FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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December 6, 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 November 19, 2021 from the Spic n Span 060172, F&BI 111360 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
ASP1206R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on November 19, 2021 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Spic n Span 060172, F&BI 111360 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
111360 -01	VGAC-EFF-111621
111360 -02	VGAC-INF-111621

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

Several TO-15 and APH analytes exceeded the calibration range. The data were qualified accordingly.

All quality control requirements were acceptable.

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	VGAC-EFF-111621	Client:	Aspect Consulting, LLC
Date Received:	11/19/21	Project:	Spic n Span 060172, F&BI 111360
Date Collected:	11/16/21	Lab ID:	111360-01 1/5.5
Date Analyzed:	11/22/21	Data File:	112214.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	78	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	500
APH EC9-12 aliphatics	<140
APH EC9-10 aromatics	<140

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	VGAC-INF-111621	Client:	Aspect Consulting, LLC
Date Received:	11/19/21	Project:	Spic n Span 060172, F&BI 111360
Date Collected:	11/16/21	Lab ID:	111360-02 1/8.2
Date Analyzed:	11/22/21	Data File:	112215.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	6,600 ve
APH EC9-12 aliphatics	50,000 ve
APH EC9-10 aromatics	1,000

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 111360
Date Collected:	11/22/21	Lab ID:	01-2595 MB
Date Analyzed:	11/22/21	Data File:	112212.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	81	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-EFF-111621	Client:	Aspect Consulting, LLC
Date Received:	11/19/21	Project:	Spic n Span 060172, F&BI 111360
Date Collected:	11/16/21	Lab ID:	111360-01 1/5.5
Date Analyzed:	11/22/21	Data File:	112214.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	84	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Propene	91	53	1,2-Dichloropropane	<1.3	<0.28
Dichlorodifluoromethane	3.4	0.69	1,4-Dioxane	<2	<0.55
Chloromethane	<20	<9.9	2,2,4-Trimethylpentane	<26	<5.5
F-114	<3.8	<0.55	Methyl methacrylate	<23	<5.5
Vinyl chloride	1.6	0.62	Heptane	<23	<5.5
1,3-Butadiene	<0.24	<0.11	Bromodichloromethane	<0.37	<0.055
Butane	52	22	Trichloroethene	<0.59	<0.11
Bromomethane	<13	<3.3	cis-1,3-Dichloropropene	<2.5	<0.55
Chloroethane	<15	<5.5	4-Methyl-2-pentanone	<23	<5.5
Vinyl bromide	<2.4	<0.55	trans-1,3-Dichloropropene	<2.5	<0.55
Ethanol	290 ve	160 ve	Toluene	<100	<27
Acrolein	<0.63	<0.28	1,1,2-Trichloroethane	<0.3	<0.055
Pentane	<16	<5.5	2-Hexanone	<23	<5.5
Trichlorofluoromethane	<12	<2.2	Tetrachloroethene	40	5.9
Acetone	520 ve	220 ve	Dibromochloromethane	<0.47	<0.055
2-Propanol	<47	<19	1,2-Dibromoethane (EDB)	<0.42	<0.055
1,1-Dichloroethene	<2.2	<0.55	Chlorobenzene	<2.5	<0.55
trans-1,2-Dichloroethene	<2.2	<0.55	Ethylbenzene	<2.4	<0.55
Methylene chloride	<190	<55	1,1,2,2-Tetrachloroethane	<0.76	<0.11
t-Butyl alcohol (TBA)	<67	<22	Nonane	<29	<5.5
3-Chloropropene	<8.6	<2.7	Isopropylbenzene	<14	<2.7
CFC-113	<4.2	<0.55	2-Chlorotoluene	<28	<5.5
Carbon disulfide	40	13	Propylbenzene	<14	<2.7
Methyl t-butyl ether (MTBE)	<9.9	<2.7	4-Ethyltoluene	<14	<2.7
Vinyl acetate	<39	<11	m,p-Xylene	<4.8	<1.1
1,1-Dichloroethane	<2.2	<0.55	o-Xylene	<2.4	<0.55
cis-1,2-Dichloroethene	<2.2	<0.55	Styrene	<4.7	<1.1
Hexane	<19	<5.5	Bromoform	<11	<1.1
Chloroform	<0.27	<0.055	Benzyl chloride	<0.28	<0.055
Ethyl acetate	<40	<11	1,3,5-Trimethylbenzene	<14	<2.7
Tetrahydrofuran	<3.2	<1.1	1,2,4-Trimethylbenzene	<14	<2.7
2-Butanone (MEK)	<16	<5.5	1,3-Dichlorobenzene	<3.3	<0.55
1,2-Dichloroethane (EDC)	<0.22	<0.055	1,4-Dichlorobenzene	<1.3	<0.21
1,1,1-Trichloroethane	<3	<0.55	1,2-Dichlorobenzene	<3.3	<0.55
Carbon tetrachloride	<1.7	<0.28	1,2,4-Trichlorobenzene	<4.1	<0.55
Benzene	<1.8	<0.55	Naphthalene	<1.4	<0.28
Cyclohexane	<38	<11	Hexachlorobutadiene	<1.2	<0.11

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VGAC-INF-111621	Client:	Aspect Consulting, LLC
Date Received:	11/19/21	Project:	Spic n Span 060172, F&BI 111360
Date Collected:	11/16/21	Lab ID:	111360-02 1/8.2
Date Analyzed:	11/22/21	Data File:	112215.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	117	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Propene	75	44	1,2-Dichloropropane	<1.9	<0.41
Dichlorodifluoromethane	<4.1	<0.82	1,4-Dioxane	<3	<0.82
Chloromethane	<30	<15	2,2,4-Trimethylpentane	<38	<8.2
F-114	<5.7	<0.82	Methyl methacrylate	<34	<8.2
Vinyl chloride	<2.1	<0.82	Heptane	<34	<8.2
1,3-Butadiene	<0.36	<0.16	Bromodichloromethane	<0.55	<0.082
Butane	<39	<16	Trichloroethene	190	36
Bromomethane	<19	<4.9	cis-1,3-Dichloropropene	<3.7	<0.82
Chloroethane	<22	<8.2	4-Methyl-2-pentanone	<34	<8.2
Vinyl bromide	<3.6	<0.82	trans-1,3-Dichloropropene	<3.7	<0.82
Ethanol	210	110	Toluene	<150	<41
Acrolein	38	17	1,1,2-Trichloroethane	0.45	0.082
Pentane	39	13	2-Hexanone	<34	<8.2
Trichlorofluoromethane	<18	<3.3	Tetrachloroethene	1,800 ve	270 ve
Acetone	5,300 ve	2,200 ve	Dibromochloromethane	<0.7	<0.082
2-Propanol	<71	<29	1,2-Dibromoethane (EDB)	<0.63	<0.082
1,1-Dichloroethene	<3.3	<0.82	Chlorobenzene	<3.8	<0.82
trans-1,2-Dichloroethene	8.0	2.0	Ethylbenzene	26	5.9
Methylene chloride	<280	<82	1,1,2,2-Tetrachloroethane	<1.1	<0.16
t-Butyl alcohol (TBA)	<99	<33	Nonane	<43	<8.2
3-Chloropropene	<13	<4.1	Isopropylbenzene	<20	<4.1
CFC-113	<6.3	<0.82	2-Chlorotoluene	<42	<8.2
Carbon disulfide	93	30	Propylbenzene	33	6.7
Methyl t-butyl ether (MTBE)	<15	<4.1	4-Ethyltoluene	29	6.0
Vinyl acetate	810 ve	230 ve	m,p-Xylene	64	15
1,1-Dichloroethane	<3.3	<0.82	o-Xylene	23	5.2
cis-1,2-Dichloroethene	97	25	Styrene	<7	<1.6
Hexane	<29	<8.2	Bromoform	<17	<1.6
Chloroform	13	2.6	Benzyl chloride	<0.42	<0.082
Ethyl acetate	<59	<16	1,3,5-Trimethylbenzene	23	4.8
Tetrahydrofuran	7.2	2.4	1,2,4-Trimethylbenzene	97	20
2-Butanone (MEK)	990 ve	340 ve	1,3-Dichlorobenzene	<4.9	<0.82
1,2-Dichloroethane (EDC)	6.4	1.6	1,4-Dichlorobenzene	3.4	0.56
1,1,1-Trichloroethane	<4.5	<0.82	1,2-Dichlorobenzene	7.0	1.2
Carbon tetrachloride	<2.6	<0.41	1,2,4-Trichlorobenzene	<6.1	<0.82
Benzene	45	14	Naphthalene	480	92
Cyclohexane	<56	<16	Hexachlorobutadiene	<1.7	<0.16

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 111360
Date Collected:	11/22/21	Lab ID:	01-2595 MB
Date Analyzed:	11/22/21	Data File:	112212.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	88	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: 12/06/21
Date Received: 11/19/21
Project: Spic n Span 060172, F&BI 111360

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

Laboratory Code: 111360-01 1/5.5 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	500	530	6
APH EC9-12 aliphatics	ug/m3	<140	<140	nm
APH EC9-10 aromatics	ug/m3	<140	<140	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	93	70-130
APH EC9-12 aliphatics	ug/m3	67	106	70-130
APH EC9-10 aromatics	ug/m3	67	87	70-130

Date of Report: 12/06/21
Date Received: 11/19/21
Project: Spic n Span 060172, F&BI 111360

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

Laboratory Code: 111360-01 1/5.5 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Propene	ug/m3	91	84	8
Dichlorodifluoromethane	ug/m3	3.4	3.5	3
Chloromethane	ug/m3	<20	<20	nm
F-114	ug/m3	<3.8	<3.8	nm
Vinyl chloride	ug/m3	1.6	1.6	0
1,3-Butadiene	ug/m3	<0.24	<0.24	nm
Butane	ug/m3	52	52	0
Bromomethane	ug/m3	<13	<13	nm
Chloroethane	ug/m3	<15	<15	nm
Vinyl bromide	ug/m3	<2.4	<2.4	nm
Ethanol	ug/m3	290	280	4
Acrolein	ug/m3	<0.63	<0.63	nm
Pentane	ug/m3	<16	<16	nm
Trichlorofluoromethane	ug/m3	<12	<12	nm
Acetone	ug/m3	520	540	4
2-Propanol	ug/m3	<47	<47	nm
1,1-Dichloroethene	ug/m3	<2.2	<2.2	nm
trans-1,2-Dichloroethene	ug/m3	<2.2	<2.2	nm
Methylene chloride	ug/m3	<190	<190	nm
t-Butyl alcohol (TBA)	ug/m3	<67	<67	nm
3-Chloropropene	ug/m3	<8.6	<8.6	nm
CFC-113	ug/m3	<4.2	<4.2	nm
Carbon disulfide	ug/m3	40	42	5
Methyl t-butyl ether (MTBE)	ug/m3	<9.9	<9.9	nm
Vinyl acetate	ug/m3	<39	<39	nm
1,1-Dichloroethane	ug/m3	<2.2	<2.2	nm
cis-1,2-Dichloroethene	ug/m3	<2.2	<2.2	nm
Hexane	ug/m3	<19	<19	nm
Chloroform	ug/m3	<0.27	<0.27	nm
Ethyl acetate	ug/m3	<40	<40	nm
Tetrahydrofuran	ug/m3	<3.2	<3.2	nm
2-Butanone (MEK)	ug/m3	<16	<16	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.22	<0.22	nm
1,1,1-Trichloroethane	ug/m3	<3	<3	nm
Carbon tetrachloride	ug/m3	<1.7	<1.7	nm
Benzene	ug/m3	<1.8	<1.8	nm
Cyclohexane	ug/m3	<38	<38	nm
1,2-Dichloropropane	ug/m3	<1.3	<1.3	nm
1,4-Dioxane	ug/m3	<2	<2	nm
2,2,4-Trimethylpentane	ug/m3	<26	<26	nm

Date of Report: 12/06/21
Date Received: 11/19/21
Project: Spic n Span 060172, F&BI 111360

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

Laboratory Code: 111360-01 1/5.5 (Duplicate, continued)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Methyl methacrylate	ug/m3	<23	<23	nm
Heptane	ug/m3	<23	<23	nm
Bromodichloromethane	ug/m3	<0.37	<0.37	nm
Trichloroethene	ug/m3	<0.59	<0.59	nm
cis-1,3-Dichloropropene	ug/m3	<2.5	<2.5	nm
4-Methyl-2-pentanone	ug/m3	<23	<23	nm
trans-1,3-Dichloropropene	ug/m3	<2.5	<2.5	nm
Toluene	ug/m3	<100	<100	nm
1,1,2-Trichloroethane	ug/m3	<0.3	<0.3	nm
2-Hexanone	ug/m3	<23	<23	nm
Tetrachloroethene	ug/m3	40	41	2
Dibromochloromethane	ug/m3	<0.47	0.52	nm
1,2-Dibromoethane (EDB)	ug/m3	<0.42	0.72	nm
Chlorobenzene	ug/m3	<2.5	<2.5	nm
Ethylbenzene	ug/m3	<2.4	<2.4	nm
1,1,2,2-Tetrachloroethane	ug/m3	<0.76	<0.76	nm
Nonane	ug/m3	<29	<29	nm
Isopropylbenzene	ug/m3	<14	<14	nm
2-Chlorotoluene	ug/m3	<28	<28	nm
Propylbenzene	ug/m3	<14	<14	nm
4-Ethyltoluene	ug/m3	<14	<14	nm
m,p-Xylene	ug/m3	<4.8	<4.8	nm
o-Xylene	ug/m3	<2.4	<2.4	nm
Styrene	ug/m3	<4.7	<4.7	nm
Bromoform	ug/m3	<11	<11	nm
Benzyl chloride	ug/m3	<0.28	0.60	nm
1,3,5-Trimethylbenzene	ug/m3	<14	<14	nm
1,2,4-Trimethylbenzene	ug/m3	<14	<14	nm
1,3-Dichlorobenzene	ug/m3	<3.3	<3.3	nm
1,4-Dichlorobenzene	ug/m3	<1.3	<1.3	nm
1,2-Dichlorobenzene	ug/m3	<3.3	<3.3	nm
1,2,4-Trichlorobenzene	ug/m3	<4.1	<4.1	nm
Naphthalene	ug/m3	<1.4	<1.4	nm
Hexachlorobutadiene	ug/m3	<1.2	<1.2	nm

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Project: Spic n Span 060172, F&BI 111360

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	109	70-130
Dichlorodifluoromethane	ug/m3	67	114	70-130
Chloromethane	ug/m3	28	108	70-130
F-114	ug/m3	94	123	70-130
Vinyl chloride	ug/m3	35	115	70-130
1,3-Butadiene	ug/m3	30	111	70-130
Butane	ug/m3	32	117	70-130
Bromomethane	ug/m3	52	128	70-130
Chloroethane	ug/m3	36	114	70-130
Vinyl bromide	ug/m3	59	115	70-130
Ethanol	ug/m3	25	102	70-130
Acrolein	ug/m3	31	100	70-130
Pentane	ug/m3	40	105	70-130
Trichlorofluoromethane	ug/m3	76	123	70-130
Acetone	ug/m3	32	112	70-130
2-Propanol	ug/m3	33	99	70-130
1,1-Dichloroethene	ug/m3	54	117	70-130
trans-1,2-Dichloroethene	ug/m3	54	113	70-130
Methylene chloride	ug/m3	94	109	70-130
t-Butyl alcohol (TBA)	ug/m3	41	110	70-130
3-Chloropropene	ug/m3	42	108	70-130
CFC-113	ug/m3	100	121	70-130
Carbon disulfide	ug/m3	42	117	70-130
Methyl t-butyl ether (MTBE)	ug/m3	49	109	70-130
Vinyl acetate	ug/m3	48	99	70-130
1,1-Dichloroethane	ug/m3	55	115	70-130
cis-1,2-Dichloroethene	ug/m3	54	115	70-130
Hexane	ug/m3	48	106	70-130
Chloroform	ug/m3	66	115	70-130
Ethyl acetate	ug/m3	49	105	70-130
Tetrahydrofuran	ug/m3	40	111	70-130
2-Butanone (MEK)	ug/m3	40	113	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	114	70-130
1,1,1-Trichloroethane	ug/m3	74	117	70-130
Carbon tetrachloride	ug/m3	85	115	70-130
Benzene	ug/m3	43	112	70-130
Cyclohexane	ug/m3	46	96	70-130
1,2-Dichloropropane	ug/m3	62	111	70-130
1,4-Dioxane	ug/m3	49	115	70-130
2,2,4-Trimethylpentane	ug/m3	63	110	70-130

Date of Report: 12/06/21
Date Received: 11/19/21
Project: Spic n Span 060172, F&BI 111360

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	115	70-130
Heptane	ug/m3	55	108	70-130
Bromodichloromethane	ug/m3	90	116	70-130
Trichloroethene	ug/m3	73	113	70-130
cis-1,3-Dichloropropene	ug/m3	61	119	70-130
4-Methyl-2-pentanone	ug/m3	55	117	70-130
trans-1,3-Dichloropropene	ug/m3	61	113	70-130
Toluene	ug/m3	51	115	70-130
1,1,2-Trichloroethane	ug/m3	74	116	70-130
2-Hexanone	ug/m3	55	111	70-130
Tetrachloroethene	ug/m3	92	119	70-130
Dibromochloromethane	ug/m3	120	124	70-130
1,2-Dibromoethane (EDB)	ug/m3	100	113	70-130
Chlorobenzene	ug/m3	62	121	70-130
Ethylbenzene	ug/m3	59	110	70-130
1,1,2,2-Tetrachloroethane	ug/m3	93	113	70-130
Nonane	ug/m3	71	104	70-130
Isopropylbenzene	ug/m3	66	115	70-130
2-Chlorotoluene	ug/m3	70	112	70-130
Propylbenzene	ug/m3	66	110	70-130
4-Ethyltoluene	ug/m3	66	101	70-130
m,p-Xylene	ug/m3	120	114	70-130
o-Xylene	ug/m3	59	119	70-130
Styrene	ug/m3	58	114	70-130
Bromoform	ug/m3	140	114	70-130
Benzyl chloride	ug/m3	70	121	70-130
1,3,5-Trimethylbenzene	ug/m3	66	110	70-130
1,2,4-Trimethylbenzene	ug/m3	66	110	70-130
1,3-Dichlorobenzene	ug/m3	81	121	70-130
1,4-Dichlorobenzene	ug/m3	81	118	70-130
1,2-Dichlorobenzene	ug/m3	81	120	70-130
1,2,4-Trichlorobenzene	ug/m3	100	93	70-130
Naphthalene	ug/m3	71	104	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.

111360

SAMPLE CHAIN OF CUSTODY

11-19-21

Page # 1 of 1

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

SAMPLERS (signature) Monique Ruttle

PROJECT NAME & ADDRESS: Spic n Span

PO # 060172

NOTES:

INVOICE TO

TURNAROUND TIME
☒ 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-EFF-111621	01			IA / (SG)	11/16/21	30"	1343	5"	1349	X			X			
VGAC-INF-111621	02			IA / (SG)	11/16/21	30"	1352	5"	1357	X			X			
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												Samples received at 6 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Monique Ruttle	Monique Ruttle	Aspect	11/19/21	0922
Received by:	Ann Wilbruk	FXB	11/19	0922
Relinquished by:				
Received by:				

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