ESN NORTHWEST
Environmental
Services Network

August 16, 2018

Shawn Lombardini
Associated Environmental Group, Inc.
605 11th Ave. SE, Suite 201
Olympia, WA 98501

Dear Mr. Lombardini:

Please find enclosed the analytical data report for the Franciscan West Seattle Project in Seattle, Washington. Probe services were conducted on July 26, 2018. Soil vapor samples were analyzed for VOC's by Method TO15 & APH on August 9 – 10, 2018.

The results of the analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Associated Environmental Group, Inc. for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A Korosec

Michael A. Korosec
President

1210 Eastside Street SE, Suite 200 ■ Olympia, Washington 98501 ■ 360.459.4670 ■ FAX 360.459.3432
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CASE NARRATIVE

This case narrative encompasses samples received on July 31, 2018 by Friedman & Bruya, Inc. from the ESN NW Franciscan West Seattle 18-172, F&BI 807613 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	ESN NW
807613 -01	SGV-1
807613 -02	SGV-2
807613 -03	SGV-3
807613 -04	SGV-4
807613 -05	SGV-5
807613 -06	SS-1
807613 -07	SS-2
807613 -08	SS-3
807613 -09	SS-4
807613 -10	SS-5
807613 -11	SS-6
807613 -12	SS-7
807613 -13	SS-8

Naphthalene was detected in the TO-15 method blank at a level within 10 times the concentration detected in the samples. The data were flagged accordingly.

Non-petroleum compounds were subtracted from the APH EC5-8 and EC9-12 aliphatic ranges prior to quantitation.

Several TO-15 and APH concentrations exceeded the calibration range established for the analyte. The data were qualified accordingly.

All quality control requirements were acceptable.

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SGV-1	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-01 1/3.3
Date Analyzed:	08/09/18	Data File:	080911.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	87	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	1,300
APH EC9-12 aliphatics	180
APH EC9-10 aromatics	<82

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SGV-2	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-02 1/3.3
Date Analyzed:	08/09/18	Data File:	080912.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	3,800 ve
APH EC9-12 aliphatics	16,000 ve
APH EC9-10 aromatics	910

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SGV-3	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-03 1/25
Date Analyzed:	08/10/18	Data File:	080920.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

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

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	54,000 ve
APH EC9-12 aliphatics	45,000 ve
APH EC9-10 aromatics	<620

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SGV-4	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-04 1/3.3
Date Analyzed:	08/09/18	Data File:	080913.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

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

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	1,600
APH EC9-12 aliphatics	780
APH EC9-10 aromatics	<82

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SGV-5	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-05 1/75
Date Analyzed:	08/10/18	Data File:	080923.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	123	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	210,000 ve
APH EC9-12 aliphatics	220,000 ve
APH EC9-10 aromatics	<1,900

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-1	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-06 1/50
Date Analyzed:	08/10/18	Data File:	080922.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	105	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	21,000
APH EC9-12 aliphatics	67,000 ve
APH EC9-10 aromatics	<1,200

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-2	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-07 1/25
Date Analyzed:	08/10/18	Data File:	080921.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	111	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	19,000
APH EC9-12 aliphatics	34,000 ve
APH EC9-10 aromatics	<620

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-3	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-08 1/3.3
Date Analyzed:	08/09/18	Data File:	080914.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

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

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	1,300
APH EC9-12 aliphatics	1,600
APH EC9-10 aromatics	<82

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-4	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-09 1/3.3
Date Analyzed:	08/09/18	Data File:	080915.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	88	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	1,600
APH EC9-12 aliphatics	1,300
APH EC9-10 aromatics	<82

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-5	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-10 1/3.3
Date Analyzed:	08/09/18	Data File:	080916.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	89	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	1,800
APH EC9-12 aliphatics	1,500
APH EC9-10 aromatics	<82

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-6	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-11 1/3.3
Date Analyzed:	08/10/18	Data File:	080917.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	2,500
APH EC9-12 aliphatics	2,200
APH EC9-10 aromatics	<82

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-7	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-12 1/3.3
Date Analyzed:	08/10/18	Data File:	080918.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	3,500 ve
APH EC9-12 aliphatics	3,600 ve
APH EC9-10 aromatics	210

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-8	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-13 1/3.3
Date Analyzed:	08/10/18	Data File:	080919.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	590
APH EC9-12 aliphatics	940
APH EC9-10 aromatics	<82

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	ESN NW
Date Received:	Not Applicable	Project:	Franciscan West Seattle 18-172
Date Collected:	Not Applicable	Lab ID:	08-1808 mb
Date Analyzed:	08/09/18	Data File:	080908.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	88	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<46
APH EC9-12 aliphatics	<35
APH EC9-10 aromatics	<25

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SGV-1	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-01 1/3.3
Date Analyzed:	08/09/18	Data File:	080911.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

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

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	27	8.8
Propene	79	46	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.4	0.49	Benzene	6.5	2.0
Chloromethane	0.70	0.34	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	39	17	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	25	7.2
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	6.8	3.1	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	2.8	0.51
Ethanol	<25	<13	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	18	4.4
Acrolein	5.4	2.3	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	8.1	2.2
Pentane	<9.7	<3.3	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	170	70	2-Hexanone	<14	<3.3
2-Propanol	<28	<12	Hexanal	26	6.3
Isoprene	3.3	1.2	Tetrachloroethene	8.1	1.2
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	2.0	0.46
Cyclopentane	<0.95	<0.33	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	5.5	1.3
Butanal	28	9.5	o-Xylene	2.4	0.56
Methylene chloride	340	99	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	27	7.6	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	0.53	0.11	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	43	15	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	<0.13	<0.033	Naphthalene	1.9 fb	0.37 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SGV-2	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-02 1/3.3
Date Analyzed:	08/09/18	Data File:	080912.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	103	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	<20	<6.6
Propene	200	120	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.6	0.53	Benzene	10	3.3
Chloromethane	2.5	1.2	Cyclohexane	36	10
F-114	<2.3	<0.33	2-Pentanone	<12	<3.3
Isobutene	110	48	3-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	19	5.3
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	29	13	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	6.1	1.1
Ethanol	<25	<13	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	<14	<3.3
Acrolein	4.7	2.1	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	23	6.0
Pentane	100	34	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	280	120	2-Hexanone	<14	<3.3
2-Propanol	<28	<12	Hexanal	27	6.5
Isoprene	7.3	2.6	Tetrachloroethene	35	5.2
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	0.63	0.082
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	9.5	2.2
Cyclopentane	29	10	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	26	6.0
Butanal	<9.7	<3.3	o-Xylene	20	4.7
Methylene chloride	<290	<82	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	32	10	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	60	12
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	76	15
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	67	19	1,2,3-Trimethylbenzene	89	18
Chloroform	1.4	0.28	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	140	46	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	0.15	0.036	Naphthalene	4.0 fb	0.77 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SGV-3	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-03 1/25
Date Analyzed:	08/10/18	Data File:	080920.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	120	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<8.8	<2.5	1-Butanol	<150	<50
Propene	860	500	Carbon tetrachloride	<16	<2.5
Dichlorodifluoromethane	<12	<2.5	Benzene	38	12
Chloromethane	<5.2	<2.5	Cyclohexane	460	130
F-114	<17	<2.5	3-Pentanone	<88	<25
Isobutene	460	200	2-Pentanone	<88	<25
Acetaldehyde	<220	<120	Pentanal	<88	<25
Vinyl chloride	<6.4	<2.5	1,2-Dichloropropane	<5.8	<1.2
1,3-Butadiene	80	36	1,4-Dioxane	<9	<2.5
Bromomethane	<39	<10	Bromodichloromethane	<1.7	<0.25
Chloroethane	<6.6	<2.5	Trichloroethene	17	3.2
Ethanol	590	320	cis-1,3-Dichloropropene	<11	<2.5
Acetonitrile	<42	<25	4-Methyl-2-pentanone	<100	<25
Acrolein	<23	<10	trans-1,3-Dichloropropene	<11	<2.5
Acrylonitrile	<5.4	<2.5	Toluene	37	9.8
Pentane	2,300	780	1,1,2-Trichloroethane	<1.4	<0.25
Trichlorofluoromethane	<14	<2.5	3-Hexanone	<100	<25
Acetone	760	320	2-Hexanone	<100	<25
2-Propanol	<220	<87	Hexanal	<100	<25
Isoprene	32	11	Tetrachloroethene	<17	<2.5
Iodomethane	<15	<2.5	Dibromochloromethane	<2.1	<0.25
1,1-Dichloroethene	<9.9	<2.5	1,2-Dibromoethane (EDB)	<1.9	<0.25
Methacrolein	<72	<25	Chlorobenzene	<12	<2.5
trans-1,2-Dichloroethene	<9.9	<2.5	Ethylbenzene	32	7.3
Cyclopentane	340	120	1,1,2,2-Tetrachloroethane	<3.4	<0.5
Methyl vinyl ketone	<72	<25	m,p-Xylene	42	9.7
Butanal	<74	<25	o-Xylene	26	5.9
Methylene chloride	<2,200	<620	Styrene	<21	<5
CFC-113	<19	<2.5	Bromoform	<52	<5
Carbon disulfide	<160	<50	Benzyl chloride	<1.3	<0.25
Methyl t-butyl ether (MTBE)	<45	<12	1,3,5-Trimethylbenzene	<61	<12
Vinyl acetate	<180	<50	1,2,4-Trimethylbenzene	<61	<12
1,1-Dichloroethane	<10	<2.5	1,3-Dichlorobenzene	<15	<2.5
cis-1,2-Dichloroethene	<9.9	<2.5	1,4-Dichlorobenzene	<6	<1
Hexane	2,100	600	1,2,3-Trimethylbenzene	<61	<12
Chloroform	<1.2	<0.25	1,2-Dichlorobenzene	<15	<2.5
2-Butanone (MEK)	<74	<25	1,2,4-Trichlorobenzene	<19	<2.5
1,2-Dichloroethane (EDC)	<1.0	<0.25	Naphthalene	5.0 fb	0.95 fb
1,1,1-Trichloroethane	<14	<2.5	Hexachlorobutadiene	<5.3	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SGV-4	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-04 1/3.3
Date Analyzed:	08/09/18	Data File:	080913.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

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

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	25	8.3
Propene	88	51	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.7	0.54	Benzene	7.9	2.5
Chloromethane	1.8	0.89	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	51	22	2-Pentanone	34	9.7
Acetaldehyde	1,000 ve	560 ve	Pentanal	130	36
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	8.9	4.0	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	5.2	0.96
Ethanol	97	52	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	31	19	4-Methyl-2-pentanone	18	4.3
Acrolein	19	8.2	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	15	3.9
Pentane	16	5.4	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	620 ve	260 ve	2-Hexanone	19	4.5
2-Propanol	<28	<12	Hexanal	210	51
Isoprene	3.7	1.3	Tetrachloroethene	29	4.3
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	4.5	1.0
Cyclopentane	<0.95	<0.33	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	9.8	2.3
Butanal	74	25	o-Xylene	5.3	1.2
Methylene chloride	1,100 ve	330 ve	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	86	24	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	2.7	0.55	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	120	40	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	<0.13	<0.033	Naphthalene	4.5 fb	0.85 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SGV-5	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-05 1/75
Date Analyzed:	08/10/18	Data File:	080923.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	133 ip	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<27	<7.5	1-Butanol	<450	<150
Propene	490	290	Carbon tetrachloride	<47	<7.5
Dichlorodifluoromethane	<37	<7.5	Benzene	27	8.4
Chloromethane	<15	<7.5	Cyclohexane	<520	<150
F-114	<52	<7.5	3-Pentanone	<260	<75
Isobutene	230	100	2-Pentanone	<260	<75
Acetaldehyde	<680	<370	Pentanal	<260	<75
Vinyl chloride	<19	<7.5	1,2-Dichloropropane	<17	<3.7
1,3-Butadiene	60	27	1,4-Dioxane	<27	<7.5
Bromomethane	<120	<30	Bromodichloromethane	<5	<0.75
Chloroethane	<20	<7.5	Trichloroethene	<20	<3.7
Ethanol	<570	<300	cis-1,3-Dichloropropene	<34	<7.5
Acetonitrile	<130	<75	4-Methyl-2-pentanone	<310	<75
Acrolein	<69	<30	trans-1,3-Dichloropropene	<34	<7.5
Acrylonitrile	<16	<7.5	Toluene	36	9.4
Pentane	750	260	1,1,2-Trichloroethane	<4.1	<0.75
Trichlorofluoromethane	<42	<7.5	3-Hexanone	<310	<75
Acetone	<360	<150	2-Hexanone	<310	<75
2-Propanol	<650	<260	Hexanal	<310	<75
Isoprene	21	7.5	Tetrachloroethene	<51	<7.5
Iodomethane	<44	<7.5	Dibromochloromethane	<6.4	<0.75
1,1-Dichloroethene	<30	<7.5	1,2-Dibromoethane (EDB)	<5.8	<0.75
Methacrolein	<210	<75	Chlorobenzene	<35	<7.5
trans-1,2-Dichloroethene	<30	<7.5	Ethylbenzene	<33	<7.5
Cyclopentane	<22	<7.5	1,1,2,2-Tetrachloroethane	<10	<1.5
Methyl vinyl ketone	<210	<75	m,p-Xylene	<65	<15
Butanal	<220	<75	o-Xylene	<33	<7.5
Methylene chloride	<6,500	<1,900	Styrene	<64	<15
CFC-113	<57	<7.5	Bromoform	<160	<15
Carbon disulfide	<470	<150	Benzyl chloride	<3.9	<0.75
Methyl t-butyl ether (MTBE)	<140	<37	1,3,5-Trimethylbenzene	<180	<37
Vinyl acetate	<530	<150	1,2,4-Trimethylbenzene	<180	<37
1,1-Dichloroethane	<30	<7.5	1,3-Dichlorobenzene	<45	<7.5
cis-1,2-Dichloroethene	<30	<7.5	1,4-Dichlorobenzene	<18	<3
Hexane	730	210	1,2,3-Trimethylbenzene	<180	<37
Chloroform	<3.7	<0.75	1,2-Dichlorobenzene	<45	<7.5
2-Butanone (MEK)	<220	<75	1,2,4-Trichlorobenzene	<56	<7.5
1,2-Dichloroethane (EDC)	<3	<0.75	Naphthalene	9.4 fb	1.8 fb
1,1,1-Trichloroethane	<41	<7.5	Hexachlorobutadiene	<16	<1.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-1	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-06 1/50
Date Analyzed:	08/10/18	Data File:	080922.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	113	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<18	<5	1-Butanol	900	300
Propene	<34	<20	Carbon tetrachloride	<31	<5
Dichlorodifluoromethane	<25	<5	Benzene	<16	<5
Chloromethane	<10	<5	Cyclohexane	<340	<100
F-114	<35	<5	3-Pentanone	<180	<50
Isobutene	<46	<20	2-Pentanone	<180	<50
Acetaldehyde	<450	<250	Pentanal	<180	<50
Vinyl chloride	<13	<5	1,2-Dichloropropane	<12	<2.5
1,3-Butadiene	<1.1	<0.5	1,4-Dioxane	<18	<5
Bromomethane	<78	<20	Bromodichloromethane	<3.4	<0.5
Chloroethane	<13	<5	Trichloroethene	<13	<2.5
Ethanol	1,500	790	cis-1,3-Dichloropropene	<23	<5
Acetonitrile	<84	<50	4-Methyl-2-pentanone	<200	<50
Acrolein	<46	<20	trans-1,3-Dichloropropene	<23	<5
Acrylonitrile	<11	<5	Toluene	<19	<5
Pentane	<150	<50	1,1,2-Trichloroethane	<2.7	<0.5
Trichlorofluoromethane	<28	<5	3-Hexanone	<200	<50
Acetone	610	260	2-Hexanone	<200	<50
2-Propanol	<430	<170	Hexanal	<200	<50
Isoprene	<14	<5	Tetrachloroethene	<34	<5
Iodomethane	<29	<5	Dibromochloromethane	<4.3	<0.5
1,1-Dichloroethene	<20	<5	1,2-Dibromoethane (EDB)	<3.8	<0.5
Methacrolein	<140	<50	Chlorobenzene	<23	<5
trans-1,2-Dichloroethene	<20	<5	Ethylbenzene	<22	<5
Cyclopentane	<14	<5	1,1,2,2-Tetrachloroethane	<6.9	<1
Methyl vinyl ketone	<140	<50	m,p-Xylene	<43	<10
Butanal	<150	<50	o-Xylene	<22	<5
Methylene chloride	<4,300	<1,200	Styrene	<43	<10
CFC-113	<38	<5	Bromoform	<100	<10
Carbon disulfide	<310	<100	Benzyl chloride	<2.6	<0.5
Methyl t-butyl ether (MTBE)	<90	<25	1,3,5-Trimethylbenzene	<120	<25
Vinyl acetate	<350	<100	1,2,4-Trimethylbenzene	<120	<25
1,1-Dichloroethane	<20	<5	1,3-Dichlorobenzene	<30	<5
cis-1,2-Dichloroethene	<20	<5	1,4-Dichlorobenzene	<12	<2
Hexane	<180	<50	1,2,3-Trimethylbenzene	<120	<25
Chloroform	<2.4	<0.5	1,2-Dichlorobenzene	<30	<5
2-Butanone (MEK)	<150	<50	1,2,4-Trichlorobenzene	<37	<5
1,2-Dichloroethane (EDC)	<2	<0.5	Naphthalene	6.0 fb	1.1 fb
1,1,1-Trichloroethane	<27	<5	Hexachlorobutadiene	<11	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-2	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-07 1/25
Date Analyzed:	08/10/18	Data File:	080921.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	120	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<8.8	<2.5	1-Butanol	1,100	350
Propene	24	14	Carbon tetrachloride	<16	<2.5
Dichlorodifluoromethane	<12	<2.5	Benzene	<8	<2.5
Chloromethane	<5.2	<2.5	Cyclohexane	<170	<50
F-114	<17	<2.5	3-Pentanone	<88	<25
Isobutene	<23	<10	2-Pentanone	<88	<25
Acetaldehyde	<230	<120	Pentanal	<88	<25
Vinyl chloride	<6.4	<2.5	1,2-Dichloropropane	<5.8	<1.2
1,3-Butadiene	<0.55	<0.25	1,4-Dioxane	<9	<2.5
Bromomethane	<39	<10	Bromodichloromethane	<1.7	<0.25
Chloroethane	<6.6	<2.5	Trichloroethene	12 fb	2.2 fb
Ethanol	2,300	1,200	cis-1,3-Dichloropropene	<11	<2.5
Acetonitrile	<42	<25	4-Methyl-2-pentanone	<100	<25
Acrolein	<23	<10	trans-1,3-Dichloropropene	<11	<2.5
Acrylonitrile	<5.4	<2.5	Toluene	<9.4	<2.5
Pentane	<74	<25	1,1,2-Trichloroethane	3.4	0.62
Trichlorofluoromethane	<14	<2.5	3-Hexanone	<100	<25
Acetone	1,200	520	2-Hexanone	<100	<25
2-Propanol	<220	<87	Hexanal	<100	<25
Isoprene	<7	<2.5	Tetrachloroethene	<17	<2.5
Iodomethane	<15	<2.5	Dibromochloromethane	<2.1	<0.25
1,1-Dichloroethene	<9.9	<2.5	1,2-Dibromoethane (EDB)	<1.9	<0.25
Methacrolein	<72	<25	Chlorobenzene	<12	<2.5
trans-1,2-Dichloroethene	<9.9	<2.5	Ethylbenzene	<11	<2.5
Cyclopentane	<7.3	<2.5	1,1,2,2-Tetrachloroethane	<3.4	<0.5
Methyl vinyl ketone	<72	<25	m,p-Xylene	<22	<5
Butanal	<74	<25	o-Xylene	12	2.7
Methylene chloride	<2,200	<620	Styrene	<21	<5
CFC-113	<19	<2.5	Bromoform	<52	<5
Carbon disulfide	<160	<50	Benzyl chloride	<1.3	<0.25
Methyl t-butyl ether (MTBE)	<45	<12	1,3,5-Trimethylbenzene	<61	<12
Vinyl acetate	<180	<50	1,2,4-Trimethylbenzene	<61	<12
1,1-Dichloroethane	<10	<2.5	1,3-Dichlorobenzene	<15	<2.5
cis-1,2-Dichloroethene	<9.9	<2.5	1,4-Dichlorobenzene	<6	<1
Hexane	88	25	1,2,3-Trimethylbenzene	<61	<12
Chloroform	<1.2	<0.25	1,2-Dichlorobenzene	<15	<2.5
2-Butanone (MEK)	<74	<25	1,2,4-Trichlorobenzene	<19	<2.5
1,2-Dichloroethane (EDC)	<1	<0.25	Naphthalene	3.8 fb	0.72 fb
1,1,1-Trichloroethane	<14	<2.5	Hexachlorobutadiene	<5.3	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-3	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-08 1/3.3
Date Analyzed:	08/09/18	Data File:	080914.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

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

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	850 ve	280 ve
Propene	<2.3	<1.3	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.5	0.50	Benzene	6.9	2.2
Chloromethane	<0.68	<0.33	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	17	7.6	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	<12	<3.3
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	2.7	1.2	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	5.5	1.0
Ethanol	2,800 ve	1,500 ve	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	50	12
Acrolein	<3	<1.3	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	11	2.9
Pentane	55	19	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	1,300 ve	540 ve	2-Hexanone	<14	<3.3
2-Propanol	300	120	Hexanal	<14	<3.3
Isoprene	1.8	0.65	Tetrachloroethene	16	2.4
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	2.0	0.47
Cyclopentane	<0.95	<0.33	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	8.6	2.0
Butanal	16	5.3	o-Xylene	3.6	0.83
Methylene chloride	<290	<82	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	44	12	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	12	2.5	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	65	22	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	<0.13	<0.033	Naphthalene	1.3 fb	0.25 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-4	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-09 1/3.3
Date Analyzed:	08/09/18	Data File:	080915.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	300	100
Propene	<2.3	<1.3	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.5	0.50	Benzene	12	3.7
Chloromethane	<0.68	<0.33	Cyclohexane	28	8.1
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	20	8.8	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	<12	<3.3
Vinyl chloride	12	4.6	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	4.0	1.8	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	1.4	0.52	Trichloroethene	5.1	0.95
Ethanol	1,600 ve	840 ve	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	37	9.1
Acrolein	<3	<1.3	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	17	4.6
Pentane	95	32	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	1,100 ve	440 ve	2-Hexanone	<14	<3.3
2-Propanol	210	86	Hexanal	<14	<3.3
Isoprene	1.1	0.39	Tetrachloroethene	15	2.2
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	2.2	0.50
Cyclopentane	11	4.0	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	10	2.3
Butanal	<9.7	<3.3	o-Xylene	2.9	0.66
Methylene chloride	570	160	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	71	20	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	1.1	0.23	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	44	15	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	<0.13	<0.033	Naphthalene	0.90 fb	0.17 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-5	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-10 1/3.3
Date Analyzed:	08/09/18	Data File:	080916.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

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

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	290	97
Propene	<2.3	<1.3	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.5	0.50	Benzene	4.9	1.5
Chloromethane	0.85	0.41	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	7.6	3.3	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	<12	<3.3
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	2.0	0.90	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	39	7.3
Ethanol	2,300 ve	1,200 ve	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	29	7.2
Acrolein	<3	<1.3	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	24	6.4
Pentane	53	18	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	1,200 ve	510 ve	2-Hexanone	<14	<3.3
2-Propanol	200	80	Hexanal	<14	<3.3
Isoprene	1.5	0.53	Tetrachloroethene	5.0	0.73
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	1.7	0.42	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	2.4	0.55
Cyclopentane	<0.95	<0.33	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	9.7	2.2
Butanal	15	5.1	o-Xylene	3.1	0.72
Methylene chloride	<290	<82	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	39	11	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	0.71	0.15	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	48	16	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	0.16	0.04	Naphthalene	0.97 fb	0.18 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-6	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-11 1/3.3
Date Analyzed:	08/10/18	Data File:	080917.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	105	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	82	27
Propene	<2.3	<1.3	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.4	0.48	Benzene	6.5	2.0
Chloromethane	1.0	0.50	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	12	5.1	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	<12	<3.3
Vinyl chloride	11	4.2	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	4.3	1.9	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	1.8	0.70	Trichloroethene	5.4	1.0
Ethanol	1,400 ve	740 ve	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	70	17
Acrolein	<3	<1.3	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	14	3.8
Pentane	19	6.3	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	620 ve	260 ve	2-Hexanone	<14	<3.3
2-Propanol	230	95	Hexanal	<14	<3.3
Isoprene	1.4	0.49	Tetrachloroethene	2.6	0.38
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	3.5	0.80
Cyclopentane	<0.95	<0.33	1,1,2,2-Tetrachloroethane	<0.46	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	11	2.4
Butanal	<9.7	<3.3	o-Xylene	3.9	0.89
Methylene chloride	<290	<82	Styrene	3.1	0.73
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	0.32	0.063
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	31	8.9	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	0.29 fb	0.059 fb	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	74	25	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	0.39	0.096	Naphthalene	1.0 fb	0.19 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-7	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-12 1/3.3
Date Analyzed:	08/10/18	Data File:	080918.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	106	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	1,800 ve	590 ve
Propene	<2.3	<1.3	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.4	0.48	Benzene	3.6	1.1
Chloromethane	<0.68	<0.33	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	12	5.2	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	51	14
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	1.1	0.50	1,4-Dioxane	13	3.6
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	2.0	0.36
Ethanol	1,900 ve	1,000 ve	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	25	6.1
Acrolein	5.8	2.5	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	9.5	2.5
Pentane	19	6.4	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	1,000 ve	430 ve	2-Hexanone	<14	<3.3
2-Propanol	130	52	Hexanal	<14	<3.3
Isoprene	<0.92	<0.33	Tetrachloroethene	<2.2	<0.33
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	6.1	1.3
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	7.4	1.7
Cyclopentane	6.4	2.2	1,1,2,2-Tetrachloroethane	1.2	0.17
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	20	4.7
Butanal	73	25	o-Xylene	14	3.3
Methylene chloride	<290	<82	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	15	3.1
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	38	7.8
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	3.3	0.55
Hexane	28	8.0	1,2,3-Trimethylbenzene	9.5	1.9
Chloroform	0.24 fb	0.049 fb	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	65	22	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	<0.13	<0.033	Naphthalene	1.4 fb	0.27 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-8	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-13 1/3.3
Date Analyzed:	08/10/18	Data File:	080919.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	104	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	60	20
Propene	<2.3	<1.3	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.4	0.48	Benzene	<1.1	<0.33
Chloromethane	<0.68	<0.33	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	<3	<1.3	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	<12	<3.3
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	<0.073	<0.033	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	3.5	0.64
Ethanol	50	26	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	<14	<3.3
Acrolein	<3	<1.3	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	4.1	1.1
Pentane	<9.7	<3.3	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	63	27	2-Hexanone	<14	<3.3
2-Propanol	<28	<12	Hexanal	<14	<3.3
Isoprene	<0.92	<0.33	Tetrachloroethene	<2.2	<0.33
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	1.6	0.38
Cyclopentane	<0.95	<0.33	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	8.3	1.9
Butanal	<9.7	<3.3	o-Xylene	3.8	0.86
Methylene chloride	<290	<82	Styrene	6.4	1.5
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	<12	<3.3	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	4.7	0.96	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	29	9.7	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	<0.13	<0.033	Naphthalene	0.64 fb	0.12 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	ESN NW
Date Received:	Not Applicable	Project:	Franciscan West Seattle 18-172
Date Collected:	Not Applicable	Lab ID:	08-1808 mb
Date Analyzed:	08/09/18	Data File:	080908.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

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

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<0.35	<0.1	1-Butanol	<6.1	<2
Propene	<0.69	<0.4	Carbon tetrachloride	<0.63	<0.1
Dichlorodifluoromethane	<0.49	<0.1	Benzene	<0.32	<0.1
Chloromethane	<0.21	<0.1	Cyclohexane	<6.9	<2
F-114	<0.7	<0.1	3-Pentanone	<3.5	<1
Isobutene	<0.92	<0.4	2-Pentanone	<3.5	<1
Acetaldehyde	<9	<5	Pentanal	<3.5	<1
Vinyl chloride	<0.26	<0.1	1,2-Dichloropropane	<0.23	<0.05
1,3-Butadiene	<0.022	<0.01	1,4-Dioxane	<0.36	<0.1
Bromomethane	<1.6	<0.4	Bromodichloromethane	<0.067	<0.01
Chloroethane	<0.26	<0.1	Trichloroethene	<0.27	<0.05
Ethanol	<7.5	<4	cis-1,3-Dichloropropene	<0.45	<0.1
Acetonitrile	<1.7	<1	4-Methyl-2-pentanone	<4.1	<1
Acrolein	<0.92	<0.4	trans-1,3-Dichloropropene	<0.45	<0.1
Acrylonitrile	<0.22	<0.1	Toluene	<0.38	<0.1
Pentane	<3	<1	1,1,2-Trichloroethane	<0.055	<0.01
Trichlorofluoromethane	<0.56	<0.1	3-Hexanone	<4.1	<1
Acetone	<4.8	<2	2-Hexanone	<4.1	<1
2-Propanol	<8.6	<3.5	Hexanal	<4.1	<1
Isoprene	<0.28	<0.1	Tetrachloroethene	<0.68	<0.1
Iodomethane	<0.58	<0.1	Dibromochloromethane	<0.085	<0.01
1,1-Dichloroethene	<0.4	<0.1	1,2-Dibromoethane (EDB)	<0.077	<0.01
Methacrolein	<2.9	<1	Chlorobenzene	<0.46	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1	Ethylbenzene	<0.43	<0.1
Cyclopentane	<0.29	<0.1	1,1,2,2-Tetrachloroethane	<0.14	<0.02
Methyl vinyl ketone	<2.9	<1	m,p-Xylene	<0.87	<0.2
Butanal	<2.9	<1	o-Xylene	<0.43	<0.1
Methylene chloride	<87	<25	Styrene	<0.85	<0.2
CFC-113	<0.77	<0.1	Bromoform	<2.1	<0.2
Carbon disulfide	<6.2	<2	Benzyl chloride	<0.052	<0.01
Methyl t-butyl ether (MTBE)	<1.8	<0.5	1,3,5-Trimethylbenzene	<2.5	<0.5
Vinyl acetate	<7	<2	1,2,4-Trimethylbenzene	<2.5	<0.5
1,1-Dichloroethane	<0.4	<0.1	1,3-Dichlorobenzene	<0.6	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1	1,4-Dichlorobenzene	<0.24	<0.04
Hexane	<3.5	<1	1,2,3-Trimethylbenzene	<2.5	<0.5
Chloroform	<0.049	<0.01	1,2-Dichlorobenzene	<0.6	<0.1
2-Butanone (MEK)	<2.9	<1	1,2,4-Trichlorobenzene	<0.74	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01	Naphthalene	0.14	0.027
1,1,1-Trichloroethane	<0.55	<0.1	Hexachlorobutadiene	<0.21	<0.02

Date of Report: 08/16/18
Date Received: 07/31/18
Project: Franciscan West Seattle 18-172, F&BI 807613

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	45	86	70-130
APH EC9-12 aliphatics	ug/m3	45	119	70-130
APH EC9-10 aromatics	ug/m3	45	97	70-130

Date of Report: 08/16/18
Date Received: 07/31/18
Project: Franciscan West Seattle 18-172, F&BI 807613

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
Chlorodifluoromethane	ppbv	5	95	70-130
Propene	ppbv	5	85	70-130
Dichlorodifluoromethane	ppbv	5	88	70-130
Chloromethane	ppbv	5	88	70-130
F-114	ppbv	5	90	70-130
Isobutene	ppbv	5	86	70-130
Acetaldehyde	ppbv	5	108	70-130
Vinyl chloride	ppbv	5	89	70-130
1,3-Butadiene	ppbv	5	95	70-130
Bromomethane	ppbv	5	136 vo	70-130
Chloroethane	ppbv	5	87	70-130
Ethanol	ppbv	5	86	70-130
Acetonitrile	ppbv	5	88	70-130
Acrolein	ppbv	5	98	70-130
Acrylonitrile	ppbv	5	110	70-130
Pentane	ppbv	5	95	70-130
Trichlorofluoromethane	ppbv	5	92	70-130
Acetone	ppbv	5	92	70-130
2-Propanol	ppbv	5	102	70-130
Isoprene	ppbv	5	96	70-130
Iodomethane	ppbv	5	93	70-130
1,1-Dichloroethene	ppbv	5	92	70-130
Methacrolein	ppbv	5	93	70-130
trans-1,2-Dichloroethene	ppbv	5	95	70-130
Cyclopentane	ppbv	5	95	70-130
Methyl vinyl ketone	ppbv	5	105	70-130
Butanal	ppbv	5	98	70-130
Methylene chloride	ppbv	5	84	70-130
CFC-113	ppbv	5	92	70-130
Carbon disulfide	ppbv	5	89	70-130
Methyl t-butyl ether (MTBE)	ppbv	5	102	70-130
Vinyl acetate	ppbv	5	89	70-130
1,1-Dichloroethane	ppbv	5	96	70-130
cis-1,2-Dichloroethene	ppbv	5	97	70-130
Hexane	ppbv	5	98	70-130
Chloroform	ppbv	5	97	70-130
2-Butanone (MEK)	ppbv	5	103	70-130
1,2-Dichloroethane (EDC)	ppbv	5	99	70-130
1,1,1-Trichloroethane	ppbv	5	98	70-130

Date of Report: 08/16/18
Date Received: 07/31/18
Project: Franciscan West Seattle 18-172, F&BI 807613

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
1-Butanol	ppbv	5	98	70-130
Carbon tetrachloride	ppbv	5	93	70-130
Benzene	ppbv	5	99	70-130
Cyclohexane	ppbv	5	98	70-130
2-Pentanone	ppbv	5	102	70-130
3-Pentanone	ppbv	5	108	70-130
Pentanal	ppbv	5	95	70-130
1,2-Dichloropropane	ppbv	5	96	70-130
1,4-Dioxane	ppbv	5	97	70-130
Bromodichloromethane	ppbv	5	101	70-130
Trichloroethene	ppbv	5	92	70-130
cis-1,3-Dichloropropene	ppbv	5	97	70-130
4-Methyl-2-pentanone	ppbv	5	92	70-130
trans-1,3-Dichloropropene	ppbv	5	99	70-130
Toluene	ppbv	5	94	70-130
1,1,2-Trichloroethane	ppbv	5	97	70-130
3-Hexanone	ppbv	5	97	70-130
2-Hexanone	ppbv	5	96	70-130
Hexanal	ppbv	5	89	70-130
Tetrachloroethene	ppbv	5	93	70-130
Dibromochloromethane	ppbv	5	105	70-130
1,2-Dibromoethane (EDB)	ppbv	5	102	70-130
Chlorobenzene	ppbv	5	96	70-130
Ethylbenzene	ppbv	5	99	70-130
1,1,2,2,-Tetrachloroethane	ppbv	5	103	70-130
m,p-Xylene	ppbv	10	101	70-130
o-Xylene	ppbv	5	105	70-130
Styrene	ppbv	5	98	70-130
Bromoform	ppbv	5	98	70-130
Benzyl chloride	ppbv	5	112	70-130
1,3,5-Trimethylbenzene	ppbv	5	101	70-130
1,2,4-Trimethylbenzene	ppbv	5	99	70-130
1,3-Dichlorobenzene	ppbv	5	99	70-130
1,4-Dichlorobenzene	ppbv	5	107	70-130
1,2,3-Trimethylbenzene	ppbv	5	101	70-130
1,2-Dichlorobenzene	ppbv	5	104	70-130
1,2,4-Trichlorobenzene	ppbv	5	94	70-130
Naphthalene	ppbv	5	95	70-130
Hexachloro-1,3-butadiene	ppbv	5	98	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 compound 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

SAMPLE CHAIN OF CUSTODY

Report To ~~EST~~ SHAWN / JENNIFER
Company AEG / ESN
Address 6051 10th AVE SE STE 201
City, State, ZIP OLYMPIA WA
Phone 360 352 9835 Email SLOMBARDENE@AEGcorp.com
~~LAB@ESN~~

SAMPLERS (*signature*)

PROJECT NAME: FRANCISCAN WEST SEATTLE
PO #: 18-172

REPORTING LEVEL
☐ Indoor Air ☐ Deep Soil Gas
☐ Sub Slab/Soil Gas ☐ SVE/Grab

INVOICE TO

Page # _____ of _____

TURNAROUND TIME
☐ Standard
☐ RUSH _____
Rush charges authorized by: _____

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Archive Samples
☐ Other _____

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Contr. ID	Date Sampled	Field Initial Press. (Hg)	Field Initial Time	Field Final Press. (Hg)	Field Final Time	TO-15 Full Scan	TO-15 BTEXN	TO-15 cVOCs	TO-15 / APH VOC	Notes
SGV-1		3259		7.26.18	~30	20:25	5	2032			X	X	
SGV-2		2302			~30	21:0[illegible]	5	2110				X	
SGV-3		3256			~30	21:37	6	2148				X	
SGV-4		2305			~30	22:14	5	2219				X	
SGV-5		3252			~29	2242	5	2248				X	
SS-1		3387			~30	2357	5	0002				X	
SS-2		3250			~28	0014	3	0020				X	
SS-3		3476			~28	0027	5	0033				X	

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	SHAWN LOMBARDENE	AEG	7.26.18	
Received by:				
Relinquished by:				
Received by:				

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

SAMPLE CHAIN OF CUSTODY

Report To SHAWN / JENNIFER
Company AEG / FSN
Address 605 1ST AVE S
City, State, ZIP OLY WA
Phone 360-352-9835 Email SLOMBARDI@AEGWA.COM

SAMPLERS (*signature*)

PROJECT NAME: FRANCISCAN WEST SEATTLE
PO #: 18-172

REPORTING LEVEL
☐ Indoor Air ☐ Deep Soil Gas
☐ Sub Slab/Soil Gas ☐ SVE/Grab

INVOICE TO

Page # _____ of _____

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ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Contr. ID	Date Sampled	Field Initial Press. (Hg)	Field Initial Time	Field Final Press. (Hg)	Field Final Time	TO-15 Full Scan	TO-15 BTEXN	TO-15 cVOCs	TO-15 VC / MeOH	Notes
SS-4		3344		7.26.18	-29	040	-5	046				X	
SS-5		3483			-30	051	-6	059				X	
SS-6		2296			-30	102	-6	109				X	
SS-7		2438			-29	114	-6	121				X	
SS-8		3668			-32	126	-3	135				X	

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:		SHAWN LOMBARDI	AEG	7.26.18	
Received by:					
Relinquished by:					
Received by:					