

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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September 16, 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 8, 2021 from the Spic' N Span 060172, F&BI 109137 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
ASP0916R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 8, 2021 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Spic' N Span 060172, F&BI 109137 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
109137 -01	VGAC-1-INF-090821
109137 -02	VGAC-1-EFF-090821

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

Several analytes in sample VGAC-1-INF-090821 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.

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ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	VGAC-1-INF-090821	Client:	Aspect Consulting, LLC
Date Received:	09/08/21	Project:	Spic' N Span 060172, F&BI 109137
Date Collected:	09/08/21	Lab ID:	109137-01 1/18
Date Analyzed:	09/09/21	Data File:	090919.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	100	70	130

Compounds:	Concentration
	ug/m3

APH EC5-8 aliphatics	25,000 ve
APH EC9-12 aliphatics	100,000 ve
APH EC9-10 aromatics	1,200

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	VGAC-1-EFF-090821	Client:	Aspect Consulting, LLC
Date Received:	09/08/21	Project:	Spic' N Span 060172, F&BI 109137
Date Collected:	09/08/21	Lab ID:	109137-02 1/5.9
Date Analyzed:	09/09/21	Data File:	090917.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	96	70	130

	Concentration
Compounds:	ug/m3
APH EC5-8 aliphatics	460
APH EC9-12 aliphatics	630
APH EC9-10 aromatics	<150

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ENVIRONMENTAL CHEMISTS

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 109137
Date Collected:	Not Applicable	Lab ID:	01-2016 MB
Date Analyzed:	09/09/21	Data File:	090911.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	96	70	130

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VGAC-1-INF-090821	Client:	Aspect Consulting, LLC
Date Received:	09/08/21	Project:	Spic' N Span 060172, F&BI 109137
Date Collected:	09/08/21	Lab ID:	109137-01 1/18
Date Analyzed:	09/09/21	Data File:	090919.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	99	70	130

Compounds:	Concentration ug/m3	ppbv	Compounds:	Concentration ug/m3	ppbv
Propene	110	61	1,2-Dichloropropane	7.8	1.7
Dichlorodifluoromethane	<8.9	<1.8	1,4-Dioxane	<6.5	<1.8
Chloromethane	<67	<32	2,2,4-Trimethylpentane	<84	<18
F-114	<13	<1.8	Methyl methacrylate	<74	<18
Vinyl chloride	14	5.5	Heptane	<74	<18
1,3-Butadiene	<0.8	<0.36	Bromodichloromethane	<1.2	<0.18
Butane	<86	<36	Trichloroethene	970	180
Bromomethane	<42	<11	cis-1,3-Dichloropropene	<8.2	<1.8
Chloroethane	<47	<18	4-Methyl-2-pentanone	<74	<18
Vinyl bromide	<7.9	<1.8	trans-1,3-Dichloropropene	<8.2	<1.8
Ethanol	<140	<72	Toluene	<340	<90
Acrolein	14	6.0	1,1,2-Trichloroethane	<0.98	<0.18
Pentane	<53	<18	2-Hexanone	<74	<18
Trichlorofluoromethane	<40	<7.2	Tetrachloroethene	18,000 ve	2,700 ve
Acetone	1,500 ve	630 ve	Dibromochloromethane	<1.5	<0.18
2-Propanol	<150	<63	1,2-Dibromoethane (EDB)	<1.4	<0.18
1,1-Dichloroethene	<7.1	<1.8	Chlorobenzene	<8.3	<1.8
trans-1,2-Dichloroethene	44	11	Ethylbenzene	21	4.9
Methylene chloride	<630	<180	1,1,2,2-Tetrachloroethane	<2.5	<0.36
t-Butyl alcohol (TBA)	<220	<72	Nonane	<94	<18
3-Chloropropene	<28	<9	Isopropylbenzene	<44	<9
CFC-113	<14	<1.8	2-Chlorotoluene	<93	<18
Carbon disulfide	170	56	Propylbenzene	45	9.2
Methyl t-butyl ether (MTBE)	<32	<9	4-Ethyltoluene	<44	<9
Vinyl acetate	300	85	m,p-Xylene	52	12
1,1-Dichloroethane	<7.3	<1.8	o-Xylene	20	4.7
cis-1,2-Dichloroethene	600	150	Styrene	<15	<3.6
Hexane	<63	<18	Bromoform	<37	<3.6
Chloroform	16	3.3	Benzyl chloride	<0.93	<0.18
Ethyl acetate	<130	<36	1,3,5-Trimethylbenzene	<44	<9
Tetrahydrofuran	68	23	1,2,4-Trimethylbenzene	76	16
2-Butanone (MEK)	230	78	1,3-Dichlorobenzene	<11	<1.8
1,2-Dichloroethane (EDC)	30	7.4	1,4-Dichlorobenzene	<4.1	<0.68
1,1,1-Trichloroethane	<9.8	<1.8	1,2-Dichlorobenzene	<11	<1.8
Carbon tetrachloride	<5.7	<0.9	1,2,4-Trichlorobenzene	<13	<1.8
Benzene	32	10	Naphthalene	29	5.6
Cyclohexane	<120	<36	Hexachlorobutadiene	<3.8	<0.36

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: VGAC-1-EFF-090821	Client: Aspect Consulting, LLC
Date Received: 09/08/21	Project: Spic' N Span 060172, F&BI 109137
Date Collected: 09/08/21	Lab ID: 109137-02 1/5.9
Date Analyzed: 09/09/21	Data File: 090917.D
Matrix: Air	Instrument: GCMS7
Units: ug/m3	Operator: bat

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

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Propene	120	69	1,2-Dichloropropane	<1.4	<0.29
Dichlorodifluoromethane	6.2	1.3	1,4-Dioxane	<2.1	<0.59
Chloromethane	<22	<11	2,2,4-Trimethylpentane	<28	<5.9
F-114	<4.1	<0.59	Methyl methacrylate	<24	<5.9
Vinyl chloride	18	6.9	Heptane	<24	<5.9
1,3-Butadiene	<0.26	<0.12	Bromodichloromethane	<0.4	<0.059
Butane	<28	<12	Trichloroethene	<0.63	<0.12
Bromomethane	<14	<3.5	cis-1,3-Dichloropropene	<2.7	<0.59
Chloroethane	<16	<5.9	4-Methyl-2-pentanone	<24	<5.9
Vinyl bromide	<2.6	<0.59	trans-1,3-Dichloropropene	<2.7	<0.59
Ethanol	53	28	Toluene	<110	<29
Acrolein	0.72	0.31	1,1,2-Trichloroethane	<0.32	<0.059
Pentane	<17	<5.9	2-Hexanone	<24	<5.9
Trichlorofluoromethane	<13	<2.4	Tetrachloroethene	<40	<5.9
Acetone	<28	<12	Dibromochloromethane	<0.5	<0.059
2-Propanol	<51	<21	1,2-Dibromoethane (EDB)	<0.45	<0.059
1,1-Dichloroethene	<2.3	<0.59	Chlorobenzene	<2.7	<0.59
trans-1,2-Dichloroethene	<2.3	<0.59	Ethylbenzene	4.1	0.94
Methylene chloride	<200	<59	1,1,2,2-Tetrachloroethane	<0.81	<0.12
t-Butyl alcohol (TBA)	<72	<24	Nonane	<31	<5.9
3-Chloropropene	<9.2	<2.9	Isopropylbenzene	<15	<2.9
CFC-113	<4.5	<0.59	2-Chlorotoluene	<31	<5.9
Carbon disulfide	<37	<12	Propylbenzene	<15	<2.9
Methyl t-butyl ether (MTBE)	<11	<2.9	4-Ethyltoluene	<15	<2.9
Vinyl acetate	<42	<12	m,p-Xylene	14	3.2
1,1-Dichloroethane	<2.4	<0.59	o-Xylene	5.4	1.2
cis-1,2-Dichloroethene	<2.3	<0.59	Styrene	<5	<1.2
Hexane	<21	<5.9	Bromoform	<12	<1.2
Chloroform	<0.29	<0.059	Benzyl chloride	<0.31	<0.059
Ethyl acetate	<43	<12	1,3,5-Trimethylbenzene	<15	<2.9
Tetrahydrofuran	42	14	1,2,4-Trimethylbenzene	<15	<2.9
2-Butanone (MEK)	<17	<5.9	1,3-Dichlorobenzene	<3.5	<0.59
1,2-Dichloroethane (EDC)	<0.24	<0.059	1,4-Dichlorobenzene	<1.3	<0.22
1,1,1-Trichloroethane	<3.2	<0.59	1,2-Dichlorobenzene	<3.5	<0.59
Carbon tetrachloride	<1.9	<0.29	1,2,4-Trichlorobenzene	<4.4	<0.59
Benzene	<1.9	<0.59	Naphthalene	<1.5	<0.29
Cyclohexane	<41	<12	Hexachlorobutadiene	<1.3	<0.12

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 109137
Date Collected:	Not Applicable	Lab ID:	01-2016 MB
Date Analyzed:	09/09/21	Data File:	090911.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

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

Compounds:	Concentration ug/m3	ppbv	Compounds:	Concentration ug/m3	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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/16/21

Date Received: 09/08/21

Project: Spic' N Span 060172, F&BI 109137

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

Laboratory Code: 109137-02 1/5.9 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	460	510	10
APH EC9-12 aliphatics	ug/m3	630	650	3
APH EC9-10 aromatics	ug/m3	<150	<150	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	94	70-130
APH EC9-12 aliphatics	ug/m3	67	125	70-130
APH EC9-10 aromatics	ug/m3	67	106	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/16/21

Date Received: 09/08/21

Project: Spic' N Span 060172, F&BI 109137

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

Laboratory Code: 109137-02 1/5.9 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Propene	ug/m3	120	130	8
Dichlorodifluoromethane	ug/m3	6.2	5.3	16
Chloromethane	ug/m3	<22	<22	nm
F-114	ug/m3	<4.1	<4.1	nm
Vinyl chloride	ug/m3	18	17	6
1,3-Butadiene	ug/m3	<0.26	<0.26	nm
Butane	ug/m3	<28	<28	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	53	<44	nm
Acrolein	ug/m3	0.72	<0.68	nm
Pentane	ug/m3	<17	<17	nm
Trichlorofluoromethane	ug/m3	<13	<13	nm
Acetone	ug/m3	<28	<28	nm
2-Propanol	ug/m3	<51	<51	nm
1,1-Dichloroethene	ug/m3	<2.3	<2.3	nm
trans-1,2-Dichloroethene	ug/m3	<2.3	<2.3	nm
Methylene chloride	ug/m3	<200	<200	nm
t-Butyl alcohol (TBA)	ug/m3	<72	<72	nm
3-Chloropropene	ug/m3	<9.2	<9.2	nm
CFC-113	ug/m3	<4.5	<4.5	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	<2.3	<2.3	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	42	41	2
2-Butanone (MEK)	ug/m3	<17	<17	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.24	<0.24	nm
1,1,1-Trichloroethane	ug/m3	<3.2	<3.2	nm
Carbon tetrachloride	ug/m3	<1.9	<1.9	nm
Benzene	ug/m3	<1.9	<1.9	nm
Cyclohexane	ug/m3	<41	<41	nm
1,2-Dichloropropane	ug/m3	<1.4	<1.4	nm
1,4-Dioxane	ug/m3	<2.1	<2.1	nm
2,2,4-Trimethylpentane	ug/m3	<28	<28	nm

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/16/21

Date Received: 09/08/21

Project: Spic' N Span 060172, F&BI 109137

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

Laboratory Code: 109137-02 1/5.9 (Duplicate, continued)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Methyl methacrylate	ug/m3	<24	<24	nm
Heptane	ug/m3	<24	<24	nm
Bromodichloromethane	ug/m3	<0.4	<0.4	nm
Trichloroethene	ug/m3	<0.63	<0.63	nm
cis-1,3-Dichloropropene	ug/m3	<2.7	<2.7	nm
4-Methyl-2-pentanone	ug/m3	<24	<24	nm
trans-1,3-Dichloropropene	ug/m3	<2.7	<2.7	nm
Toluene	ug/m3	<110	<110	nm
1,1,2-Trichloroethane	ug/m3	<0.32	<0.32	nm
2-Hexanone	ug/m3	<24	<24	nm
Tetrachloroethene	ug/m3	<40	<40	nm
Dibromochloromethane	ug/m3	<0.5	<0.5	nm
1,2-Dibromoethane (EDB)	ug/m3	<0.45	<0.45	nm
Chlorobenzene	ug/m3	<2.7	<2.7	nm
Ethylbenzene	ug/m3	4.1	4.1	0
1,1,2,2-Tetrachloroethane	ug/m3	<0.81	<0.81	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	14	14	0
o-Xylene	ug/m3	5.4	5.5	2
Styrene	ug/m3	<5	<5	nm
Bromoform	ug/m3	<12	<12	nm
Benzyl chloride	ug/m3	<0.31	<0.31	nm
1,3,5-Trimethylbenzene	ug/m3	<15	<15	nm
1,2,4-Trimethylbenzene	ug/m3	<15	<15	nm
1,3-Dichlorobenzene	ug/m3	<3.5	<3.5	nm
1,4-Dichlorobenzene	ug/m3	<1.3	<1.3	nm
1,2-Dichlorobenzene	ug/m3	<3.5	<3.5	nm
1,2,4-Trichlorobenzene	ug/m3	<4.4	<4.4	nm
Naphthalene	ug/m3	<1.5	<1.5	nm
Hexachlorobutadiene	ug/m3	<1.3	<1.3	nm

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/16/21

Date Received: 09/08/21

Project: Spic' N Span 060172, F&BI 109137

**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	116	70-130
Dichlorodifluoromethane	ug/m3	67	106	70-130
Chloromethane	ug/m3	28	109	70-130
F-114	ug/m3	94	103	70-130
Vinyl chloride	ug/m3	35	104	70-130
1,3-Butadiene	ug/m3	30	105	70-130
Butane	ug/m3	32	98	70-130
Bromomethane	ug/m3	52	129	70-130
Chloroethane	ug/m3	36	107	70-130
Vinyl bromide	ug/m3	59	115	70-130
Ethanol	ug/m3	25	100	70-130
Acrolein	ug/m3	31	102	70-130
Pentane	ug/m3	40	99	70-130
Trichlorofluoromethane	ug/m3	76	106	70-130
Acetone	ug/m3	32	110	70-130
2-Propanol	ug/m3	33	113	70-130
1,1-Dichloroethene	ug/m3	54	104	70-130
trans-1,2-Dichloroethene	ug/m3	54	105	70-130
Methylene chloride	ug/m3	94	96	70-130
t-Butyl alcohol (TBA)	ug/m3	41	109	70-130
3-Chloropropene	ug/m3	42	106	70-130
CFC-113	ug/m3	100	109	70-130
Carbon disulfide	ug/m3	42	100	70-130
Methyl t-butyl ether (MTBE)	ug/m3	49	108	70-130
Vinyl acetate	ug/m3	48	128	70-130
1,1-Dichloroethane	ug/m3	55	109	70-130
cis-1,2-Dichloroethene	ug/m3	54	104	70-130
Hexane	ug/m3	48	103	70-130
Chloroform	ug/m3	66	104	70-130
Ethyl acetate	ug/m3	49	115	70-130
Tetrahydrofuran	ug/m3	40	100	70-130
2-Butanone (MEK)	ug/m3	40	104	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	104	70-130
1,1,1-Trichloroethane	ug/m3	74	114	70-130
Carbon tetrachloride	ug/m3	85	115	70-130
Benzene	ug/m3	43	102	70-130
Cyclohexane	ug/m3	46	99	70-130
1,2-Dichloropropane	ug/m3	62	111	70-130
1,4-Dioxane	ug/m3	49	106	70-130
2,2,4-Trimethylpentane	ug/m3	63	108	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/16/21

Date Received: 09/08/21

Project: Spic' N Span 060172, F&BI 109137

**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	Acceptance Criteria
			Recovery LCS	
Methyl methacrylate	ug/m3	55	121	70-130
Heptane	ug/m3	55	107	70-130
Bromodichloromethane	ug/m3	90	112	70-130
Trichloroethene	ug/m3	73	105	70-130
cis-1,3-Dichloropropene	ug/m3	61	117	70-130
4-Methyl-2-pentanone	ug/m3	55	122	70-130
trans-1,3-Dichloropropene	ug/m3	61	122	70-130
Toluene	ug/m3	51	106	70-130
1,1,2-Trichloroethane	ug/m3	74	112	70-130
2-Hexanone	ug/m3	55	121	70-130
Tetrachloroethene	ug/m3	92	112	70-130
Dibromochloromethane	ug/m3	120	116	70-130
1,2-Dibromoethane (EDB)	ug/m3	100	112	70-130
Chlorobenzene	ug/m3	62	107	70-130
Ethylbenzene	ug/m3	59	99	70-130
1,1,2,2-Tetrachloroethane	ug/m3	93	107	70-130
Nonane	ug/m3	71	105	70-130
Isopropylbenzene	ug/m3	66	104	70-130
2-Chlorotoluene	ug/m3	70	103	70-130
Propylbenzene	ug/m3	66	106	70-130
4-Ethyltoluene	ug/m3	66	105	70-130
m,p-Xylene	ug/m3	120	102	70-130
o-Xylene	ug/m3	59	102	70-130
Styrene	ug/m3	58	102	70-130
Bromoform	ug/m3	140	121	70-130
Benzyl chloride	ug/m3	70	143 vo	70-130
1,3,5-Trimethylbenzene	ug/m3	66	103	70-130
1,2,4-Trimethylbenzene	ug/m3	66	101	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	104	70-130
1,2,4-Trichlorobenzene	ug/m3	100	101	70-130
Naphthalene	ug/m3	71	91	70-130
Hexachlorobutadiene	ug/m3	140	107	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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.

09-08-71

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Phone: 206-790-2129 Email: info@inspectionswhing.com

INVOICE TO

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

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
V6AC-2-1MF-090821	01	8538	203	IA / SG	09/08/21	30	1125	5	1130	X			X		
V6AC-2-EFF-090821	02	8346	231	IA / SG	09/08/21	30	1133	5	1139	X			X		
				IA / SG											
				IA / SG											
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Samples received at 23°C

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