SEMS-RM DOCID # 100019246

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October 05, 2018

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum GW - South Gate / 130072-016-1

A874318 / 8I17019

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 09/17/18 18:56 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
MW-63-091218	8I17019-01	Water	5	09/17/18 08:39	09/17/18 18:56
QC1-091218	8I17019-02	Water	5	09/17/18 08:49	09/17/18 18:56
MW-64B-091218	8I17019-03	Water	5	09/17/18 09:39	09/17/18 18:56
QC2-091218	8I17019-04	Water	5	09/17/18 07:00	09/17/18 18:56
MW-64A-091218	8I17019-05	Water	5	09/17/18 10:52	09/17/18 18:56
QC3-091218	8I17019-06	Water	5	09/17/18 11:15	09/17/18 18:56
QC4-091218	8I17019-07	Water	5	09/17/18 11:20	09/17/18 18:56
8270CM 1,4-Dioxane Only					
MW-63-091218	8I17019-01	Water	5	09/17/18 08:39	09/17/18 18:56
QC1-091218	8I17019-02	Water	5	09/17/18 08:49	09/17/18 18:56
MW-64B-091218	8I17019-03	Water	5	09/17/18 09:39	09/17/18 18:56
MW-64A-091218	8I17019-05	Water	5	09/17/18 10:52	09/17/18 18:56
QC3-091218	8I17019-06	Water	5	09/17/18 11:15	09/17/18 18:56
QC4-091218	8I17019-07	Water	5	09/17/18 11:20	09/17/18 18:56

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
8270CM 1,4-Dioxane Only (EPA 8270CM)									
8I17019-01	MW-63-091218	09/17/18	09/21/18	09/24/18	5	**28**	ug/L	1	2
8I17019-02	QC1-091218	09/17/18	09/21/18	09/24/18	5	**32**	ug/L	1	2
8I17019-03	MW-64B-091218	09/17/18	09/21/18	09/24/18	1	<1.0	ug/L	1	2
8I17019-05	MW-64A-091218	09/17/18	09/21/18	09/24/18	1	**7.4**	ug/L	1	2
8I17019-06	QC3-091218	09/17/18	09/21/18	09/24/18	1	<1.0	ug/L	1	2
8I17019-07	QC4-091218	09/17/18	09/21/18	09/24/18	1	<1.0	ug/L	1	2

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18
Units: ug/L

Date Sampled:	09/17/18	09/17/18	09/17/18	09/17/18		
Date Prepared:	09/26/18	09/26/18	09/26/18	09/26/18		
Date Analyzed:	09/26/18	09/26/18	09/26/18	09/26/18		
AA ID No:	8I17019-01	8I17019-02	8I17019-03	8I17019-04		
Client ID No:	MW-63-091218	QC1-091218	MW-64B-091218	QC2-091218		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	**12**	**6.0 J**	**10**	<2.0	2.0	10
Benzene	**3.9**	**4.5**	<0.20	<0.20	0.20	0.50
Bromobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Bromochloromethane	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Bromodichloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromoform	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Bromomethane	<0.50	<0.50	<0.50	<0.50	0.50	0.50
2-Butanone (MEK)	<2.0	<2.0	<2.0	<2.0	2.0	10
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloroethane	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dibromo-3-chloropropane	<2.0	<2.0	<2.0	<2.0	2.0	2.0
Dibromochloromethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dibromoethane (EDB)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.10	<0.10	<0.10	<0.10	0.10	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.50	<0.50	<0.50	<0.50	0.50	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18
Units: ug/L

Date Sampled:	09/17/18	09/17/18	09/17/18	09/17/18		
Date Prepared:	09/26/18	09/26/18	09/26/18	09/26/18		
Date Analyzed:	09/26/18	09/26/18	09/26/18	09/26/18		
AA ID No:	8I17019-01	8I17019-02	8I17019-03	8I17019-04		
Client ID No:	MW-63-091218	QC1-091218	MW-64B-091218	QC2-091218		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	**0.55**	**0.63**	<0.20	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	<0.30	<0.30	**2.8**	<0.30	0.30	0.50
cis-1,2-Dichloroethylene	**3.2**	**3.5**	**4.1**	<0.20	0.20	0.50
1,1-Dichloroethylene	**7.2**	**7.5**	<0.30	<0.30	0.30	0.50
trans-1,2-Dichloroethylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichloropropane	<0.10	<0.10	<0.10	<0.10	0.10	0.50
1,2-Dichloropropane	<0.50	<0.50	<0.50	<0.50	0.50	0.50
2,2-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
trans-1,3-Dichloropropylene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1-Dichloropropylene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
cis-1,3-Dichloropropylene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Ethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Hexachlorobutadiene	<0.40	<0.40	<0.40	<0.40	0.40	1.0
2-Hexanone (MBK)	<2.0	<2.0	<2.0	<2.0	2.0	10
Isopropylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
4-Isopropyltoluene	<0.20	<0.20	<0.20	<0.20	0.20	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.7	<1.7	<1.7	<1.7	1.7	2.0
Methylene Chloride	<5.0	<5.0	<5.0	<5.0	5.0	5.0
4-Methyl-2-pentanone (MIBK)	<0.70	<0.70	<0.70	<0.70	0.70	10
Naphthalene	<0.20	<0.20	<0.20	<0.20	0.20	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,1,2,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trichlorobenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18
Units: ug/L

Date Sampled:	09/17/18	09/17/18	09/17/18	09/17/18		
Date Prepared:	09/26/18	09/26/18	09/26/18	09/26/18		
Date Analyzed:	09/26/18	09/26/18	09/26/18	09/26/18		
AA ID No:	8I17019-01	8I17019-02	8I17019-03	8I17019-04		
Client ID No:	MW-63-091218	QC1-091218	MW-64B-091218	QC2-091218		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**0.50**	**0.54**	**0.33 J**	<0.20	0.20	0.50
Trichlorofluoromethane (R11)	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,3-Trichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	**0.74**	**0.67**	<0.50	<0.50	0.50	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.40	<0.40	<0.40	<0.40	0.40	1.0

Surrogates					**%REC Limits**
4-Bromofluorobenzene	110%	111%	108%	113%	70-130
Dibromofluoromethane	117%	128%	128%	121%	70-130
Toluene-d8	109%	105%	104%	111%	70-130

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18
Units: ug/L

Date Sampled:	09/17/18	09/17/18	09/17/18		
Date Prepared:	09/26/18	09/26/18	09/26/18		
Date Analyzed:	09/26/18	09/26/18	09/26/18		
AA ID No:	8I17019-05	8I17019-06	8I17019-07		
Client ID No:	MW-64A-091218	QC3-091218	QC4-091218		
Matrix:	Water	Water	Water		
Dilution Factor:	1	1	1	MDL	MRL
8260B (EPA 8260B)					
Acetone	**47000**	<2.0	<2.0	2.0	10
Benzene	**22**	<0.20	<0.20	0.20	0.50
Bromobenzene	<0.30	<0.30	<0.30	0.30	0.50
Bromochloromethane	<0.50	<0.50	<0.50	0.50	0.50
Bromodichloromethane	<0.20	<0.20	<0.20	0.20	0.50
Bromoform	<0.50	<0.50	<0.50	0.50	0.50
Bromomethane	<0.50	<0.50	<0.50	0.50	0.50
2-Butanone (MEK)	**590**	<2.0	<2.0	2.0	10
tert-Butylbenzene	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.30	<0.30	**1.8**	0.30	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.30	<0.30	<0.30	0.30	0.50
Chloroethane	<0.50	<0.50	<0.50	0.50	0.50
Chloroform	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dibromo-3-chloropropane	<2.0	<2.0	<2.0	2.0	2.0
Dibromochloromethane	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dibromoethane (EDB)	<0.30	<0.30	<0.30	0.30	0.50
Dibromomethane	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.10	<0.10	<0.10	0.10	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.50	<0.50	<0.50	0.50	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18
Units: ug/L

Date Sampled:	09/17/18	09/17/18	09/17/18		
Date Prepared:	09/26/18	09/26/18	09/26/18		
Date Analyzed:	09/26/18	09/26/18	09/26/18		
AA ID No:	8I17019-05	8I17019-06	8I17019-07		
Client ID No:	MW-64A-091218	QC3-091218	QC4-091218		
Matrix:	Water	Water	Water		
Dilution Factor:	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)					
1,1-Dichloroethane	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	<0.30	<0.30	<0.30	0.30	0.50
cis-1,2-Dichloroethylene	**3.9**	<0.20	<0.20	0.20	0.50
1,1-Dichloroethylene	<0.30	<0.30	<0.30	0.30	0.50
trans-1,2-Dichloroethylene	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichloropropane	<0.10	<0.10	<0.10	0.10	0.50
1,2-Dichloropropane	<0.50	<0.50	<0.50	0.50	0.50
2,2-Dichloropropane	<0.40	<0.40	<0.40	0.40	0.50
trans-1,3-Dichloropropylene	<0.20	<0.20	<0.20	0.20	0.50
1,1-Dichloropropylene	<0.20	<0.20	<0.20	0.20	0.50
cis-1,3-Dichloropropylene	<0.20	<0.20	<0.20	0.20	0.50
Ethylbenzene	**1.8**	<0.20	<0.20	0.20	0.50
Hexachlorobutadiene	<0.40	<0.40	<0.40	0.40	1.0
2-Hexanone (MBK)	**19**	<2.0	<2.0	2.0	10
Isopropylbenzene	<0.20	<0.20	<0.20	0.20	0.50
4-Isopropyltoluene	<0.20	<0.20	<0.20	0.20	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.7	<1.7	<1.7	1.7	2.0
Methylene Chloride	<5.0	<5.0	<5.0	5.0	5.0
4-Methyl-2-pentanone (MIBK)	**5200**	<0.70	<0.70	0.70	10
Naphthalene	<0.20	<0.20	<0.20	0.20	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.40	<0.40	<0.40	0.40	0.50
1,1,2,2-Tetrachloroethane	<0.30	<0.30	<0.30	0.30	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	0.50	0.50
Toluene	**4000**	<0.30	<0.30	0.30	0.50
1,2,4-Trichlorobenzene	<0.20	<0.20	<0.20	0.20	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate
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AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18
Units: ug/L

Date Sampled:	09/17/18	09/17/18	09/17/18		
Date Prepared:	09/26/18	09/26/18	09/26/18		
Date Analyzed:	09/26/18	09/26/18	09/26/18		
AA ID No:	8I17019-05	8I17019-06	8I17019-07		
Client ID No:	MW-64A-091218	QC3-091218	QC4-091218		
Matrix:	Water	Water	Water		
Dilution Factor:	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)					
1,2,3-Trichlorobenzene	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	<0.20	<0.20	<0.20	0.20	0.50
Trichlorofluoromethane (R11)	<0.20	<0.20	<0.20	0.20	0.50
1,2,3-Trichloropropane	<0.30	<0.30	<0.30	0.30	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.50	<0.50	<0.50	0.50	0.50
o-Xylene	**4.4**	<0.30	<0.30	0.30	0.50
m,p-Xylenes	**4.0**	<0.40	<0.40	0.40	1.0
Surrogates				**%REC Limits**	
4-Bromofluorobenzene	104%	113%	110%	70-130	
Dibromofluoromethane	120%	129%	129%	70-130	
Toluene-d8	94%	107%	91%	70-130	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B8I2101 - EPA 3510C_MS										
Blank (B8I2101-BLK1)				Prepared: 09/21/18			Analyzed: 09/24/18			
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B8I2101-BS1)				Prepared: 09/21/18			Analyzed: 09/24/18			
1,4-Dioxane	**9.95**	1.0	ug/L	10		99.5	70-130		30	
LCS Dup (B8I2101-BSD1)				Prepared: 09/21/18			Analyzed: 09/24/18			
1,4-Dioxane	**11.8**	1.0	ug/L	10		118	70-130	16.8	30	
Matrix Spike (B8I2101-MS1)		**Source: 8I17019-03**		Prepared: 09/21/18			Analyzed: 09/24/18			
1,4-Dioxane	**11.4**	1.0	ug/L	10	<2.0	114	70-130		30	
Matrix Spike Dup (B8I2101-MSD1)		**Source: 8I17019-03**		Prepared: 09/21/18			Analyzed: 09/24/18			
1,4-Dioxane	**13.7**	1.0	ug/L	10	<2.0	137	70-130	18.2	30	QM-07
VOCs by GC/MS - Quality Control										
Batch B8I2618 - EPA 5030B										
Blank (B8I2618-BLK1)				Prepared & Analyzed: 09/26/18						
Acetone	<2.0	2.0	ug/L							
Benzene	<0.20	0.20	ug/L							
Bromobenzene	<0.30	0.30	ug/L							
Bromochloromethane	<0.50	0.50	ug/L							
Bromodichloromethane	<0.20	0.20	ug/L							
Bromoform	<0.50	0.50	ug/L							
Bromomethane	<0.50	0.50	ug/L							
2-Butanone (MEK)	<2.0	2.0	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.30	0.30	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.30	0.30	ug/L							
Chloroethane	<0.50	0.50	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B8I2618 - EPA 5030B										
Blank (B8I2618-BLK1) Continued				Prepared & Analyzed: 09/26/18						
2-Chlorotoluene	<0.30	0.30	ug/L							
1,2-Dibromo-3-chloropropane	<2.0	2.0	ug/L							
Dibromochloromethane	<0.30	0.30	ug/L							
1,2-Dibromoethane (EDB)	<0.30	0.30	ug/L							
Dibromomethane	<0.40	0.40	ug/L							
1,3-Dichlorobenzene	<0.10	0.10	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.50	0.50	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.30	0.30	ug/L							
cis-1,2-Dichloroethylene	<0.20	0.20	ug/L							
1,1-Dichloroethylene	<0.30	0.30	ug/L							
trans-1,2-Dichloroethylene	<0.40	0.40	ug/L							
1,3-Dichloropropane	<0.10	0.10	ug/L							
1,2-Dichloropropane	<0.50	0.50	ug/L							
2,2-Dichloropropane	<0.40	0.40	ug/L							
trans-1,3-Dichloropropylene	<0.20	0.20	ug/L							
1,1-Dichloropropylene	<0.20	0.20	ug/L							
cis-1,3-Dichloropropylene	<0.20	0.20	ug/L							
Ethylbenzene	<0.20	0.20	ug/L							
Hexachlorobutadiene	<0.40	0.40	ug/L							
2-Hexanone (MBK)	<2.0	2.0	ug/L							
Isopropylbenzene	<0.20	0.20	ug/L							
4-Isopropyltoluene	<0.20	0.20	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.7	1.7	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<0.70	0.70	ug/L							
Naphthalene	<0.20	0.20	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.40	0.40	ug/L							

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B8I2618 - EPA 5030B										
Blank (B8I2618-BLK1) Continued				Prepared & Analyzed: 09/26/18						
1,1,2,2-Tetrachloroethane	<0.30	0.30	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.30	0.30	ug/L							
1,2,4-Trichlorobenzene	<0.20	0.20	ug/L							
1,2,3-Trichlorobenzene	<0.20	0.20	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.20	0.20	ug/L							
Trichlorofluoromethane (R11)	<0.20	0.20	ug/L							
1,2,3-Trichloropropane	<0.30	0.30	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.50	0.50	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.40	0.40	ug/L							
Surrogate: 4-Bromofluorobenzene	*52.3*		*ug/L*	*50*		*105*	*70-130*			
Surrogate: Dibromofluoromethane	*64.0*		*ug/L*	*50*		*128*	*70-130*			
Surrogate: Toluene-d8	*50.7*		*ug/L*	*50*		*101*	*70-130*			
LCS (B8I2618-BS1)				Prepared & Analyzed: 09/26/18						
Acetone	**15.7**	2.0	ug/L	20		78.7	50-150		30	
Benzene	**21.2**	0.20	ug/L	20		106	70-130		30	
Bromobenzene	**19.7**	0.30	ug/L	20		98.4	50-150		30	
Bromochloromethane	**21.6**	0.50	ug/L	20		108	50-150		30	
Bromodichloromethane	**23.6**	0.20	ug/L	20		118	70-130		30	
Bromoform	**19.6**	0.50	ug/L	20		97.9	70-130		30	
Bromomethane	**25.7**	0.50	ug/L	20		128	70-130		30	
2-Butanone (MEK)	**21.2**	2.0	ug/L	20		106	50-150		30	
tert-Butylbenzene	**20.6**	0.20	ug/L	20		103	50-150		30	
n-Butylbenzene	**22.1**	0.20	ug/L	20		110	50-150		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B8I2618 - EPA 5030B										
LCS (B8I2618-BS1) Continued				Prepared & Analyzed: 09/26/18						
sec-Butylbenzene	**20.5**	0.20	ug/L	20		103	50-150		30	
Carbon Disulfide	**20.6**	0.30	ug/L	20		103	50-150		30	
Carbon Tetrachloride	**22.7**	0.30	ug/L	20		113	70-130		30	
Chlorobenzene	**20.5**	0.30	ug/L	20		103	70-130		30	
Chloroethane	**23.6**	0.50	ug/L	20		118	70-130		30	
Chloroform	**22.4**	0.30	ug/L	20		112	70-130		30	
Chloromethane	**20.2**	0.40	ug/L	20		101	70-130		30	
4-Chlorotoluene	**20.6**	0.20	ug/L	20		103	65-125		30	
2-Chlorotoluene	**20.8**	0.30	ug/L	20		104	65-125		30	
1,2-Dibromo-3-chloropropane	**22.2**	2.0	ug/L	20		111	65-125		30	
Dibromochloromethane	**21.7**	0.30	ug/L	20		108	70-130		30	
1,2-Dibromoethane (EDB)	**21.0**	0.30	ug/L	20		105	65-125		30	
Dibromomethane	**22.7**	0.40	ug/L	20		114	65-125		30	
1,3-Dichlorobenzene	**19.9**	0.10	ug/L	20		99.6	65-125		30	
1,4-Dichlorobenzene	**20.2**	0.30	ug/L	20		101	70-130		30	
1,2-Dichlorobenzene	**20.8**	0.30	ug/L	20		104	65-125		30	
Dichlorodifluoromethane (R12)	**16.2**	0.50	ug/L	20		81.0	50-150		30	
1,1-Dichloroethane	**21.4**	0.20	ug/L	20		107	70-130		30	
1,2-Dichloroethane (EDC)	**21.9**	0.30	ug/L	20		109	70-130		30	
cis-1,2-Dichloroethylene	**21.5**	0.20	ug/L	20		107	70-130		30	
1,1-Dichloroethylene	**20.2**	0.30	ug/L	20		101	70-130		30	
trans-1,2-Dichloroethylene	**21.2**	0.40	ug/L	20		106	70-130		30	
1,3-Dichloropropane	**20.0**	0.10	ug/L	20		99.9	65-125		30	
1,2-Dichloropropane	**22.2**	0.50	ug/L	20		111	70-130		30	
2,2-Dichloropropane	**21.7**	0.40	ug/L	20		108	65-125		30	
trans-1,3-Dichloropropylene	**21.5**	0.20	ug/L	20		108	65-125		30	
1,1-Dichloropropylene	**22.6**	0.20	ug/L	20		113	65-125		30	
cis-1,3-Dichloropropylene	**22.5**	0.20	ug/L	20		112	70-130		30	
Ethylbenzene	**21.4**	0.20	ug/L	20		107	70-130		30	
Hexachlorobutadiene	**19.4**	0.40	ug/L	20		97.2	65-125		30	
2-Hexanone (MBK)	**19.4**	2.0	ug/L	20		97.2	65-125		30	
Isopropylbenzene	**20.8**	0.20	ug/L	20		104	65-125		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B8I2618 - EPA 5030B										
LCS (B8I2618-BS1) Continued				Prepared & Analyzed: 09/26/18						
4-Isopropyltoluene	**20.7**	0.20	ug/L	20		104	65-125		30	
Methyl-tert-Butyl Ether (MTBE)	**40.9**	1.7	ug/L	40		102	70-130		30	
Methylene Chloride	**19.6**	5.0	ug/L	20		97.9	70-130		30	
4-Methyl-2-pentanone (MIBK)	**21.2**	0.70	ug/L	20		106	65-125		30	
Naphthalene	**22.6**	0.20	ug/L	20		113	65-125		30	
n-Propylbenzene	**20.3**	0.20	ug/L	20		101	65-125		30	
Styrene	**21.4**	0.20	ug/L	20		107	65-125		30	
1,1,1,2-Tetrachloroethane	**20.5**	0.40	ug/L	20		103	65-125		30	
1,1,2,2-Tetrachloroethane	**21.3**	0.30	ug/L	20		107	70-130		30	
Tetrachloroethylene (PCE)	**19.4**	0.50	ug/L	20		96.8	70-130		30	
Toluene	**19.3**	0.30	ug/L	20		96.6	70-130		30	
1,2,4-Trichlorobenzene	**21.6**	0.20	ug/L	20		108	65-125		30	
1,2,3-Trichlorobenzene	**21.0**	0.20	ug/L	20		105	65-125		30	
1,1,2-Trichloroethane	**21.6**	0.30	ug/L	20		108	70-130		30	
1,1,1-Trichloroethane	**22.7**	0.30	ug/L	20		113	70-130		30	
Trichloroethylene (TCE)	**22.7**	0.20	ug/L	20		113	70-130		30	
Trichlorofluoromethane (R11)	**21.5**	0.20	ug/L	20		108	65-125		30	
1,2,3-Trichloropropane	**20.8**	0.30	ug/L	20		104	65-125		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**20.5**	0.30	ug/L	20		102	65-125		30	
1,2,4-Trimethylbenzene	**20.8**	0.30	ug/L	20		104	65-125		30	
1,3,5-Trimethylbenzene	**20.6**	0.20	ug/L	20		103	65-125		30	
Vinyl chloride	**19.8**	0.50	ug/L	20		99.0	70-130		30	
o-Xylene	**20.7**	0.30	ug/L	20		104	70-130		30	
m,p-Xylenes	**40.5**	0.40	ug/L	40		101	65-125		30	
Surrogate: 4-Bromofluorobenzene	*50.4*		*ug/L*	*50*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*56.5*		*ug/L*	*50*		*113*	*70-130*			
Surrogate: Toluene-d8	*51.4*		*ug/L*	*50*		*103*	*70-130*			
Matrix Spike (B8I2618-MS1)		**Source: 8I17019-03**		Prepared & Analyzed: 09/26/18						
Acetone	**39.2**	2.0	ug/L	20	10.3	144	50-150		30	
Benzene	**22.0**	0.20	ug/L	20	<0.50	110	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B8I2618 - EPA 5030B										
Matrix Spike (B8I2618-MS1) Continued		**Source: 8I17019-03**		Prepared & Analyzed: 09/26/18						
Bromobenzene	**19.8**	0.30	ug/L	20	<0.50	99.2	50-150		30	
Bromochloromethane	**20.8**	0.50	ug/L	20	<0.50	104	50-150		30	
Bromodichloromethane	**24.6**	0.20	ug/L	20	<0.50	123	50-150		30	
Bromoform	**19.5**	0.50	ug/L	20	<0.50	97.6	70-130		30	
Bromomethane	**20.3**	0.50	ug/L	20	<0.50	102	50-150		30	
2-Butanone (MEK)	**21.8**	2.0	ug/L	20	<10	109	50-150		30	
tert-Butylbenzene	**21.0**	0.20	ug/L	20	<0.50	105	50-150		30	
n-Butylbenzene	**23.0**	0.20	ug/L	20	<0.50	115	50-150		30	
sec-Butylbenzene	**20.8**	0.20	ug/L	20	<0.50	104	50-150		30	
Carbon Disulfide	**21.4**	0.30	ug/L	20	<0.50	107	50-150		30	
Carbon Tetrachloride	**23.8**	0.30	ug/L	20	<0.50	119	50-150		30	
Chlorobenzene	**20.5**	0.30	ug/L	20	<0.50	103	70-130		30	
Chloroethane	**23.5**	0.50	ug/L	20	<0.50	117	50-150		30	
Chloroform	**23.3**	0.30	ug/L	20	<0.50	116	70-130		30	
Chloromethane	**20.2**	0.40	ug/L	20	<0.50	101	50-150		30	
4-Chlorotoluene	**21.3**	0.20	ug/L	20	<0.50	106	50-150		30	
2-Chlorotoluene	**21.0**	0.30	ug/L	20	<0.50	105	50-150		30	
1,2-Dibromo-3-chloropropane	**20.9**	2.0	ug/L	20	<2.0	105	50-150		30	
Dibromochloromethane	**22.4**	0.30	ug/L	20	<0.50	112	50-150		30	
1,2-Dibromoethane (EDB)	**21.3**	0.30	ug/L	20	<0.50	106	50-150		30	
Dibromomethane	**22.9**	0.40	ug/L	20	<0.50	114	50-150		30	
1,3-Dichlorobenzene	**20.0**	0.10	ug/L	20	<0.50	99.8	50-150		30	
1,4-Dichlorobenzene	**20.4**	0.30	ug/L	20	<0.50	102	50-150		30	
1,2-Dichlorobenzene	**20.9**	0.30	ug/L	20	<0.50	104	50-150		30	
Dichlorodifluoromethane (R12)	**15.3**	0.50	ug/L	20	<0.50	76.6	50-150		30	
1,1-Dichloroethane	**22.0**	0.20	ug/L	20	<0.50	110	70-130		30	
1,2-Dichloroethane (EDC)	**26.4**	0.30	ug/L	20	2.82	118	50-150		30	
cis-1,2-Dichloroethylene	**24.8**	0.20	ug/L	20	4.08	104	70-130		30	
1,1-Dichloroethylene	**19.6**	0.30	ug/L	20	<0.50	98.0	70-130		30	
trans-1,2-Dichloroethylene	**21.6**	0.40	ug/L	20	<0.50	108	50-150		30	
1,3-Dichloropropane	**21.0**	0.10	ug/L	20	<0.50	105	50-150		30	
1,2-Dichloropropane	**23.4**	0.50	ug/L	20	<0.50	117	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B8I2618 - EPA 5030B										
Matrix Spike (B8I2618-MS1) Continued		**Source: 8I17019-03**		Prepared & Analyzed: 09/26/18						
2,2-Dichloropropane	**23.4**	0.40	ug/L	20	<0.50	117	50-150		30	
trans-1,3-Dichloropropylene	**21.7**	0.20	ug/L	20	<0.50	109	50-150		30	
1,1-Dichloropropylene	**23.6**	0.20	ug/L	20	<0.50	118	50-150		30	
cis-1,3-Dichloropropylene	**24.0**	0.20	ug/L	20	<0.50	120	50-150		30	
Ethylbenzene	**22.0**	0.20	ug/L	20	<0.50	110	70-130		30	
Hexachlorobutadiene	**20.9**	0.40	ug/L	20	<1.0	105	50-150		30	
2-Hexanone (MBK)	**18.8**	2.0	ug/L	20	<10	94.2	50-150		30	
Isopropylbenzene	**20.6**	0.20	ug/L	20	<0.50	103	50-150		30	
4-Isopropyltoluene	**21.2**	0.20	ug/L	20	<1.0	106	50-150		30	
Methyl-tert-Butyl Ether (MTBE)	**43.7**	1.7	ug/L	40	<2.0	109	70-130		30	
Methylene Chloride	**21.2**	5.0	ug/L	20	<5.0	106	50-150		30	
4-Methyl-2-pentanone (MIBK)	**25.7**	0.70	ug/L	20	<10	129	50-150		30	
Naphthalene	**20.3**	0.20	ug/L	20	<2.0	101	50-150		30	
n-Propylbenzene	**20.6**	0.20	ug/L	20	<0.50	103	70-130		30	
Styrene	**22.2**	0.20	ug/L	20	<0.50	111	50-150		30	
1,1,1,2-Tetrachloroethane	**21.3**	0.40	ug/L	20	<0.50	107	50-150		30	
1,1,2,2-Tetrachloroethane	**22.1**	0.30	ug/L	20	<0.50	110	50-150		30	
Tetrachloroethylene (PCE)	**18.8**	0.50	ug/L	20	<0.50	94.2	70-130		30	
Toluene	**21.4**	0.30	ug/L	20	<0.50	107	70-130		30	
1,2,4-Trichlorobenzene	**21.2**	0.20	ug/L	20	<0.50	106	50-150		30	
1,2,3-Trichlorobenzene	**20.3**	0.20	ug/L	20	<0.50	101	50-150		30	
1,1,2-Trichloroethane	**22.2**	0.30	ug/L	20	<0.50	111	50-150		30	
1,1,1-Trichloroethane	**23.9**	0.30	ug/L	20	<0.50	120	70-130		30	
Trichloroethylene (TCE)	**23.8**	0.20	ug/L	20	0.330	118	70-130		30	
Trichlorofluoromethane (R11)	**23.6**	0.20	ug/L	20	<0.50	118	50-150		30	
1,2,3-Trichloropropane	**21.8**	0.30	ug/L	20	<0.50	109	50-150		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**21.9**	0.30	ug/L	20	<0.50	109	50-150		30	
1,2,4-Trimethylbenzene	**21.1**	0.30	ug/L	20	<0.50	105	50-150		30	
1,3,5-Trimethylbenzene	**20.9**	0.20	ug/L	20	<0.50	104	70-130		30	
Vinyl chloride	**16.0**	0.50	ug/L	20	<0.50	80.0	70-130		30	
o-Xylene	**21.4**	0.30	ug/L	20	<0.50	107	50-150		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B8I2618 - EPA 5030B										
Matrix Spike (B8I2618-MS1) Continued		**Source: 8I17019-03**		Prepared & Analyzed: 09/26/18						
m,p-Xylenes	**41.4**	0.40	ug/L	40	<1.0	104	50-150		30	
Surrogate: 4-Bromofluorobenzene	*50.6*		*ug/L*	*50*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*57.2*		*ug/L*	*50*		*114*	*70-130*			
Surrogate: Toluene-d8	*52.4*		*ug/L*	*50*		*105*	*70-130*			
Matrix Spike Dup (B8I2618-MSD1)		**Source: 8I17019-03**		Prepared & Analyzed: 09/26/18						
Acetone	**41.0**	2.0	ug/L	20	10.3	153	50-150	4.36	30	QM-07
Benzene	**22.2**	0.20	ug/L	20	<0.50	111	70-130	0.633	30	
Bromobenzene	**20.6**	0.30	ug/L	20	<0.50	103	50-150	3.95	30	
Bromochloromethane	**21.3**	0.50	ug/L	20	<0.50	107	50-150	2.71	30	
Bromodichloromethane	**26.1**	0.20	ug/L	20	<0.50	130	50-150	5.80	30	
Bromoform	**24.2**	0.50	ug/L	20	<0.50	121	70-130	21.2	30	
Bromomethane	**24.9**	0.50	ug/L	20	<0.50	124	50-150	20.1	30	
2-Butanone (MEK)	**25.8**	2.0	ug/L	20	<10	129	50-150	16.6	30	
tert-Butylbenzene	**20.6**	0.20	ug/L	20	<0.50	103	50-150	1.68	30	
n-Butylbenzene	**23.1**	0.20	ug/L	20	<0.50	115	50-150	0.0434	30	
sec-Butylbenzene	**21.1**	0.20	ug/L	20	<0.50	106	50-150	1.38	30	
Carbon Disulfide	**21.0**	0.30	ug/L	20	<0.50	105	50-150	1.79	30	
Carbon Tetrachloride	**23.7**	0.30	ug/L	20	<0.50	119	50-150	0.295	30	
Chlorobenzene	**21.6**	0.30	ug/L	20	<0.50	108	70-130	5.03	30	
Chloroethane	**22.8**	0.50	ug/L	20	<0.50	114	50-150	2.72	30	
Chloroform	**23.5**	0.30	ug/L	20	<0.50	118	70-130	0.855	30	
Chloromethane	**21.3**	0.40	ug/L	20	<0.50	106	50-150	4.97	30	
4-Chlorotoluene	**21.4**	0.20	ug/L	20	<0.50	107	50-150	0.749	30	
2-Chlorotoluene	**21.3**	0.30	ug/L	20	<0.50	106	50-150	1.28	30	
1,2-Dibromo-3-chloropropane	**28.7**	2.0	ug/L	20	<2.0	144	50-150	31.3	30	AA-C1
Dibromochloromethane	**24.6**	0.30	ug/L	20	<0.50	123	50-150	9.36	30	
1,2-Dibromoethane (EDB)	**24.4**	0.30	ug/L	20	<0.50	122	50-150	13.7	30	
Dibromomethane	**24.2**	0.40	ug/L	20	<0.50	121	50-150	5.65	30	
1,3-Dichlorobenzene	**20.8**	0.10	ug/L	20	<0.50	104	50-150	3.98	30	
1,4-Dichlorobenzene	**21.1**	0.30	ug/L	20	<0.50	105	50-150	3.43	30	
1,2-Dichlorobenzene	**22.1**	0.30	ug/L	20	<0.50	111	50-150	5.63	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18

VOCs by GC/MS - Quality Control

Batch B8I2618 - EPA 5030B

Matrix Spike Dup (B8I2618-MSD1) **Source: 8I17019-03** Prepared & Analyzed: 09/26/18
Continued

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane (R12)	**15.4**	0.50	ug/L	20	<0.50	77.2	50-150	0.846	30	
1,1-Dichloroethane	**21.3**	0.20	ug/L	20	<0.50	106	70-130	3.60	30	
1,2-Dichloroethane (EDC)	**28.3**	0.30	ug/L	20	2.82	127	50-150	6.99	30	
cis-1,2-Dichloroethylene	**25.1**	0.20	ug/L	20	4.08	105	70-130	1.20	30	
1,1-Dichloroethylene	**19.2**	0.30	ug/L	20	<0.50	96.2	70-130	1.85	30	
trans-1,2-Dichloroethylene	**21.7**	0.40	ug/L	20	<0.50	108	50-150	0.231	30	
1,3-Dichloropropane	**23.2**	0.10	ug/L	20	<0.50	116	50-150	9.74	30	
1,2-Dichloropropane	**24.6**	0.50	ug/L	20	<0.50	123	70-130	4.91	30	
2,2-Dichloropropane	**22.6**	0.40	ug/L	20	<0.50	113	50-150	3.47	30	
trans-1,3-Dichloropropylene	**24.2**	0.20	ug/L	20	<0.50	121	50-150	10.8	30	
1,1-Dichloropropylene	**23.8**	0.20	ug/L	20	<0.50	119	50-150	0.718	30	
cis-1,3-Dichloropropylene	**25.6**	0.20	ug/L	20	<0.50	128	50-150	6.42	30	
Ethylbenzene	**22.3**	0.20	ug/L	20	<0.50	112	70-130	1.49	30	
Hexachlorobutadiene	**20.3**	0.40	ug/L	20	<1.0	101	50-150	3.21	30	
2-Hexanone (MBK)	**25.5**	2.0	ug/L	20	<10	128	50-150	30.1	30	AA-C1
Isopropylbenzene	**20.8**	0.20	ug/L	20	<0.50	104	50-150	1.21	30	
4-Isopropyltoluene	**21.3**	0.20	ug/L	20	<1.0	106	50-150	0.519	30	
Methyl-tert-Butyl Ether (MTBE)	**50.0**	1.7	ug/L	40	<2.0	125	70-130	13.5	30	
Methylene Chloride	**21.2**	5.0	ug/L	20	<5.0	106	50-150	0.0472	30	
4-Methyl-2-pentanone (MIBK)	**27.4**	0.70	ug/L	20	<10	137	50-150	6.36	30	
Naphthalene	**25.8**	0.20	ug/L	20	<2.0	129	50-150	24.0	30	
n-Propylbenzene	**20.8**	0.20	ug/L	20	<0.50	104	70-130	0.820	30	
Styrene	**22.6**	0.20	ug/L	20	<0.50	113	50-150	1.79	30	
1,1,1,2-Tetrachloroethane	**21.7**	0.40	ug/L	20	<0.50	108	50-150	1.63	30	
1,1,2,2-Tetrachloroethane	**26.9**	0.30	ug/L	20	<0.50	134	50-150	19.7	30	
Tetrachloroethylene (PCE)	**19.5**	0.50	ug/L	20	<0.50	97.6	70-130	3.54	30	
Toluene	**20.7**	0.30	ug/L	20	<0.50	104	70-130	3.09	30	
1,2,4-Trichlorobenzene	**22.4**	0.20	ug/L	20	<0.50	112	50-150	5.69	30	
1,2,3-Trichlorobenzene	**22.6**	0.20	ug/L	20	<0.50	113	50-150	10.9	30	
1,1,2-Trichloroethane	**25.1**	0.30	ug/L	20	<0.50	126	50-150	12.2	30	
1,1,1-Trichloroethane	**23.8**	0.30	ug/L	20	<0.50	119	70-130	0.503	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-016-1
Project Name: Cooper Drum GW - South Gate

AA Project No: A874318
Date Received: 09/17/18
Date Reported: 10/05/18

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B8I2618 - EPA 5030B										
Matrix Spike Dup (B8I2618-MSD1) Continued		**Source: 8I17019-03**		Prepared & Analyzed: 09/26/18						
Trichloroethylene (TCE)	**24.5**	0.20	ug/L	20	0.330	121	70-130	2.73	30	
Trichlorofluoromethane (R11)	**21.4**	0.20	ug/L	20	<0.50	107	50-150	9.86	30	
1,2,3-Trichloropropane	**27.0**	0.30	ug/L	20	<0.50	135	50-150	21.5	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**19.8**	0.30	ug/L	20	<0.50	99.0	50-150	9.93	30	
1,2,4-Trimethylbenzene	**21.4**	0.30	ug/L	20	<0.50	107	50-150	1.46	30	
1,3,5-Trimethylbenzene	**21.2**	0.20	ug/L	20	<0.50	106	70-130	1.38	30	
Vinyl chloride	**19.3**	0.50	ug/L	20	<0.50	96.7	70-130	18.8	30	
o-Xylene	**21.0**	0.30	ug/L	20	<0.50	105	50-150	1.84	30	
m,p-Xylenes	**41.7**	0.40	ug/L	40	<1.0	104	50-150	0.673	30	
Surrogate: 4-Bromofluorobenzene	*51.3*		*ug/L*	*50*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*57.5*		*ug/L*	*50*		*115*	*70-130*			
Surrogate: Toluene-d8	*52.2*		*ug/L*	*50*		*104*	*70-130*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874318
Project No:	130072-016-1	**Date Received:**	09/17/18
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	10/05/18

Special Notes

[1] = **AA-C1** : Exceeds RPD limit.

J : Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

[2] = **QM-07** : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Viorel Vasile
Operations Manager

16497

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY

CLIENT: Haley & Aldrich

SITE: Cooper Drum
South Gate, CA

LAB: American Analytics

COC 1 of 1

Send Reports to:
Peter Bennett, CHG
Lead Hydrogeologist and Vice President
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
PBennett@haleyaldrich.com

A 874318/
8I17019

CONDUCT ANALYSIS TO DETECT

SAMPLE I.D.	DATE	TIME	MATRIX (AQ=Water)	#	Preservatio	Type	VOC's by 8260	1,4-Dioxane by EPA 8270SIM				Level 4 QAQC package	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-63-091218	9/12/18	0839	AQ	4	HCl	VOA/Amber	X	X								8I17019-01
QC1-091218		0849		4	HCl	VOA/Amber	X	X								-02
MW-64B-091218		0939		6	HCl	VOA/Amber	X	X				~~X~~	MS/MSD			-03
QC2-091218		0700		2	HCl	VOA	X									-04
MW-64A-091218		1052		4	HCl	VOA/Amber	X	X								-05
QC3-091218		1115		4	HCl	VOA/Amber	X	X								-06
QC4-091218		1120		4	HCl	VOA/Amber	X	X								-07

REVIEWED
DATE 9/18/18 TIME 0900
TAT 14 DAYS SIGN:

SAMPLE INTEGRITY INTACT (Y) N TEMP 4°C

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED NO LATER THAN
	9/12/18	1215	Jason Mahn	Standard

RELEASED BY	TIME	RECEIVED BY	DATE	TIME
	1700	Nicole	9/12/18	1700
Nicole	16:27	Larry Funk	9-17-18	16:27
Larry Funk	18:56	Larry Funk	9-17-18	18:56

SHIPPED VIA	TIME SENT	COOLER #