		1309	3.19	-06	MGU-SV-01	10/2 - 10/3	1404	1124	-30	-2	68	68	✓		✓	
1609	6	-30		[redacted]	~~3.17~~	-07	MGU-SG 02	10/3/14	1054	1059					✓		✓	
1346	6	-30		0267	3.16	-08	MGU-SV-03	10/2 - 10/3	1408	1148	-31	8.5	68	68	✓		✓	
1600	6	-30		2887	~~3.18~~	-09	MGU-SV-05	10/2 - 10/3	1407	1131	-27.5	0	68	68	✓		✓	
0493	6	-30		~~2861~~ 1315	3.14	-10	MGU-SV-04	10/2 - 10/3	1405	1128	-32	6	68	68	✓		✓	

Date of Request:	9/30/14	Total # Canisters:	11
Requested by:	Andy Kliest	# LL Canisters:	—
Company:	Tetra tech	# Flow Controllers:	11
Location:	Coldwater, MI	Flow Rate/Setting:	24hrs
Date Needed:	10/3/14	Order #: 33788	Prepared by: BRF KM

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: K Scott Date: 10/3/14

Printed: KEVIN SCOTT

QA/QC Reporting Level:

☑ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
☐ NO QC ☐ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
☑ DQA*

* additional charges may apply contact SA's QA Department for further info.

Client Use	Ambient Temperature (Fahrenheit)	Ambient Pressure (inches of Hg)
Start	70	~~32~~
Stop	72	

Special Instructions/QC Requirements & Comments:

MGU-SG01, MGU-SG-02 + SG-03 (5 min grab samples)
no flow restrictor used.
*matrix adjusted per client req. AME 10/8

Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.

Relinquished by:	Received by:	Date:	Time:
K Scott	Fed Ex	10/3/14	
Fed Ex	AME	10/6/14	1000

☑ EDD Format EPA Region 2
☑ E-mail Results to Kevin.scott@tetratech.com

193/0/19 1R02

Ambient * AME 10/6

Revised Feb 2014

A 4154

SB97588 AME

SPECTRUM ANALYTICAL, INC.
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Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page 1 of 2

Special Handling:
☑ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____

All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.

Report To: Kevin Scott	**Invoice To:** Tetra Tech Inc		
Tetra Tech Inc	1 S. Wacker Dr.	**Project No.:** 103X9026-1405.006	
1 S. Wacker Dr.	37th Floor	**Site Name:** MGU	
Chicago, IL 60606	Chicago, IL 60606	**Location:** Coldwater,	**State:** MI
Tel #: 312.201.7739	**Attn:** Kevin Scott	**Sampler(s):** Kevin Scott	
Project Manager: Kevin Scott	**P.O. No.:**	**RQN:**	Andy Kleist

Can ID	Can Size (L)	Outgoing Canister Pressure ("Hg) (Lab)	Incoming Canister Pressure ("Hg) (Lab)	Flow Reg. ID	Flow Controller Readout (ml/min)	Lab Id:	Sample Id:	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Analysis: TO15 Low Level				Matrix: Indoor/Ambient Air	Soil Gas		Check box if canister is returned unused
				LABORATORY USE ONLY																		
0255	6	-30		~~1315~~ 2877	3.195	B97588-11	MGU-IA-02	10/2-10/3	1407	1134	-27.5	-6.5	68	68	✓				✓			

Date of Request: 9/30/14	Total # Canisters: 11		
Requested by: Andy Kliest	# LL Canisters: —		
Company: Tetra Tech	# Flow Controllers: 11		
Location: Coldwater, MI	Flow Rate/Setting: 24hrs		
Date Needed: 10/2/14	Order #: 32788	Prepared by: BRF	AME

QA/QC Reporting Level:

☑ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
☐ NO QC ☐ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
☑ DQA*

* additional charges may apply contact SA's QA Department for further info.

Client Use	Ambient Temperature (Fahrenheit)	Ambient Pressure (inches of Hg)
Start		
Stop		

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

Special Instructions/QC Requirements & Comments:

*matrix adjusted per client req. AME 10/8

Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.

Relinquished by:	Received by:	Date:	Time:
FedEX	AME	10/6/14	1000

☑ EDD Format
☑ E-mail Results to

19.3/0/19.3 IR 02

11 Almgren Drive • Agawam, MA 01001 • 1-800-789-9115 • 413-789-9018 • FAX 413-789-4076 • www.spectrum-analytical.com

Revised Feb 2014

A 4155

Ambient * AME 10/6

SB 97588 AME

SPECTRUM ANALYTICAL, INC.
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Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page 1 of 2

Special Handling:
☑ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed:

- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.

Report To:	Tetra Tech, Inc	Invoice To:	Tetra Tech
	1 S. Wacker Dr.		1 S. Wacker Dr.
	37th Floor		37th Floor
	Chicago, IL 60606		Chicago, IL 60606
Tel #:	312.201.7739	Attn:	Kevin Scott
Project Manager:	Kevin Scott	P.O. No.:	RQN:

Project No.:	103X9026 1405 006
Site Name:	MGU
Location:	Caldwater State: ME
Sampler(s):	Kevin Scott, Andy Kleist

Can ID	Can Size (L)	Outgoing Canister Pressure ("Hg) (Lab)	Incoming Canister Pressure ("Hg) (Lab)	Flow Reg. ID	Flow Controller Readout (ml/min)	Lab Id:	Sample Id:	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Analysis: TO-15 Low Level				Matrix: Indoor/Ambient Air	Soil Gas		Check box if canister is returned unused
			LABORATORY USE ONLY																			
0242	6	-30	-8	2851	3.16	97588-01	MGU-SV-02	10/2 - 10/3	14:04	11:22	-27.5	-7	68	68	✓							
1867	6	-30	-9	2889	3.18	-02	MGU-CA-01	10/2 - 10/3	12:10	12:05	-29	-8.5	68	68	✓							
0906	6	-30	-2	[redacted]	3.18	-03	MGU-SG 01	10/3/14	10:47	10:52					✓					✓		
4623	6	-30	-2	[redacted]	3.19	-04	MGU SG-03	10/3/14	11:06	11:11					✓					✓		
0186	6	-30	-1	2987	3.18	-05	MGU-IA-01	10/2 - 10/3	14:00	11:30	-30	0.5	68	68	✓							
7631	6	-30	-1	1309	3.19	-06	MGU-SV-01	10/2 - 10/3	14:04	11:24	-30	-2	68	68	✓							
1600	6	-30	-2	[redacted]	~~3.12~~	-07	MGU-SG 02	10/3/14	10:54	10:59					✓					✓		
1346	6	-30	-7	0267	3.16	-08	MGU-SV-03	10/2 - 10/3	14:08	11:18	-31	8.5	68	68	✓							
1600	6	-30	-1	2883	~~3.18~~	-09	MGU-SV-05	10/2 - 10/3	14:07	11:31	-27.5	0	68	68	✓							
0493	6	-30	-3	~~2887~~ 1313	3.14	-10	MGU-SV-04	10/2 - 10/3	14:05	11:28	-32	6	68	68	✓							

Date of Request:	9/30/14	Total # Canisters:	11
Requested by:	Andy Kliest	# LL Canisters:	—
Company:	Tetra tech	# Flow Controllers:	11
Location:	Colchester, MT	Flow Rate/Setting:	24hrs
Date Needed:	10/3/14	Order #:	37788
		Prepared by:	BRR KM

QA/QC Reporting Level:
☑ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
☐ NO QC ☐ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
☐ DQA*
* additional charges may apply contact SA's QA Department for further info.

Client Use	Ambient Temperature (Fahrenheit)	Ambient Pressure (inches of Hg)
Start	70	
Stop	72	

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions listed on the back of this document.

Signed: K Scott Date: 10/3/14

Printed: KEVIN SCOTT

Special Instructions/QC Requirements & Comments:
MGU-SG01 MGU-SG-02 · SG-03 (5 min grab samples)
no flow restrictor used.

Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.

Relinquished by:	Received by:	Date:	Time:
K Scott	Fed Ex	10/3/14	
Fed Ex	[illegible]	10/6/14	1000

☑ EDD Format EPA Region 2
☑ E-mail Results to kevin.scott@tetratech.com

93/0/93R02

Ambient * AME 10/6

A 4154

SB97588AME

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page 1 of 2

Special Handling:
☑ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____

All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.

Report To: Kevin Scott	Invoice To: Tetra Tech Inc		
Tetra Tech Inc	1 S. Wacker Dr.	Project No.: 103X9026-1405.006	
1 S. Wacker Dr.	37th Floor	Site Name: MGU	
Chicago, IL 60606	Chicago, IL 60606	Location: Coldwater	State: MI
Tel #: 312.201.7739	Attn: Kevin Scott	Sampler(s): Kevin Scott	
Project Manager: Kevin Scott	P.O. No.: RQN:	Andy Kleist	

Can ID	Can Size (L)	Outgoing Canister Pressure ("Hg) (Lab)	Incoming Canister Pressure ("Hg) (Lab)	Flow Reg. ID	Flow Controller Readout (ml/min)	Lab Id	Sample Id:	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Analysis: TO15 Low Level	Matrix: Indoor /Ambient Air	Matrix: Soil Gas	Check box if canister is returned unused
LABORATORY USE ONLY																		
0255	6	-30	-9	~~1315~~ 2877	3.195	B97588-11	MGU-IA-02	10/2-10/3	1407	1134	-27.5	-6.5	68	68	✓	✓		

Date of Request: 9/30/14	Total # Canisters: 11	QA/QC Reporting Level:	
Requested by: Andy Kliest	# LL Canisters: —	☑ Standard	☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
Company: Tetra Tech	# Flow Controllers: 11	☐ NO QC	☐ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
Location: Coldwater, MI	Flow Rate/Setting: 24hrs	☑ DQA*	* additional charges may apply contact SA's QA Department for further info.
Date Needed: 10/2/14 Order #: 32788	Prepared by: BRF AME		

Client Use	Ambient Temperature (Fahrenheit)	Ambient Pressure (inches of Hg)
Start		
Stop		

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

Special Instructions/QC Requirements & Comments:

Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.

Relinquished by:	Received by:	Date:	Time:
FedEX	AME	10/6/14	1000

☑ EDD Format
☑ E-mail Results to

19.3/0/19.3 IR 02

11 Almgren Drive • Agawam, MA 01001 • 1-800-789-9115 • 413-789-9018 • FAX 413-789-4076 • www.spectrum-analytical.com

Revised Feb 2014

A 4155

Ambient * AME 10/6