FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 4, 2021

Jeremy Porter, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Mr Porter:

Included are the results from the testing of material submitted on September 22, 2021 from the Spic'N Span 060172, F&BI 109387 project. There are 13 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Aspect Data
ASP1004R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 22, 2021 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Spic'N Span 060172, F&BI 109387 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
109387 -01	VGAC-INF-1-092221
109387 -02	VGAC-EFF-1-092221

Non-petroleum compounds identified in the air phase hydrocarbon (APH) ranges were subtracted per the MA-APH method.

Several analytes exceeded the calibration range. The data were flagged accordingly.

Benzyl chloride in the TO-15 laboratory control sample exceeded the acceptance criteria. The analyte was not detected in the samples, therefore the data were acceptable.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	VGAC-INF-1-092221	Client:	Aspect Consulting, LLC
Date Received:	09/22/21	Project:	Spic'N Span 060172, F&BI 109387
Date Collected:	09/22/21	Lab ID:	109387-01 1/9
Date Analyzed:	09/28/21	Data File:	092724.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	114	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	18,000 ve
APH EC9-12 aliphatics	61,000 ve
APH EC9-10 aromatics	1,000

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	VGAC-EFF-1-092221	Client:	Aspect Consulting, LLC
Date Received:	09/22/21	Project:	Spic'N Span 060172, F&BI 109387
Date Collected:	09/22/21	Lab ID:	109387-02 1/6
Date Analyzed:	09/27/21	Data File:	092722.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	1,000
APH EC9-12 aliphatics	2,000
APH EC9-10 aromatics	290

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Spic'N Span 060172, F&BI 109387
Date Collected:	Not Applicable	Lab ID:	01-2134 MB
Date Analyzed:	09/27/21	Data File:	092711.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VGAC-INF-1-092221	Client:	Aspect Consulting, LLC
Date Received:	09/22/21	Project:	Spic'N Span 060172, F&BI 109387
Date Collected:	09/22/21	Lab ID:	109387-01 1/9
Date Analyzed:	09/28/21	Data File:	092724.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	112	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Propene	96	56	1,2-Dichloropropane	9.4	2.0
Dichlorodifluoromethane	4.9	0.98	1,4-Dioxane	<3.2	<0.9
Chloromethane	<33	<16	2,2,4-Trimethylpentane	<42	<9
F-114	<6.3	<0.9	Methyl methacrylate	<37	<9
Vinyl chloride	9.6	3.8	Heptane	<37	<9
1,3-Butadiene	<0.4	<0.18	Bromodichloromethane	<0.6	<0.09
Butane	<43	<18	Trichloroethene	1,400 ve	260 ve
Bromomethane	<21	<5.4	cis-1,3-Dichloropropene	<4.1	<0.9
Chloroethane	<24	<9	4-Methyl-2-pentanone	95	23
Vinyl bromide	<3.9	<0.9	trans-1,3-Dichloropropene	<4.1	<0.9
Ethanol	230	120	Toluene	170	45
Acrolein	18	7.6	1,1,2-Trichloroethane	<0.5	<0.09
Pentane	42	14	2-Hexanone	<37	<9
Trichlorofluoromethane	<20	<3.6	Tetrachloroethene	15,000 ve	2,200 ve
Acetone	3,200 ve	1,300 ve	Dibromochloromethane	<0.77	<0.09
2-Propanol	<77	<31	1,2-Dibromoethane (EDB)	<0.69	<0.09
1,1-Dichloroethene	10	2.6	Chlorobenzene	<4.1	<0.9
trans-1,2-Dichloroethene	60	15	Ethylbenzene	36	8.2
Methylene chloride	<310	<90	1,1,2,2-Tetrachloroethane	<1.2	<0.18
t-Butyl alcohol (TBA)	<110	<36	Nonane	<47	<9
3-Chloropropene	<14	<4.5	Isopropylbenzene	30	6.2
CFC-113	<6.9	<0.9	2-Chlorotoluene	<47	<9
Carbon disulfide	130	42	Propylbenzene	47	9.5
Methyl t-butyl ether (MTBE)	<16	<4.5	4-Ethyltoluene	26	5.2
Vinyl acetate	470	130	m,p-Xylene	130	29
1,1-Dichloroethane	<3.6	<0.9	o-Xylene	45	10
cis-1,2-Dichloroethene	890 ve	220 ve	Styrene	20	4.7
Hexane	<32	<9	Bromoform	<19	<1.8
Chloroform	18	3.6	Benzyl chloride	<0.47	<0.09
Ethyl acetate	<65	<18	1,3,5-Trimethylbenzene	31	6.3
Tetrahydrofuran	20	6.8	1,2,4-Trimethylbenzene	93	19
2-Butanone (MEK)	440 ve	150 ve	1,3-Dichlorobenzene	9.0	1.5
1,2-Dichloroethane (EDC)	44	11	1,4-Dichlorobenzene	<2.1	<0.34
1,1,1-Trichloroethane	<4.9	<0.9	1,2-Dichlorobenzene	<5.4	<0.9
Carbon tetrachloride	<2.8	<0.45	1,2,4-Trichlorobenzene	<6.7	<0.9
Benzene	51	16	Naphthalene	83	16
Cyclohexane	<62	<18	Hexachlorobutadiene	<1.9	<0.18

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VGAC-EFF-1-092221	Client:	Aspect Consulting, LLC
Date Received:	09/22/21	Project:	Spic'N Span 060172, F&BI 109387
Date Collected:	09/22/21	Lab ID:	109387-02 1/6
Date Analyzed:	09/27/21	Data File:	092722.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration ug/m3	ppbv	Compounds:	Concentration ug/m3	ppbv
Propene	110	64	1,2-Dichloropropane	<1.4	<0.3
Dichlorodifluoromethane	4.9	1.0	1,4-Dioxane	<2.2	<0.6
Chloromethane	<22	<11	2,2,4-Trimethylpentane	<28	<6
F-114	<4.2	<0.6	Methyl methacrylate	<25	<6
Vinyl chloride	14	5.6	Heptane	<25	<6
1,3-Butadiene	<0.27	<0.12	Bromodichloromethane	<0.4	<0.06
Butane	<29	<12	Trichloroethene	0.74	0.14
Bromomethane	<14	<3.6	cis-1,3-Dichloropropene	<2.7	<0.6
Chloroethane	<16	<6	4-Methyl-2-pentanone	92	22
Vinyl bromide	<2.6	<0.6	trans-1,3-Dichloropropene	<2.7	<0.6
Ethanol	230 ve	120 ve	Toluene	170	45
Acrolein	1.4	0.62	1,1,2-Trichloroethane	<0.33	<0.06
Pentane	<18	<6	2-Hexanone	<25	<6
Trichlorofluoromethane	<13	<2.4	Tetrachloroethene	<41	<6
Acetone	93	39	Dibromochloromethane	<0.51	<0.06
2-Propanol	<52	<21	1,2-Dibromoethane (EDB)	<0.46	<0.06
1,1-Dichloroethene	<2.4	<0.6	Chlorobenzene	<2.8	<0.6
trans-1,2-Dichloroethene	<2.4	<0.6	Ethylbenzene	22	5.0
Methylene chloride	<210	<60	1,1,2,2-Tetrachloroethane	<0.82	<0.12
t-Butyl alcohol (TBA)	<73	<24	Nonane	<31	<6
3-Chloropropene	<9.4	<3	Isopropylbenzene	<15	<3
CFC-113	<4.6	<0.6	2-Chlorotoluene	<31	<6
Carbon disulfide	<37	<12	Propylbenzene	<15	<3
Methyl t-butyl ether (MTBE)	<11	<3	4-Ethyltoluene	<15	<3
Vinyl acetate	<42	<12	m,p-Xylene	98	23
1,1-Dichloroethane	<2.4	<0.6	o-Xylene	36	8.4
cis-1,2-Dichloroethene	<2.4	<0.6	Styrene	21	5.0
Hexane	<21	<6	Bromoform	<12	<1.2
Chloroform	<0.29	<0.06	Benzyl chloride	0.37 ca	0.072 ca
Ethyl acetate	<43	<12	1,3,5-Trimethylbenzene	<15	<3
Tetrahydrofuran	<3.5	<1.2	1,2,4-Trimethylbenzene	30	6.1
2-Butanone (MEK)	<18	<6	1,3-Dichlorobenzene	8.3	1.4
1,2-Dichloroethane (EDC)	0.44	0.11	1,4-Dichlorobenzene	<1.4	<0.23
1,1,1-Trichloroethane	<3.3	<0.6	1,2-Dichlorobenzene	<3.6	<0.6
Carbon tetrachloride	<1.9	<0.3	1,2,4-Trichlorobenzene	<4.5	<0.6
Benzene	2.3	0.73	Naphthalene	61	12
Cyclohexane	<41	<12	Hexachlorobutadiene	1.5	0.14

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Spic'N Span 060172, F&BI 109387
Date Collected:	Not Applicable	Lab ID:	01-2134 MB
Date Analyzed:	09/27/21	Data File:	092711.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Propene	<1.2	<0.7	1,2-Dichloropropane	<0.23	<0.05
Dichlorodifluoromethane	<0.49	<0.1	1,4-Dioxane	<0.36	<0.1
Chloromethane	<3.7	<1.8	2,2,4-Trimethylpentane	<4.7	<1
F-114	<0.7	<0.1	Methyl methacrylate	<4.1	<1
Vinyl chloride	<0.26	<0.1	Heptane	<4.1	<1
1,3-Butadiene	<0.044	<0.02	Bromodichloromethane	<0.067	<0.01
Butane	<4.8	<2	Trichloroethene	<0.11	<0.02
Bromomethane	<2.3	<0.6	cis-1,3-Dichloropropene	<0.45	<0.1
Chloroethane	<2.6	<1	4-Methyl-2-pentanone	<4.1	<1
Vinyl bromide	<0.44	<0.1	trans-1,3-Dichloropropene	<0.45	<0.1
Ethanol	<7.5	<4	Toluene	<19	<5
Acrolein	<0.11	<0.05	1,1,2-Trichloroethane	<0.055	<0.01
Pentane	<3	<1	2-Hexanone	<4.1	<1
Trichlorofluoromethane	<2.2	<0.4	Tetrachloroethene	<6.8	<1
Acetone	<4.8	<2	Dibromochloromethane	<0.085	<0.01
2-Propanol	<8.6	<3.5	1,2-Dibromoethane (EDB)	<0.077	<0.01
1,1-Dichloroethene	<0.4	<0.1	Chlorobenzene	<0.46	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1	Ethylbenzene	<0.43	<0.1
Methylene chloride	<35	<10	1,1,2,2-Tetrachloroethane	<0.14	<0.02
t-Butyl alcohol (TBA)	<12	<4	Nonane	<5.2	<1
3-Chloropropene	<1.6	<0.5	Isopropylbenzene	<2.5	<0.5
CFC-113	<0.77	<0.1	2-Chlorotoluene	<5.2	<1
Carbon disulfide	<6.2	<2	Propylbenzene	<2.5	<0.5
Methyl t-butyl ether (MTBE)	<1.8	<0.5	4-Ethyltoluene	<2.5	<0.5
Vinyl acetate	<7	<2	m,p-Xylene	<0.87	<0.2
1,1-Dichloroethane	<0.4	<0.1	o-Xylene	<0.43	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1	Styrene	<0.85	<0.2
Hexane	<3.5	<1	Bromoform	<2.1	<0.2
Chloroform	<0.049	<0.01	Benzyl chloride	<0.052	<0.01
Ethyl acetate	<7.2	<2	1,3,5-Trimethylbenzene	<2.5	<0.5
Tetrahydrofuran	<0.59	<0.2	1,2,4-Trimethylbenzene	<2.5	<0.5
2-Butanone (MEK)	<2.9	<1	1,3-Dichlorobenzene	<0.6	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01	1,4-Dichlorobenzene	<0.23	<0.038
1,1,1-Trichloroethane	<0.55	<0.1	1,2-Dichlorobenzene	<0.6	<0.1
Carbon tetrachloride	<0.31	<0.05	1,2,4-Trichlorobenzene	<0.74	<0.1
Benzene	<0.32	<0.1	Naphthalene	<0.26	<0.05
Cyclohexane	<6.9	<2	Hexachlorobutadiene	<0.21	<0.02

Date of Report: 10/04/21
Date Received: 09/22/21
Project: Spic'N Span 060172, F&BI 109387

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD MA-APH

Laboratory Code: 109387-02 1/6 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	1,000	1,100	10
APH EC9-12 aliphatics	ug/m3	2,000	2,100	5
APH EC9-10 aromatics	ug/m3	290	300	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	86	70-130
APH EC9-12 aliphatics	ug/m3	67	117	70-130
APH EC9-10 aromatics	ug/m3	67	98	70-130

Date of Report: 10/04/21
Date Received: 09/22/21
Project: Spic'N Span 060172, F&BI 109387

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 109387-02 1/6 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Propene	ug/m3	110	100	10
Dichlorodifluoromethane	ug/m3	4.9	5.3	8
Chloromethane	ug/m3	<22	<22	nm
F-114	ug/m3	<4.2	<4.2	nm
Vinyl chloride	ug/m3	14	14	0
1,3-Butadiene	ug/m3	<0.27	<0.27	nm
Butane	ug/m3	<29	<29	nm
Bromomethane	ug/m3	<14	<14	nm
Chloroethane	ug/m3	<16	<16	nm
Vinyl bromide	ug/m3	<2.6	<2.6	nm
Ethanol	ug/m3	230	220	4
Acrolein	ug/m3	1.4	1.5	7
Pentane	ug/m3	<18	<18	nm
Trichlorofluoromethane	ug/m3	<13	<13	nm
Acetone	ug/m3	93	92	1
2-Propanol	ug/m3	<52	<52	nm
1,1-Dichloroethene	ug/m3	<2.4	<2.4	nm
trans-1,2-Dichloroethene	ug/m3	<2.4	<2.4	nm
Methylene chloride	ug/m3	<210	<210	nm
t-Butyl alcohol (TBA)	ug/m3	<73	<73	nm
3-Chloropropene	ug/m3	<9.4	<9.4	nm
CFC-113	ug/m3	<4.6	<4.6	nm
Carbon disulfide	ug/m3	<37	<37	nm
Methyl t-butyl ether (MTBE)	ug/m3	<11	<11	nm
Vinyl acetate	ug/m3	<42	<42	nm
1,1-Dichloroethane	ug/m3	<2.4	<2.4	nm
cis-1,2-Dichloroethene	ug/m3	<2.4	<2.4	nm
Hexane	ug/m3	<21	<21	nm
Chloroform	ug/m3	<0.29	<0.29	nm
Ethyl acetate	ug/m3	<43	<43	nm
Tetrahydrofuran	ug/m3	<3.5	<3.5	nm
2-Butanone (MEK)	ug/m3	<18	<18	nm
1,2-Dichloroethane (EDC)	ug/m3	0.44	0.44	0
1,1,1-Trichloroethane	ug/m3	<3.3	<3.3	nm
Carbon tetrachloride	ug/m3	<1.9	<1.9	nm
Benzene	ug/m3	2.3	2.4	4
Cyclohexane	ug/m3	<41	<41	nm
1,2-Dichloropropane	ug/m3	<1.4	<1.4	nm
1,4-Dioxane	ug/m3	<2.2	<2.2	nm
2,2,4-Trimethylpentane	ug/m3	<28	<28	nm

Date of Report: 10/04/21
Date Received: 09/22/21
Project: Spic'N Span 060172, F&BI 109387

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 109387-02 1/6 (Duplicate, continued)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Methyl methacrylate	ug/m3	<25	<25	nm
Heptane	ug/m3	<25	<25	nm
Bromodichloromethane	ug/m3	<0.4	<0.4	nm
Trichloroethene	ug/m3	0.74	0.74	0
cis-1,3-Dichloropropene	ug/m3	<2.7	<2.7	nm
4-Methyl-2-pentanone	ug/m3	92	100	8
trans-1,3-Dichloropropene	ug/m3	<2.7	<2.7	nm
Toluene	ug/m3	170	170	0
1,1,2-Trichloroethane	ug/m3	<0.33	<0.33	nm
2-Hexanone	ug/m3	<25	<25	nm
Tetrachloroethene	ug/m3	<41	<41	nm
Dibromochloromethane	ug/m3	<0.51	<0.51	nm
1,2-Dibromoethane (EDB)	ug/m3	<0.46	<0.46	nm
Chlorobenzene	ug/m3	<2.8	<2.8	nm
Ethylbenzene	ug/m3	22	22	0
1,1,2,2-Tetrachloroethane	ug/m3	<0.82	<0.82	nm
Nonane	ug/m3	<31	<31	nm
Isopropylbenzene	ug/m3	<15	<15	nm
2-Chlorotoluene	ug/m3	<31	<31	nm
Propylbenzene	ug/m3	<15	<15	nm
4-Ethyltoluene	ug/m3	<15	<15	nm
m,p-Xylene	ug/m3	98	98	0
o-Xylene	ug/m3	36	36	0
Styrene	ug/m3	21	22	5
Bromoform	ug/m3	<12	<12	nm
Benzyl chloride	ug/m3	0.37	0.40	8
1,3,5-Trimethylbenzene	ug/m3	<15	<15	nm
1,2,4-Trimethylbenzene	ug/m3	30	30	0
1,3-Dichlorobenzene	ug/m3	8.3	8.3	0
1,4-Dichlorobenzene	ug/m3	<1.4	<1.4	nm
1,2-Dichlorobenzene	ug/m3	<3.6	<3.6	nm
1,2,4-Trichlorobenzene	ug/m3	<4.5	<4.5	nm
Naphthalene	ug/m3	61	64	5
Hexachlorobutadiene	ug/m3	1.5	1.5	0

Date of Report: 10/04/21
Date Received: 09/22/21
Project: Spic'N Span 060172, F&BI 109387

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Propene	ug/m3	23	104	70-130
Dichlorodifluoromethane	ug/m3	67	102	70-130
Chloromethane	ug/m3	28	111	70-130
F-114	ug/m3	94	109	70-130
Vinyl chloride	ug/m3	35	105	70-130
1,3-Butadiene	ug/m3	30	97	70-130
Butane	ug/m3	32	97	70-130
Bromomethane	ug/m3	52	118	70-130
Chloroethane	ug/m3	36	105	70-130
Vinyl bromide	ug/m3	59	113	70-130
Ethanol	ug/m3	25	106	70-130
Acrolein	ug/m3	31	94	70-130
Pentane	ug/m3	40	87	70-130
Trichlorofluoromethane	ug/m3	76	107	70-130
Acetone	ug/m3	32	98	70-130
2-Propanol	ug/m3	33	106	70-130
1,1-Dichloroethene	ug/m3	54	105	70-130
trans-1,2-Dichloroethene	ug/m3	54	103	70-130
Methylene chloride	ug/m3	94	96	70-130
t-Butyl alcohol (TBA)	ug/m3	41	108	70-130
3-Chloropropene	ug/m3	42	96	70-130
CFC-113	ug/m3	100	111	70-130
Carbon disulfide	ug/m3	42	113	70-130
Methyl t-butyl ether (MTBE)	ug/m3	49	98	70-130
Vinyl acetate	ug/m3	48	119	70-130
1,1-Dichloroethane	ug/m3	55	107	70-130
cis-1,2-Dichloroethene	ug/m3	54	102	70-130
Hexane	ug/m3	48	92	70-130
Chloroform	ug/m3	66	104	70-130
Ethyl acetate	ug/m3	49	115	70-130
Tetrahydrofuran	ug/m3	40	90	70-130
2-Butanone (MEK)	ug/m3	40	97	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	100	70-130
1,1,1-Trichloroethane	ug/m3	74	115	70-130
Carbon tetrachloride	ug/m3	85	118	70-130
Benzene	ug/m3	43	99	70-130
Cyclohexane	ug/m3	46	88	70-130
1,2-Dichloropropane	ug/m3	62	108	70-130
1,4-Dioxane	ug/m3	49	100	70-130
2,2,4-Trimethylpentane	ug/m3	63	100	70-130

Date of Report: 10/04/21
Date Received: 09/22/21
Project: Spic'N Span 060172, F&BI 109387

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: Laboratory Control Sample (Continued)

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Methyl methacrylate	ug/m3	55	116	70-130
Heptane	ug/m3	55	94	70-130
Bromodichloromethane	ug/m3	90	114	70-130
Trichloroethene	ug/m3	73	105	70-130
cis-1,3-Dichloropropene	ug/m3	61	114	70-130
4-Methyl-2-pentanone	ug/m3	55	117	70-130
trans-1,3-Dichloropropene	ug/m3	61	125	70-130
Toluene	ug/m3	51	101	70-130
1,1,2-Trichloroethane	ug/m3	74	111	70-130
2-Hexanone	ug/m3	55	112	70-130
Tetrachloroethene	ug/m3	92	114	70-130
Dibromochloromethane	ug/m3	120	119	70-130
1,2-Dibromoethane (EDB)	ug/m3	100	113	70-130
Chlorobenzene	ug/m3	62	108	70-130
Ethylbenzene	ug/m3	59	93	70-130
1,1,2,2-Tetrachloroethane	ug/m3	93	106	70-130
Nonane	ug/m3	71	95	70-130
Isopropylbenzene	ug/m3	66	98	70-130
2-Chlorotoluene	ug/m3	70	107	70-130
Propylbenzene	ug/m3	66	100	70-130
4-Ethyltoluene	ug/m3	66	96	70-130
m,p-Xylene	ug/m3	120	98	70-130
o-Xylene	ug/m3	59	100	70-130
Styrene	ug/m3	58	94	70-130
Bromoform	ug/m3	140	125	70-130
Benzyl chloride	ug/m3	70	158 vo	70-130
1,3,5-Trimethylbenzene	ug/m3	66	101	70-130
1,2,4-Trimethylbenzene	ug/m3	66	94	70-130
1,3-Dichlorobenzene	ug/m3	81	105	70-130
1,4-Dichlorobenzene	ug/m3	81	104	70-130
1,2-Dichlorobenzene	ug/m3	81	103	70-130
1,2,4-Trichlorobenzene	ug/m3	100	88	70-130
Naphthalene	ug/m3	71	76	70-130
Hexachlorobutadiene	ug/m3	140	110	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

109387

SAMPLE CHAIN OF CUSTODY

ME 09/22/21

Report To Jeremy Porter
Company Aspect Consulting
Address 710 2nd Ave Suite 550
City, State, ZIP Seattle, WA 98104
Phone 206.790.2129 Email jporter@aspectconsulting.com

SAMPLERS (signature) Monique Rutte
PROJECT NAME & ADDRESS: Spic'N Span
PO # 000172
NOTES:
INVOICE TO

Page # 1 of 1

TURNAROUND TIME
X Standard
RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Default: Clean after 3 days
☐ Archive (Fee may apply)

SAMPLE INFORMATION										ANALYSIS REQUESTED						
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium		Notes
VGAC-INF-1-092221	01	3312	88	IA / (SG)	9/22/21	29	1255	5	1300	X			X			
VGAC-EFF-1-092221	02	3254	02	IA / (SG)	9/22/21	30	1242	5	1252	X			X			
				IA / SG		~~29~~	~~1255~~	~~5~~	~~1300~~							
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COCTO-15.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Monique Rutte	Monique Rutte	Aspect	09/22/21	1331
Received by:	Nhan Pham	FEBr	9/22/21	1331
Relinquished by:				
Received by:		Samples received at 2021 °C		