ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**
Client Sample ID: **PS-SW-VOC-093016-01**

ALS Project ID: P1604824
ALS Sample ID: P1604824-001

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: 9/30/16
Date Received: 10/12/16
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.00

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	**8.8**	1.0	0.12	NA	NA	NA	
74-87-3	Chloromethane	**3.8**	1.0	0.27	NA	NA	NA	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	**0.26**	1.0	0.16	NA	NA	NA	**J**
75-01-4	Vinyl Chloride	ND	1.0	0.14	NA	NA	NA	**0.0**
106-99-0	1,3-Butadiene	**15**	1.1	0.28	NA	NA	NA	
75-00-3	Chloroethane	**2.4**	1.0	0.20	NA	NA	NA	
64-17-5	Ethanol	**13**	5.2	0.73	NA	NA	NA	
75-05-8	Acetonitrile	**31**	2.1	0.23	NA	NA	NA	
67-64-1	Acetone	**38**	5.3	1.9	NA	NA	NA	
75-69-4	Trichlorofluoromethane	**3.4**	1.0	0.079	NA	NA	NA	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	0.52	NA	NA	NA	**0.0**
75-35-4	1,1-Dichloroethene	ND	1.1	0.17	NA	NA	NA	
75-09-2	Methylene Chloride	**2.9**	1.1	0.13	NA	NA	NA	
76-13-1	Trichlorotrifluoroethane	**1.8**	1.0	0.14	NA	NA	NA	
75-15-0	Carbon Disulfide	ND	5.3	0.80	NA	NA	NA	**0.0**
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.12	NA	NA	NA	
75-34-3	1,1-Dichloroethane	ND	1.0	0.059	NA	NA	NA	
1634-04-4	Methyl tert-Butyl Ether	ND	1.1	0.070	NA	NA	NA	
78-93-3	2-Butanone (MEK)	**7.6**	1.0	0.20	NA	NA	NA	
156-59-2	cis-1,2-Dichloroethene	ND	1.1	0.093	NA	NA	NA	
110-54-3	n-Hexane	**1.6**	1.1	0.12	NA	NA	NA	
67-66-3	Chloroform	**0.14**	1.1	0.11	NA	NA	NA	**J**
109-99-9	Tetrahydrofuran (THF)	**0.54**	1.1	0.25	NA	NA	NA	**J**
107-06-2	1,2-Dichloroethane	ND	1.1	0.15	NA	NA	NA	**0.0**
71-55-6	1,1,1-Trichloroethane	ND	1.1	0.12	NA	NA	NA	
71-43-2	Benzene	**170**	2.1	0.94	NA	NA	NA	
56-23-5	Carbon Tetrachloride	**1.7**	1.1	0.098	NA	NA	NA	
110-82-7	Cyclohexane	ND	2.1	0.18	NA	NA	NA	
78-87-5	1,2-Dichloropropane	ND	1.1	0.20	NA	NA	NA	
75-27-4	Bromodichloromethane	ND	1.1	0.095	NA	NA	NA	
79-01-6	Trichloroethene	ND	1.1	0.13	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**

Client Sample ID: **PS-SW-VOC-093016-01**

ALS Project ID: P1604824
ALS Sample ID: P1604824-001

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: 9/30/16
Date Received: 10/12/16
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.00
0.00

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
123-91-1	1,4-Dioxane	ND	1.1	0.20	NA	NA	NA	**0.0**
540-84-1	2,2,4-Trimethylpentane (Isooctane)	**0.54**	1.1	0.13	NA	NA	NA	**J**
142-82-5	n-Heptane	**4.0**	1.1	0.14	NA	NA	NA	
10061-01-5	cis-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
108-10-1	4-Methyl-2-pentanone	**0.77**	2.1	0.16	NA	NA	NA	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
79-00-5	1,1,2-Trichloroethane	ND	1.1	0.20	NA	NA	NA	
108-88-3	Toluene	**57**	1.1	0.47	NA	NA	NA	
591-78-6	2-Hexanone	ND	1.1	0.23	NA	NA	NA	
124-48-1	Dibromochloromethane	ND	1.1	0.068	NA	NA	NA	
106-93-4	1,2-Dibromoethane	ND	1.1	0.098	NA	NA	NA	
111-65-9	n-Octane	**11**	1.1	0.21	NA	NA	NA	
127-18-4	Tetrachloroethene	ND	1.1	0.12	NA	NA	NA	**0.0**
108-90-7	Chlorobenzene	ND	1.1	0.084	NA	NA	NA	
100-41-4	Ethylbenzene	**13**	1.1	0.11	NA	NA	NA	
179601-23-1	m,p-Xylenes	**28**	2.1	0.17	NA	NA	NA	
75-25-2	Bromoform	ND	1.1	0.14	NA	NA	NA	
100-42-5	Styrene	**28**	1.1	0.078	NA	NA	NA	
95-47-6	o-Xylene	**12**	1.1	0.071	NA	NA	NA	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.1	0.14	NA	NA	NA	
98-82-8	Cumene	**2.7**	1.1	0.28	NA	NA	NA	
108-67-8	1,3,5-Trimethylbenzene	**6.4**	1.0	0.27	NA	NA	NA	
95-63-6	1,2,4-Trimethylbenzene	**23**	1.1	0.14	NA	NA	NA	
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.15	NA	NA	NA	
106-46-7	1,4-Dichlorobenzene	ND	1.1	0.14	NA	NA	NA	
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.17	NA	NA	NA	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.1	0.21	NA	NA	NA	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.41	NA	NA	NA	
91-20-3	Naphthalene	**80**	1.1	0.37	NA	NA	NA	
87-68-3	Hexachlorobutadiene	ND	1.1	0.30	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**
Client Sample ID: **PS-SW-VOC-093016-02**

ALS Project ID: P1604824
ALS Sample ID: P1604824-002

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: 9/30/16
Date Received: 10/12/16
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.00

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	**5.1**	1.0	0.12	NA	NA	NA	
74-87-3	Chloromethane	**3.6**	1.0	0.27	NA	NA	NA	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	**0.18**	1.0	0.16	NA	NA	NA	**J**
75-01-4	Vinyl Chloride	ND	1.0	0.14	NA	NA	NA	**0.0**
106-99-0	1,3-Butadiene	**4.6**	1.1	0.28	NA	NA	NA	
75-00-3	Chloroethane	**0.44**	1.0	0.20	NA	NA	NA	**J**
64-17-5	Ethanol	**3.2**	5.2	0.73	NA	NA	NA	**J**
75-05-8	Acetonitrile	**11**	2.1	0.23	NA	NA	NA	
67-64-1	Acetone	**18**	5.3	1.9	NA	NA	NA	
75-69-4	Trichlorofluoromethane	**1.4**	1.0	0.079	NA	NA	NA	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	0.52	NA	NA	NA	**0.0**
75-35-4	1,1-Dichloroethene	ND	1.1	0.17	NA	NA	NA	
75-09-2	Methylene Chloride	**3.2**	1.1	0.13	NA	NA	NA	
76-13-1	Trichlorotrifluoroethane	**1.1**	1.0	0.14	NA	NA	NA	
75-15-0	Carbon Disulfide	ND	5.3	0.80	NA	NA	NA	**0.0**
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.12	NA	NA	NA	
75-34-3	1,1-Dichloroethane	ND	1.0	0.059	NA	NA	NA	
1634-04-4	Methyl tert-Butyl Ether	ND	1.1	0.070	NA	NA	NA	
78-93-3	2-Butanone (MEK)	**4.1**	1.0	0.20	NA	NA	NA	
156-59-2	cis-1,2-Dichloroethene	ND	1.1	0.093	NA	NA	NA	
110-54-3	n-Hexane	**0.86**	1.1	0.12	NA	NA	NA	**J**
67-66-3	Chloroform	ND	1.1	0.11	NA	NA	NA	**0.0**
109-99-9	Tetrahydrofuran (THF)	ND	1.1	0.25	NA	NA	NA	**0.0**
107-06-2	1,2-Dichloroethane	ND	1.1	0.15	NA	NA	NA	**0.0**
71-55-6	1,1,1-Trichloroethane	ND	1.1	0.12	NA	NA	NA	
71-43-2	Benzene	**120**	2.1	0.94	NA	NA	NA	
56-23-5	Carbon Tetrachloride	**1.1**	1.1	0.098	NA	NA	NA	
110-82-7	Cyclohexane	ND	2.1	0.18	NA	NA	NA	
78-87-5	1,2-Dichloropropane	ND	1.1	0.20	NA	NA	NA	**0.0**
75-27-4	Bromodichloromethane	ND	1.1	0.095	NA	NA	NA	
79-01-6	Trichloroethene	ND	1.1	0.13	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**
Client Sample ID: **PS-SW-VOC-093016-02**

ALS Project ID: P1604824
ALS Sample ID: P1604824-002

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: 9/30/16
Date Received: 10/12/16
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.00
0.00

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
123-91-1	1,4-Dioxane	ND	1.1	0.20	NA	NA	NA	
540-84-1	2,2,4-Trimethylpentane (Isooctane)	**0.29**	1.1	0.13	NA	NA	NA	**J**
142-82-5	n-Heptane	**1.3**	1.1	0.14	NA	NA	NA	
10061-01-5	cis-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
108-10-1	4-Methyl-2-pentanone	**0.91**	2.1	0.16	NA	NA	NA	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
79-00-5	1,1,2-Trichloroethane	**0.23**	1.1	0.20	NA	NA	NA	**J**
108-88-3	Toluene	**47**	1.1	0.47	NA	NA	NA	
591-78-6	2-Hexanone	**1.4**	1.1	0.23	NA	NA	NA	
124-48-1	Dibromochloromethane	ND	1.1	0.068	NA	NA	NA	**0.0**
106-93-4	1,2-Dibromoethane	ND	1.1	0.098	NA	NA	NA	
111-65-9	n-Octane	**3.8**	1.1	0.21	NA	NA	NA	
127-18-4	Tetrachloroethene	ND	1.1	0.12	NA	NA	NA	**0.0**
108-90-7	Chlorobenzene	ND	1.1	0.084	NA	NA	NA	
100-41-4	Ethylbenzene	**7.3**	1.1	0.11	NA	NA	NA	
179601-23-1	m,p-Xylenes	**14**	2.1	0.17	NA	NA	NA	
75-25-2	Bromoform	ND	1.1	0.14	NA	NA	NA	
100-42-5	Styrene	**20**	1.1	0.078	NA	NA	NA	
95-47-6	o-Xylene	**5.6**	1.1	0.071	NA	NA	NA	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.1	0.14	NA	NA	NA	
98-82-8	Cumene	**1.4**	1.1	0.28	NA	NA	NA	
108-67-8	1,3,5-Trimethylbenzene	**2.2**	1.0	0.27	NA	NA	NA	
95-63-6	1,2,4-Trimethylbenzene	**8.8**	1.1	0.14	NA	NA	NA	
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.15	NA	NA	NA	**0.0**
106-46-7	1,4-Dichlorobenzene	ND	1.1	0.14	NA	NA	NA	**0.0**
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.17	NA	NA	NA	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.1	0.21	NA	NA	NA	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.41	NA	NA	NA	
91-20-3	Naphthalene	**55**	1.1	0.37	NA	NA	NA	
87-68-3	Hexachlorobutadiene	ND	1.1	0.30	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**
Client Sample ID: **PS-SW-VOC-100616-01**

ALS Project ID: P1604824
ALS Sample ID: P1604824-003

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: 10/6/16
Date Received: 10/12/16
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.00

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	**9.2**	1.0	0.12	NA	NA	NA	
74-87-3	Chloromethane	**8.1**	1.0	0.27	NA	NA	NA	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	**0.42**	1.0	0.16	NA	NA	NA	**J**
75-01-4	Vinyl Chloride	ND	1.0	0.14	NA	NA	NA	**0.0**
106-99-0	1,3-Butadiene	**21**	1.1	0.28	NA	NA	NA	
75-00-3	Chloroethane	**1.2**	1.0	0.20	NA	NA	NA	
64-17-5	Ethanol	**23**	5.2	0.73	NA	NA	NA	
75-05-8	Acetonitrile	**26**	2.1	0.23	NA	NA	NA	
67-64-1	Acetone	**100**	5.3	1.9	NA	NA	NA	
75-69-4	Trichlorofluoromethane	**3.8**	1.0	0.079	NA	NA	NA	
67-63-0	2-Propanol (Isopropyl Alcohol)	**5.9**	2.1	0.52	NA	NA	NA	
75-35-4	1,1-Dichloroethene	ND	1.1	0.17	NA	NA	NA	
75-09-2	Methylene Chloride	**720**	1.1	0.13	NA	NA	NA	
76-13-1	Trichlorotrifluoroethane	**2.0**	1.0	0.14	NA	NA	NA	
75-15-0	Carbon Disulfide	**1.6**	5.3	0.80	NA	NA	NA	**J, B**
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.12	NA	NA	NA	**0.0**
75-34-3	1,1-Dichloroethane	ND	1.0	0.059	NA	NA	NA	
1634-04-4	Methyl tert-Butyl Ether	ND	1.1	0.070	NA	NA	NA	**0.0**
78-93-3	2-Butanone (MEK)	**7.9**	1.0	0.20	NA	NA	NA	
156-59-2	cis-1,2-Dichloroethene	ND	1.1	0.093	NA	NA	NA	
110-54-3	n-Hexane	**91**	1.1	0.12	NA	NA	NA	
67-66-3	Chloroform	**0.68**	1.1	0.11	NA	NA	NA	
109-99-9	Tetrahydrofuran (THF)	**1.1**	1.1	0.25	NA	NA	NA	
107-06-2	1,2-Dichloroethane	**0.15**	1.1	0.15	NA	NA	NA	**J**
71-55-6	1,1,1-Trichloroethane	ND	1.1	0.12	NA	NA	NA	**0.0**
71-43-2	Benzene	**240**	2.1	0.94	NA	NA	NA	
56-23-5	Carbon Tetrachloride	**2.4**	1.1	0.098	NA	NA	NA	
110-82-7	Cyclohexane	**13**	2.1	0.18	NA	NA	NA	
78-87-5	1,2-Dichloropropane	**2.0**	1.1	0.20	NA	NA	NA	
75-27-4	Bromodichloromethane	ND	1.1	0.095	NA	NA	NA	
79-01-6	Trichloroethene	**0.42**	1.1	0.13	NA	NA	NA	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**

Client Sample ID: **PS-SW-VOC-100616-01**

ALS Project ID: P1604824
ALS Sample ID: P1604824-003

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: 10/6/16
Date Received: 10/12/16
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.00
0.00

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
123-91-1	1,4-Dioxane	**1.4**	1.1	0.20	NA	NA	NA	
540-84-1	2,2,4-Trimethylpentane (Isooctane)	**3.1**	1.1	0.13	NA	NA	NA	
142-82-5	n-Heptane	**7.6**	1.1	0.14	NA	NA	NA	
10061-01-5	cis-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
108-10-1	4-Methyl-2-pentanone	**1.8**	2.1	0.16	NA	NA	NA	
10061-02-6	trans-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
79-00-5	1,1,2-Trichloroethane	ND	1.1	0.20	NA	NA	NA	**0.0**
108-88-3	Toluene	**1,400**	1.1	0.47	NA	NA	NA	**E**
591-78-6	2-Hexanone	ND	1.1	0.23	NA	NA	NA	
124-48-1	Dibromochloromethane	ND	1.1	0.068	NA	NA	NA	
106-93-4	1,2-Dibromoethane	ND	1.1	0.098	NA	NA	NA	
111-65-9	n-Octane	**30**	1.1	0.21	NA	NA	NA	
127-18-4	Tetrachloroethene	**1.9**	1.1	0.12	NA	NA	NA	
108-90-7	Chlorobenzene	**2.6**	1.1	0.084	NA	NA	NA	
100-41-4	Ethylbenzene	**22**	1.1	0.11	NA	NA	NA	
179601-23-1	m,p-Xylenes	**44**	2.1	0.17	NA	NA	NA	
75-25-2	Bromoform	ND	1.1	0.14	NA	NA	NA	
100-42-5	Styrene	**42**	1.1	0.078	NA	NA	NA	
95-47-6	o-Xylene	**13**	1.1	0.071	NA	NA	NA	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.1	0.14	NA	NA	NA	
98-82-8	Cumene	**2.4**	1.1	0.28	NA	NA	NA	
108-67-8	1,3,5-Trimethylbenzene	**4.4**	1.0	0.27	NA	NA	NA	
95-63-6	1,2,4-Trimethylbenzene	**18**	1.1	0.14	NA	NA	NA	
541-73-1	1,3-Dichlorobenzene	**0.17**	1.1	0.15	NA	NA	NA	**J**
106-46-7	1,4-Dichlorobenzene	**0.35**	1.1	0.14	NA	NA	NA	**J**
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.17	NA	NA	NA	**0.0**
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.1	0.21	NA	NA	NA	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.41	NA	NA	NA	
91-20-3	Naphthalene	**120**	1.1	0.37	NA	NA	NA	
87-68-3	Hexachlorobutadiene	ND	1.1	0.30	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E = Estimated; concentration exceeded calibration range.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**
Client Sample ID: **PS-SW-VOC-100616-02**

ALS Project ID: P1604824
ALS Sample ID: P1604824-004

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: 10/6/16
Date Received: 10/12/16
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.00

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	**4.3**	1.0	0.12	NA	NA	NA	
74-87-3	Chloromethane	**2.0**	1.0	0.27	NA	NA	NA	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.0	0.16	NA	NA	NA	**0.0**
75-01-4	Vinyl Chloride	ND	1.0	0.14	NA	NA	NA	**0.0**
106-99-0	1,3-Butadiene	**20**	1.1	0.28	NA	NA	NA	
75-00-3	Chloroethane	ND	1.0	0.20	NA	NA	NA	
64-17-5	Ethanol	**3.1**	5.2	0.73	NA	NA	NA	**J**
75-05-8	Acetonitrile	**23**	2.1	0.23	NA	NA	NA	
67-64-1	Acetone	**37**	5.3	1.9	NA	NA	NA	
75-69-4	Trichlorofluoromethane	**1.3**	1.0	0.079	NA	NA	NA	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	0.52	NA	NA	NA	**0.0**
75-35-4	1,1-Dichloroethene	ND	1.1	0.17	NA	NA	NA	
75-09-2	Methylene Chloride	**4.8**	1.1	0.13	NA	NA	NA	
76-13-1	Trichlorotrifluoroethane	**1.2**	1.0	0.14	NA	NA	NA	
75-15-0	Carbon Disulfide	ND	5.3	0.80	NA	NA	NA	**0.0**
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.12	NA	NA	NA	
75-34-3	1,1-Dichloroethane	ND	1.0	0.059	NA	NA	NA	
1634-04-4	Methyl tert-Butyl Ether	ND	1.1	0.070	NA	NA	NA	
78-93-3	2-Butanone (MEK)	**8.5**	1.0	0.20	NA	NA	NA	
156-59-2	cis-1,2-Dichloroethene	ND	1.1	0.093	NA	NA	NA	
110-54-3	n-Hexane	**1.3**	1.1	0.12	NA	NA	NA	
67-66-3	Chloroform	**0.19**	1.1	0.11	NA	NA	NA	**J**
109-99-9	Tetrahydrofuran (THF)	**0.63**	1.1	0.25	NA	NA	NA	**J**
107-06-2	1,2-Dichloroethane	ND	1.1	0.15	NA	NA	NA	
71-55-6	1,1,1-Trichloroethane	ND	1.1	0.12	NA	NA	NA	
71-43-2	Benzene	**260**	2.1	0.94	NA	NA	NA	
56-23-5	Carbon Tetrachloride	**1.0**	1.1	0.098	NA	NA	NA	**J**
110-82-7	Cyclohexane	ND	2.1	0.18	NA	NA	NA	
78-87-5	1,2-Dichloropropane	ND	1.1	0.20	NA	NA	NA	
75-27-4	Bromodichloromethane	ND	1.1	0.095	NA	NA	NA	
79-01-6	Trichloroethene	ND	1.1	0.13	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**

Client Sample ID: **PS-SW-VOC-100616-02**

ALS Project ID: P1604824
ALS Sample ID: P1604824-004

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: 10/6/16
Date Received: 10/12/16
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.00
0.00

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
123-91-1	1,4-Dioxane	**0.54**	1.1	0.20	NA	NA	NA	**J**
540-84-1	2,2,4-Trimethylpentane (Isooctane)	**0.47**	1.1	0.13	NA	NA	NA	**J**
142-82-5	n-Heptane	**2.8**	1.1	0.14	NA	NA	NA	
10061-01-5	cis-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
108-10-1	4-Methyl-2-pentanone	**0.42**	2.1	0.16	NA	NA	NA	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
79-00-5	1,1,2-Trichloroethane	ND	1.1	0.20	NA	NA	NA	**0.0**
108-88-3	Toluene	**85**	1.1	0.47	NA	NA	NA	
591-78-6	2-Hexanone	ND	1.1	0.23	NA	NA	NA	
124-48-1	Dibromochloromethane	ND	1.1	0.068	NA	NA	NA	
106-93-4	1,2-Dibromoethane	ND	1.1	0.098	NA	NA	NA	
111-65-9	n-Octane	**8.2**	1.1	0.21	NA	NA	NA	
127-18-4	Tetrachloroethene	**0.14**	1.1	0.12	NA	NA	NA	**J**
108-90-7	Chlorobenzene	ND	1.1	0.084	NA	NA	NA	
100-41-4	Ethylbenzene	**15**	1.1	0.11	NA	NA	NA	
179601-23-1	m,p-Xylenes	**29**	2.1	0.17	NA	NA	NA	
75-25-2	Bromoform	ND	1.1	0.14	NA	NA	NA	**0.0**
100-42-5	Styrene	**37**	1.1	0.078	NA	NA	NA	
95-47-6	o-Xylene	**12**	1.1	0.071	NA	NA	NA	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.1	0.14	NA	NA	NA	
98-82-8	Cumene	**2.4**	1.1	0.28	NA	NA	NA	
108-67-8	1,3,5-Trimethylbenzene	**5.5**	1.0	0.27	NA	NA	NA	
95-63-6	1,2,4-Trimethylbenzene	**20**	1.1	0.14	NA	NA	NA	
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.15	NA	NA	NA	**0.0**
106-46-7	1,4-Dichlorobenzene	ND	1.1	0.14	NA	NA	NA	**0.0**
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.17	NA	NA	NA	**0.0**
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.1	0.21	NA	NA	NA	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.41	NA	NA	NA	
91-20-3	Naphthalene	**120**	1.1	0.37	NA	NA	NA	
87-68-3	Hexachlorobutadiene	ND	1.1	0.30	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**
Client Sample ID: **BS-VOC-100616**

ALS Project ID: P1604824
ALS Sample ID: P1604824-005

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: 10/6/16
Date Received: 10/12/16
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.00

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	**14**	1.0	0.12	NA	NA	NA	
74-87-3	Chloromethane	**0.31**	1.0	0.27	NA	NA	NA	**J**
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	**0.63**	1.0	0.16	NA	NA	NA	**J**
75-01-4	Vinyl Chloride	ND	1.0	0.14	NA	NA	NA	
106-99-0	1,3-Butadiene	ND	1.1	0.28	NA	NA	NA	**0.0**
75-00-3	Chloroethane	ND	1.0	0.20	NA	NA	NA	
64-17-5	Ethanol	**1.8**	5.2	0.73	NA	NA	NA	**J**
75-05-8	Acetonitrile	**0.64**	2.1	0.23	NA	NA	NA	**J**
67-64-1	Acetone	**5.4**	5.3	1.9	NA	NA	NA	
75-69-4	Trichlorofluoromethane	**3.0**	1.0	0.079	NA	NA	NA	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	0.52	NA	NA	NA	**0.0**
75-35-4	1,1-Dichloroethene	ND	1.1	0.17	NA	NA	NA	
75-09-2	Methylene Chloride	**2.1**	1.1	0.13	NA	NA	NA	
76-13-1	Trichlorotrifluoroethane	**3.2**	1.0	0.14	NA	NA	NA	
75-15-0	Carbon Disulfide	ND	5.3	0.80	NA	NA	NA	**0.0**
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.12	NA	NA	NA	
75-34-3	1,1-Dichloroethane	ND	1.0	0.059	NA	NA	NA	
1634-04-4	Methyl tert-Butyl Ether	ND	1.1	0.070	NA	NA	NA	
78-93-3	2-Butanone (MEK)	**2.0**	1.0	0.20	NA	NA	NA	
156-59-2	cis-1,2-Dichloroethene	ND	1.1	0.093	NA	NA	NA	
110-54-3	n-Hexane	**1.7**	1.1	0.12	NA	NA	NA	
67-66-3	Chloroform	**0.15**	1.1	0.11	NA	NA	NA	**J**
109-99-9	Tetrahydrofuran (THF)	ND	1.1	0.25	NA	NA	NA	
107-06-2	1,2-Dichloroethane	ND	1.1	0.15	NA	NA	NA	**0.0**
71-55-6	1,1,1-Trichloroethane	ND	1.1	0.12	NA	NA	NA	**0.0**
71-43-2	Benzene	**1.7**	2.1	0.94	NA	NA	NA	**J**
56-23-5	Carbon Tetrachloride	**3.0**	1.1	0.098	NA	NA	NA	
110-82-7	Cyclohexane	ND	2.1	0.18	NA	NA	NA	
78-87-5	1,2-Dichloropropane	ND	1.1	0.20	NA	NA	NA	
75-27-4	Bromodichloromethane	**0.13**	1.1	0.095	NA	NA	NA	**J**
79-01-6	Trichloroethene	ND	1.1	0.13	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**
Client Sample ID: **BS-VOC-100616**

ALS Project ID: P1604824
ALS Sample ID: P1604824-005

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: 10/6/16
Date Received: 10/12/16
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.00
0.00

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
123-91-1	1,4-Dioxane	ND	1.1	0.20	NA	NA	NA	
540-84-1	2,2,4-Trimethylpentane (Isooctane)	**0.91**	1.1	0.13	NA	NA	NA	**J**
142-82-5	n-Heptane	**0.85**	1.1	0.14	NA	NA	NA	**J**
10061-01-5	cis-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
108-10-1	4-Methyl-2-pentanone	**0.65**	2.1	0.16	NA	NA	NA	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
79-00-5	1,1,2-Trichloroethane	ND	1.1	0.20	NA	NA	NA	**0.0**
108-88-3	Toluene	**13**	1.1	0.47	NA	NA	NA	
591-78-6	2-Hexanone	**0.35**	1.1	0.23	NA	NA	NA	**J**
124-48-1	Dibromochloromethane	ND	1.1	0.068	NA	NA	NA	
106-93-4	1,2-Dibromoethane	ND	1.1	0.098	NA	NA	NA	
111-65-9	n-Octane	**0.79**	1.1	0.21	NA	NA	NA	**J**
127-18-4	Tetrachloroethene	**0.27**	1.1	0.12	NA	NA	NA	**J**
108-90-7	Chlorobenzene	**0.10**	1.1	0.084	NA	NA	NA	**J**
100-41-4	Ethylbenzene	**0.70**	1.1	0.11	NA	NA	NA	**J**
179601-23-1	m,p-Xylenes	**2.2**	2.1	0.17	NA	NA	NA	
75-25-2	Bromoform	**0.15**	1.1	0.14	NA	NA	NA	**J**
100-42-5	Styrene	**0.25**	1.1	0.078	NA	NA	NA	**J**
95-47-6	o-Xylene	**0.86**	1.1	0.071	NA	NA	NA	**J**
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.1	0.14	NA	NA	NA	
98-82-8	Cumene	ND	1.1	0.28	NA	NA	NA	**0.0**
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.27	NA	NA	NA	**0.0**
95-63-6	1,2,4-Trimethylbenzene	**0.93**	1.1	0.14	NA	NA	NA	**J**
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.15	NA	NA	NA	**0.0**
106-46-7	1,4-Dichlorobenzene	**0.17**	1.1	0.14	NA	NA	NA	**J**
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.17	NA	NA	NA	**0.0**
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.1	0.21	NA	NA	NA	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.41	NA	NA	NA	**0.0**
91-20-3	Naphthalene	**2.1**	1.1	0.37	NA	NA	NA	
87-68-3	Hexachlorobutadiene	ND	1.1	0.30	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**
Client Sample ID: **TS-VOC-101116**

ALS Project ID: P1604824
ALS Sample ID: P1604824-006

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: 10/11/16
Date Received: 10/12/16
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.00

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	1.0	0.12	NA	NA	NA	
74-87-3	Chloromethane	ND	1.0	0.27	NA	NA	NA	**0.0**
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.0	0.16	NA	NA	NA	
75-01-4	Vinyl Chloride	ND	1.0	0.14	NA	NA	NA	
106-99-0	1,3-Butadiene	ND	1.1	0.28	NA	NA	NA	
75-00-3	Chloroethane	ND	1.0	0.20	NA	NA	NA	
64-17-5	Ethanol	**1.6**	5.2	0.73	NA	NA	NA	**J**
75-05-8	Acetonitrile	**0.49**	2.1	0.23	NA	NA	NA	**J**
67-64-1	Acetone	**2.8**	5.3	1.9	NA	NA	NA	**J**
75-69-4	Trichlorofluoromethane	ND	1.0	0.079	NA	NA	NA	**0.0**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	0.52	NA	NA	NA	**0.0**
75-35-4	1,1-Dichloroethene	ND	1.1	0.17	NA	NA	NA	
75-09-2	Methylene Chloride	ND	1.1	0.13	NA	NA	NA	**0.0**
76-13-1	Trichlorotrifluoroethane	ND	1.0	0.14	NA	NA	NA	
75-15-0	Carbon Disulfide	ND	5.3	0.80	NA	NA	NA	**0.0**
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.12	NA	NA	NA	
75-34-3	1,1-Dichloroethane	ND	1.0	0.059	NA	NA	NA	
1634-04-4	Methyl tert-Butyl Ether	ND	1.1	0.070	NA	NA	NA	
78-93-3	2-Butanone (MEK)	ND	1.0	0.20	NA	NA	NA	
156-59-2	cis-1,2-Dichloroethene	ND	1.1	0.093	NA	NA	NA	
110-54-3	n-Hexane	ND	1.1	0.12	NA	NA	NA	**0.0**
67-66-3	Chloroform	ND	1.1	0.11	NA	NA	NA	
109-99-9	Tetrahydrofuran (THF)	ND	1.1	0.25	NA	NA	NA	
107-06-2	1,2-Dichloroethane	ND	1.1	0.15	NA	NA	NA	
71-55-6	1,1,1-Trichloroethane	ND	1.1	0.12	NA	NA	NA	
71-43-2	Benzene	ND	2.1	0.94	NA	NA	NA	**0.0**
56-23-5	Carbon Tetrachloride	ND	1.1	0.098	NA	NA	NA	
110-82-7	Cyclohexane	ND	2.1	0.18	NA	NA	NA	
78-87-5	1,2-Dichloropropane	ND	1.1	0.20	NA	NA	NA	
75-27-4	Bromodichloromethane	ND	1.1	0.095	NA	NA	NA	
79-01-6	Trichloroethene	ND	1.1	0.13	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**
Client Sample ID: **TS-VOC-101116**

ALS Project ID: P1604824
ALS Sample ID: P1604824-006

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: 10/11/16
Date Received: 10/12/16
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.00
0.00

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
123-91-1	1,4-Dioxane	ND	1.1	0.20	NA	NA	NA	
540-84-1	2,2,4-Trimethylpentane (Isooctane)	ND	1.1	0.13	NA	NA	NA	
142-82-5	n-Heptane	ND	1.1	0.14	NA	NA	NA	
10061-01-5	cis-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
108-10-1	4-Methyl-2-pentanone	ND	2.1	0.16	NA	NA	NA	
10061-02-6	trans-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
79-00-5	1,1,2-Trichloroethane	ND	1.1	0.20	NA	NA	NA	
108-88-3	Toluene	ND	1.1	0.47	NA	NA	NA	**0.0**
591-78-6	2-Hexanone	ND	1.1	0.23	NA	NA	NA	
124-48-1	Dibromochloromethane	ND	1.1	0.068	NA	NA	NA	
106-93-4	1,2-Dibromoethane	ND	1.1	0.098	NA	NA	NA	
111-65-9	n-Octane	ND	1.1	0.21	NA	NA	NA	
127-18-4	Tetrachloroethene	ND	1.1	0.12	NA	NA	NA	
108-90-7	Chlorobenzene	ND	1.1	0.084	NA	NA	NA	
100-41-4	Ethylbenzene	ND	1.1	0.11	NA	NA	NA	
179601-23-1	m,p-Xylenes	ND	2.1	0.17	NA	NA	NA	**0.0**
75-25-2	Bromoform	ND	1.1	0.14	NA	NA	NA	
100-42-5	Styrene	ND	1.1	0.078	NA	NA	NA	
95-47-6	o-Xylene	ND	1.1	0.071	NA	NA	NA	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.1	0.14	NA	NA	NA	
98-82-8	Cumene	ND	1.1	0.28	NA	NA	NA	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.27	NA	NA	NA	
95-63-6	1,2,4-Trimethylbenzene	ND	1.1	0.14	NA	NA	NA	**0.0**
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.15	NA	NA	NA	
106-46-7	1,4-Dichlorobenzene	ND	1.1	0.14	NA	NA	NA	
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.17	NA	NA	NA	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.1	0.21	NA	NA	NA	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.41	NA	NA	NA	
91-20-3	Naphthalene	ND	1.1	0.37	NA	NA	NA	**0.0**
87-68-3	Hexachlorobutadiene	ND	1.1	0.30	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**
Client Sample ID: **Method Blank**

ALS Project ID: P1604824
ALS Sample ID: P161013-MB

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.0

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	1.0	0.12	NA	NA	NA	
74-87-3	Chloromethane	ND	1.0	0.27	NA	NA	NA	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.0	0.16	NA	NA	NA	
75-01-4	Vinyl Chloride	ND	1.0	0.14	NA	NA	NA	
106-99-0	1,3-Butadiene	ND	1.1	0.28	NA	NA	NA	
75-00-3	Chloroethane	ND	1.0	0.20	NA	NA	NA	
64-17-5	Ethanol	ND	5.2	0.73	NA	NA	NA	
75-05-8	Acetonitrile	ND	2.1	0.23	NA	NA	NA	
67-64-1	Acetone	ND	5.3	1.9	NA	NA	NA	**0.0**
75-69-4	Trichlorofluoromethane	ND	1.0	0.079	NA	NA	NA	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	0.52	NA	NA	NA	
75-35-4	1,1-Dichloroethene	ND	1.1	0.17	NA	NA	NA	
75-09-2	Methylene Chloride	ND	1.1	0.13	NA	NA	NA	
76-13-1	Trichlorotrifluoroethane	ND	1.0	0.14	NA	NA	NA	
75-15-0	Carbon Disulfide	**0.92**	5.3	0.80	NA	NA	NA	**J**
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.12	NA	NA	NA	
75-34-3	1,1-Dichloroethane	ND	1.0	0.059	NA	NA	NA	
1634-04-4	Methyl tert-Butyl Ether	ND	1.1	0.070	NA	NA	NA	
78-93-3	2-Butanone (MEK)	ND	1.0	0.20	NA	NA	NA	
156-59-2	cis-1,2-Dichloroethene	ND	1.1	0.093	NA	NA	NA	
110-54-3	n-Hexane	ND	1.1	0.12	NA	NA	NA	
67-66-3	Chloroform	ND	1.1	0.11	NA	NA	NA	
109-99-9	Tetrahydrofuran (THF)	ND	1.1	0.25	NA	NA	NA	
107-06-2	1,2-Dichloroethane	ND	1.1	0.15	NA	NA	NA	
71-55-6	1,1,1-Trichloroethane	ND	1.1	0.12	NA	NA	NA	
71-43-2	Benzene	ND	2.1	0.94	NA	NA	NA	
56-23-5	Carbon Tetrachloride	ND	1.1	0.098	NA	NA	NA	
110-82-7	Cyclohexane	ND	2.1	0.18	NA	NA	NA	
78-87-5	1,2-Dichloropropane	ND	1.1	0.20	NA	NA	NA	
75-27-4	Bromodichloromethane	ND	1.1	0.095	NA	NA	NA	
79-01-6	Trichloroethene	ND	1.1	0.13	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **US Environmental Protection Agency (E-343-03)**

Client Sample ID: **Method Blank**

ALS Project ID: P1604824
ALS Sample ID: P161013-MB

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.0
0.00

CAS #	Compound	Result ng/Tube	MRL ng/Tube	MDL ng/Tube	Result µg/m³	MRL µg/m³	MDL µg/m³	Data Qualifier
123-91-1	1,4-Dioxane	ND	1.1	0.20	NA	NA	NA	
540-84-1	2,2,4-Trimethylpentane (Isooctane)	ND	1.1	0.13	NA	NA	NA	
142-82-5	n-Heptane	ND	1.1	0.14	NA	NA	NA	
10061-01-5	cis-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
108-10-1	4-Methyl-2-pentanone	ND	2.1	0.16	NA	NA	NA	
10061-02-6	trans-1,3-Dichloropropene	ND	1.1	0.11	NA	NA	NA	
79-00-5	1,1,2-Trichloroethane	ND	1.1	0.20	NA	NA	NA	
108-88-3	Toluene	ND	1.1	0.47	NA	NA	NA	
591-78-6	2-Hexanone	ND	1.1	0.23	NA	NA	NA	
124-48-1	Dibromochloromethane	ND	1.1	0.068	NA	NA	NA	
106-93-4	1,2-Dibromoethane	ND	1.1	0.098	NA	NA	NA	
111-65-9	n-Octane	ND	1.1	0.21	NA	NA	NA	
127-18-4	Tetrachloroethene	ND	1.1	0.12	NA	NA	NA	
108-90-7	Chlorobenzene	ND	1.1	0.084	NA	NA	NA	
100-41-4	Ethylbenzene	ND	1.1	0.11	NA	NA	NA	
179601-23-1	m,p-Xylenes	ND	2.1	0.17	NA	NA	NA	
75-25-2	Bromoform	ND	1.1	0.14	NA	NA	NA	
100-42-5	Styrene	ND	1.1	0.078	NA	NA	NA	
95-47-6	o-Xylene	ND	1.1	0.071	NA	NA	NA	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.1	0.14	NA	NA	NA	
98-82-8	Cumene	ND	1.1	0.28	NA	NA	NA	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.27	NA	NA	NA	
95-63-6	1,2,4-Trimethylbenzene	ND	1.1	0.14	NA	NA	NA	
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.15	NA	NA	NA	
106-46-7	1,4-Dichlorobenzene	ND	1.1	0.14	NA	NA	NA	
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.17	NA	NA	NA	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.1	0.21	NA	NA	NA	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.41	NA	NA	NA	
91-20-3	Naphthalene	ND	1.1	0.37	NA	NA	NA	
87-68-3	Hexachlorobutadiene	ND	1.1	0.30	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **US Environmental Protection Agency (E-343-03)**

ALS Project ID: P1604824

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube(s)
Test Notes:

Date(s) Collected: 9/30 - 10/11/16
Date(s) Received: 10/12/16
Date(s) Analyzed: 10/13/16

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 % Recovered	Acceptance Limits	Toluene-d8 % Recovered	Acceptance Limits	Bromofluorobenzene % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P161013-MB	**90**	70-140	**100**	70-140	**101**	70-140	
Lab Control Sample	P161013-LCS	**99**	70-140	**99**	70-140	**106**	70-140	
Duplicate Lab Control Sample	P161013-DLCS	**104**	70-140	**98**	70-140	**107**	70-140	
PS-SW-VOC-093016-01	P1604824-001	**95**	70-140	**100**	70-140	**104**	70-140	
PS-SW-VOC-093016-02	P1604824-002	**87**	70-140	**100**	70-140	**102**	70-140	
PS-SW-VOC-100616-01	P1604824-003	**85**	70-140	**99**	70-140	**103**	70-140	
PS-SW-VOC-100616-02	P1604824-004	**86**	70-140	**98**	70-140	**104**	70-140	
BS-VOC-100616	P1604824-005	**86**	70-140	**99**	70-140	**102**	70-140	
TS-VOC-101116	P1604824-006	**91**	70-140	**99**	70-140	**103**	70-140	

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **US Environmental Protection Agency (E-343-03)**
Client Sample ID: **Duplicate Lab Control Sample**

ALS Project ID: P1604824
ALS Sample ID: P161013-DLCS

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.0000

CAS #	Compound	Spike Amount LCS / DLCS ng	Result LCS ng	Result DLCS ng	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	52.5	52.3	56.6	**100**	**108**	73-120	8	25	
74-87-3	Chloromethane	52.5	53.6	58.2	**102**	**111**	69-120	8	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	52.8	53.5	57.2	**101**	**108**	79-112	7	25	
75-01-4	Vinyl Chloride	52.5	54.5	57.9	**104**	**110**	75-119	6	25	
106-99-0	1,3-Butadiene	52.5	61.5	58.9	**117**	**112**	77-118	4	25	
75-00-3	Chloroethane	52.5	55.8	58.3	**106**	**111**	75-120	5	25	
64-17-5	Ethanol	265	278	282	**105**	**106**	72-120	0.9	25	
75-05-8	Acetonitrile	53.3	53.8	56.2	**101**	**105**	66-115	4	25	
67-64-1	Acetone	266	277	277	**104**	**104**	70-110	0	25	
75-69-4	Trichlorofluoromethane	52.6	53.1	56.1	**101**	**107**	70-103	6	25	**L**
67-63-0	2-Propanol (Isopropyl Alcohol)	106	116	117	**109**	**110**	75-123	0.9	25	
75-35-4	1,1-Dichloroethene	53.2	54.9	58.2	**103**	**109**	79-111	6	25	
75-09-2	Methylene Chloride	53.1	53.1	57.4	**100**	**108**	75-106	8	25	**L**
76-13-1	Trichlorotrifluoroethane	52.9	54.1	57.3	**102**	**108**	65-127	6	25	
75-15-0	Carbon Disulfide	53.4	52.6	54.3	**99**	**102**	53-100	3	25	**L**
156-60-5	trans-1,2-Dichloroethene	53.4	56.7	60.5	**106**	**113**	78-119	6	25	
75-34-3	1,1-Dichloroethane	53.1	55.3	57.9	**104**	**109**	76-118	5	25	
1634-04-4	Methyl tert-Butyl Ether	53.2	58.9	62.7	**111**	**118**	81-120	6	25	
78-93-3	2-Butanone (MEK)	53.1	67.0	71.1	**126**	**134**	88-138	6	25	
156-59-2	cis-1,2-Dichloroethene	53.0	56.5	59.6	**107**	**112**	78-119	5	25	
110-54-3	n-Hexane	53.2	54.8	58.2	**103**	**109**	75-114	6	25	
67-66-3	Chloroform	53.0	56.0	56.9	**106**	**107**	73-115	0.9	25	
109-99-9	Tetrahydrofuran (THF)	53.2	60.3	60.3	**113**	**113**	80-119	0	25	
107-06-2	1,2-Dichloroethane	53.0	56.1	59.1	**106**	**112**	71-131	6	25	
71-55-6	1,1,1-Trichloroethane	53.0	57.7	56.9	**109**	**107**	79-116	2	25	
71-43-2	Benzene	53.1	47.7	47.8	**90**	**90**	68-99	0	25	
56-23-5	Carbon Tetrachloride	53.2	58.5	57.7	**110**	**108**	78-114	2	25	
110-82-7	Cyclohexane	106	110	110	**104**	**104**	77-113	0	25	
78-87-5	1,2-Dichloropropane	53.1	56.9	56.6	**107**	**107**	78-114	0	25	
75-27-4	Bromodichloromethane	53.4	62.1	61.7	**116**	**116**	85-121	0	25	
79-01-6	Trichloroethene	53.1	54.5	56.1	**103**	**106**	78-102	3	25	**L**

L = Laboratory control sample recovery outside the specified limits, results may be biased high.

Verified By:_____ Date:_____

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **US Environmental Protection Agency (E-343-03)**
Client Sample ID: **Duplicate Lab Control Sample**

ALS Project ID: P1604824
ALS Sample ID: P161013-DLCS

Test Code: EPA TO-17
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
Analyst: Rui Malinowski
Sampling Media: TD Carbo 300 Sorbent Tube
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 10/13/16
Volume(s) Analyzed: NA Liter(s)
0.00.0
0.00.0

CAS #	Compound	Spike Amount LCS / DLCS ng	Result LCS ng	Result DLCS ng	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
123-91-1	1,4-Dioxane	53.2	58.3	57.9	**110**	**109**	85-117	0.9	25	
540-84-1	2,2,4-Trimethylpentane (Isooctane)	53.1	54.7	54.5	**103**	**103**	74-110	0	25	
142-82-5	n-Heptane	53.2	56.4	57.5	**106**	**108**	82-109	2	25	
10061-01-5	cis-1,3-Dichloropropene	52.6	61.7	59.1	**117**	**112**	86-117	4	25	
108-10-1	4-Methyl-2-pentanone	53.2	60.9	60.4	**114**	**114**	85-114	0	25	
10061-02-6	trans-1,3-Dichloropropene	53.4	63.1	61.2	**118**	**115**	83-123	3	25	
79-00-5	1,1,2-Trichloroethane	53.1	58.1	57.1	**109**	**108**	84-107	0.9	25	**L**
108-88-3	Toluene	52.9	55.1	55.2	**104**	**104**	78-102	0	25	**L**
591-78-6	2-Hexanone	53.2	59.6	58.1	**112**	**109**	82-121	3	25	
124-48-1	Dibromochloromethane	53.2	58.2	57.1	**109**	**107**	84-110	2	25	
106-93-4	1,2-Dibromoethane	52.9	60.3	59.9	**114**	**113**	85-111	0.9	25	**L**
111-65-9	n-Octane	53.0	52.5	53.5	**99**	**101**	75-118	2	25	
127-18-4	Tetrachloroethene	53.2	54.0	55.5	**102**	**104**	81-109	2	25	
108-90-7	Chlorobenzene	53.0	53.8	54.7	**102**	**103**	82-108	1	25	
100-41-4	Ethylbenzene	52.9	54.1	55.5	**102**	**105**	81-112	3	25	
179601-23-1	m,p-Xylenes	106	109	111	**103**	**105**	83-111	2	25	
75-25-2	Bromoform	53.1	55.0	55.1	**104**	**104**	73-103	0	25	**L**
100-42-5	Styrene	53.0	57.3	58.1	**108**	**110**	85-113	2	25	
95-47-6	o-Xylene	52.9	54.1	55.7	**102**	**105**	82-112	3	25	
79-34-5	1,1,2,2-Tetrachloroethane	53.0	58.0	58.0	**109**	**109**	79-115	0	25	
98-82-8	Cumene	53.1	54.0	55.4	**102**	**104**	81-110	2	25	
108-67-8	1,3,5-Trimethylbenzene	53.1	54.3	55.6	**102**	**105**	81-111	3	25	
95-63-6	1,2,4-Trimethylbenzene	53.1	55.4	56.4	**104**	**106**	80-111	2	25	
541-73-1	1,3-Dichlorobenzene	53.0	55.3	57.6	**104**	**109**	73-112	5	25	
106-46-7	1,4-Dichlorobenzene	53.3	53.8	55.9	**101**	**105**	75-119	4	25	
95-50-1	1,2-Dichlorobenzene	53.1	54.9	56.5	**103**	**106**	74-112	3	25	
96-12-8	1,2-Dibromo-3-chloropropane	53.0	64.7	63.1	**122**	**119**	63-135	2	25	
120-82-1	1,2,4-Trichlorobenzene	53.0	58.0	60.6	**109**	**114**	53-127	4	25	
91-20-3	Naphthalene	53.4	61.0	62.9	**114**	**118**	52-130	3	25	
87-68-3	Hexachlorobutadiene	53.2	54.0	55.1	**102**	**104**	58-113	2	25	

L = Laboratory control sample recovery outside the specified limits, results may be biased high.

Verified By:_____ Date:_____